

XVII. APPENDIX TABLE OF CONTENTS

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Glossary of North Carolina Early Learning and Development Systems Terms

Alliance for Evidence-Based Family Strengthening Programs (Alliance) is public-private collaborative made up of a group of nine public and private funders that collaboratively support specific evidence-based practices that strengthen families

Assuring Better Child Health and Development (ABCD) is a project designed to increase routine developmental and behavioral screening at well child visits for children 0 – 5 so that children with problems that might affect development are identified at the earliest possible point in time. In addition to improving the general screening rates, the ABCD project is expanding screening to include routine postpartum depression screening and autism screening at 18 and 24 months visits. Related work includes improving referral rates based on screening results and developing systems to ensure that care is secured once a referral is made.

Birth-through-Kindergarten Degree and License (B-K License), which is obtained upon completion of a BA degree, prepares early educators to work with young children, from birth through age 5 years, with and without disabilities, including those at-risk, and their families. The licensure process requires coursework and student teaching/internships to qualify for a NC Educator's Standard Professional I license issued by the NC State Board of Education.

Child Care Health Consultants (CCHC) are health professionals who know about child health, child development, and health and safety in child care settings. North Carolina has been a national leader in developing systems for providing child care health consultation. North Carolina is the home of the National Training Institute (NTI) for Child Care Health Consultants (CCHCs) and the exclusive source of training for the trainers of CCHCs across the country. Qualification for CCHCs in North Carolina requires completion of one of the most rigorous training courses in the nation, the *North Carolina Child Care Health Consultant Training Course*, offered by the NTI-trained health professionals of the North Carolina Child Care Health and Safety Resource Center. CCHCs and the staff in ELD programs work together to promote healthy and safe environments for young children and connect families with community health resources, including developmental screenings, referrals and follow up and ongoing health care as part of a schedule of well child care. CCHCs also provide health education for staff members, families and children. Currently, about half of the 100 counties in NC have child care health consultation services. CCHCs working in the field receive technical assistance from the NC Child Care Health Safety Resource Center and the State Child Care Nurse Consultant.

Community Care of North Carolina (CCNC) is a public-private partnership that brings together regional networks of physicians, nurses, pharmacists, hospitals, health departments, social service agencies and other community organizations. These professionals work together to provide cooperative, coordinated care through the Medical Home model. This approach matches each patient with a primary care physician who leads a health care team that addresses the patient's health needs.

Data exchange hub is a place of convergence in which data arrive from one or more sources and are forwarded to other points, much like an airport hub that connects flights from one point to another. It is not a specific technology but rather a shared infrastructure that enables interoperable data exchange across different sources in the enterprise (NC's early childhood system). This method allows independent users to source, manage, store, and maintain ownership of their data while the hub mechanism enables coordinated extraction, translation and integration of the data through joint governance, including adoption of common data elements, definitions, and practices. Secure linkage allows authorized data users role-based access to linked data in order to meet the goals of the grant by informing policy and practice for continuous improvement.

Division of Child Development and Early Education (DCDEE) is housed within the Department of Health and Human Services (DHHS). DCDEE's mission is to implement quality standards, increase access for families, and collaborate to promote enhanced service delivery of care and education across the state of NC. It was created in 1993 and its major functions include the administration of licensing all child care programs, developing and monitoring child care workforce standards, and oversight on child care subsidies.

Department of Public Instruction (DPI) is the agency charged with implementing the State's public school laws and the State Board of Education's policies and procedures governing pre-kindergarten through 12th grade public education. DPI developed the *Standard Course of Study* which describes the subjects and course content that should be taught in North Carolina public schools and develops the assessments and accountability model used to evaluate school and district success. The DPI administers annual public school funds totaling approximately \$8 billion in state and federal funds and licenses the approximately 120,000 teachers and administrators serving in public schools.

Local Smart Start Partnerships are part of Smart Start and overseen by the North Carolina Partnership for Children (NCPC). NCPC establishes measurable, statewide goals for increasing the health, well-being and development of North Carolina's children birth to five. Local Smart Start Partnerships then take responsibility for making decisions about how best to achieve those goals based on the needs and resources in their local communities.

North Carolina Child Care Commission is a rule-making body that is made up of seventeen members including those appointed by the Governor, the Speaker of the House of Representatives, and by the President Pro Tempore of the Senate. Members include parents, child care providers, a pediatrician, early childhood education specialists and general citizens. The Commission is highly committed to ensuring quality child care across North Carolina, and is responsible for adopting rules to implement the child care laws established by the NC General Assembly.

North Carolina Institute for Child Development Professionals is composed of stakeholders who work directly with children or on the behalf of children in a variety of settings. Teachers, family child care home providers, administrators, school age group leaders, faculty, education coordinators, agency and program directors, consultants, specialists, researchers and more work together to build and strengthen NC's approach to professional development; striving for a comprehensive professional development system for all Early Educators. The Institute provides both free and fee-based services including but not limited to: consultation services on professional development strategies, system development and grant development; certified early educators who work with children ages birth to twelve; produces tools, publications, research and reports and collects and disseminates data about the NC Early Educator workforce; and builds and supplies high quality training opportunities for Early Educators on professional development planning for individuals, organizations and systems.

North Carolina Partnership for Children (NCPC) is a nonprofit organization that oversees Smart Start, NC's public-private early childhood initiative for children birth to five. It provides technical assistance to the 77 local Smart Start Partnerships that serve young children and their families in NC's 100 counties. It is also home to the National Technical Assistance Center.

NC Pre-K is North Carolina's state-funded prekindergarten program, formally called More at Four. Established in 2001, it is designed to serve four-year-old children with high needs, defined as those "at risk" of later school difficulties (e.g., in low-income families, have an Individualized Education Plan). It continues to be one of the top ranked pre-K programs in the country.

NC Star Rated License is North Carolina's TQRIS, which is also part of the state child care licensing system. All Early Learning and Development programs in the state that are licensed are therefore by default part of the state's TQRIS.

Office of Early Learning (OEL) focuses on Pre-K - Grade 3 to prepare and support children's school success in the early grades through high-quality early education. The Office of Early Learning combines the Department's staffs in primary education and prekindergarten and promotes other linkages for reforming early education for North Carolina's children. Through this Office, the Department is partnering with the FirstSchool initiative of the FPG Child Development Institute at the University of North Carolina at Chapel Hill. FirstSchool is a Pre-K - Grade 3 initiative to promote public school efforts to become more responsive to the needs of an increasingly younger, more diverse population. FirstSchool unites the best of early childhood, elementary and special education.

The Teacher Education and Compensation Helps (T.E.A.C.H.) Early Childhood Project® was created in 1990 to address the issues of under-education, poor compensation and high turnover within the early childhood workforce. The T.E.A.C.H. Early Childhood® Project gives scholarships to child care workers to complete course work in early childhood education and to increase their compensation. The scholarships help individuals working in early care and

education settings afford college, improve their compensation, and encourage retention in the field. Most scholarships cover partial costs for tuition, books and travel, mandate and support paid release time, require a bonus or raise upon completion of a minimum number of credit hours, and require the individual remain in her sponsoring ELD program for an additional year.

Smart Start is an early childhood initiative for children birth to five created in 1993 as an innovative solution to a problem: children were coming to school unprepared to learn. Smart Start was established as a public/private partnership and its mission is to advance a high quality, comprehensive, accountable system of care and education for every child beginning with a healthy birth. Independent, private organizations work in all 100 North Carolina counties through The North Carolina Partnership for Children, Inc. (NCPC), and 77 local Smart Start Partnerships. The power of Smart Start is that it delivers outcomes by giving communities local control to determine the best approach to achieving them.

The Child Care WAGES® Project (WAGES) provides education-based salary supplements to low-paid teachers, directors and family child care providers working with children between the ages of birth-five. The project is designed to provide preschool children more stable relationships with better educated teachers by rewarding teacher education and continuity of care. The Child Care WAGES® Project is offered throughout North Carolina as a funding collaboration between local Smart Start Partnerships and the Division of Child Development and Early Education (DCDEE). Counties that use Smart Start funding to support the Child Care WAGES® Project may participate.

Environment Rating Scales

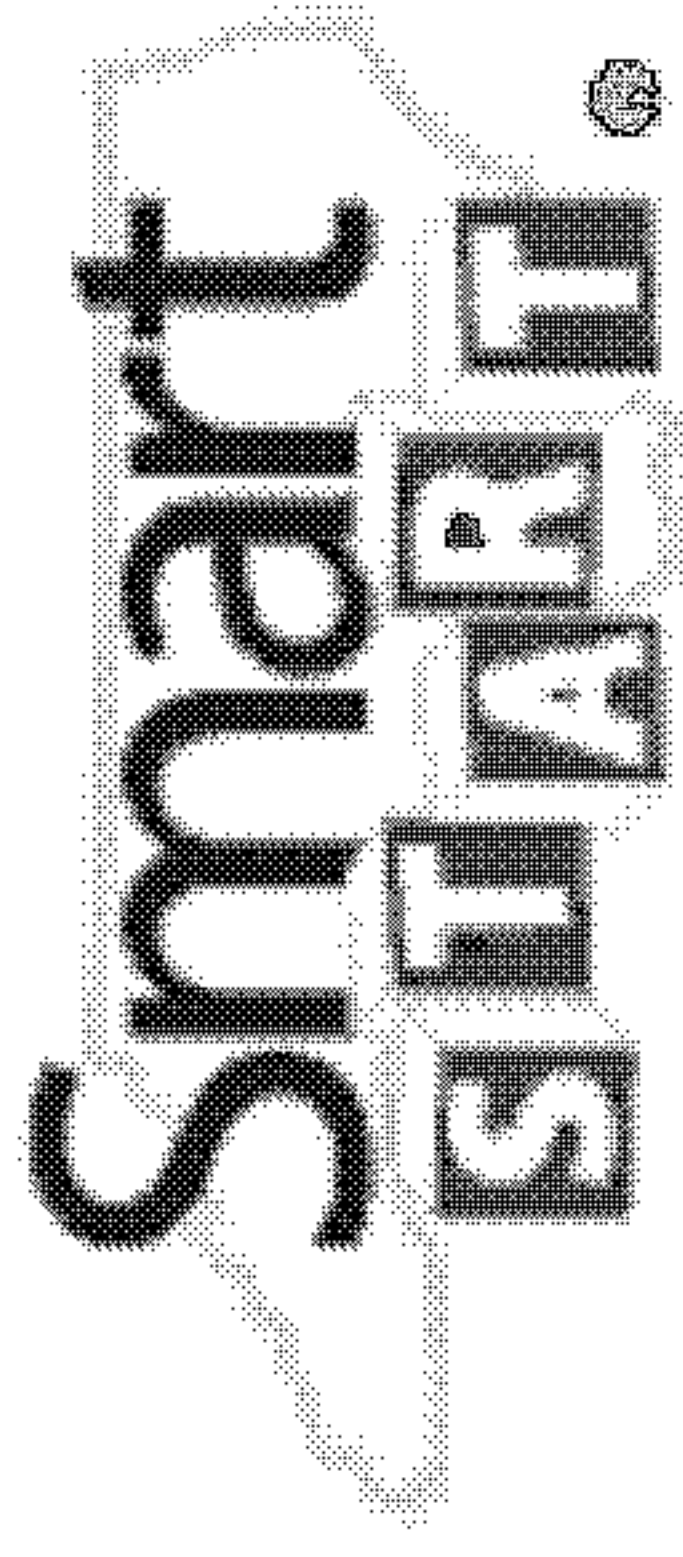
The *Early Childhood Environment Rating Scale-Revised* (ECERS-R) is a widely used measure of global classroom quality. It is specifically designed for use in classrooms serving children 2 ½ to 5 years of age. The ECERS-R measures the following aspects of classroom quality: Space and Furnishings (e.g., furnishings for relaxation and comfort, room arrangement, display); Personal Care Routines (e.g., greeting/departing, safety practices); Language-Reasoning (e.g., presence/quality of books and pictures, encouraging children to communicate); Activities (e.g., fine motor, art, promoting acceptance of diversity); Interaction (e.g., supervision of children, interactions among children); Program Structure (e.g., schedule, group time, provisions for children with disabilities); and Parents and Staff (e.g., provisions for personal needs of staff, supervision and evaluation of staff). Scores on the ECERS-R can range from 1-7 with higher scores indicating higher quality. Total mean scores from 1.0 to 2.9 are considered “low” quality, scores from 3.0 to 4.9 are considered “medium” quality, and scores of 5.0 or greater are considered “good” or “high” quality.

The *Infant Toddler Environment Rating Scale-Revised* (ITERS-R) is a widely used instrument for examining global classroom quality. It is specifically designed for use in classrooms serving children birth to 2 ½ years of age. The ITERS-R measures the following aspects of classroom quality: Space and Furnishings (e.g., furnishings for relaxation and comfort, room arrangement, display); Personal Care Routines (e.g., greeting/departing, safety practices); Listening and Talking (e.g., helping children understand language, helping children use language); Activities (e.g., fine motor, art, promoting acceptance of diversity); Interaction (e.g., supervision of play and learning, peer interactions); Program Structure (e.g., schedule, group play activities, provisions for children with disabilities); and Parents and Staff (e.g., provisions for personal needs of staff, supervision and evaluation of staff). Scores on the ITERS-R can range from 1-7 with higher scores indicating higher quality. Total mean scores from 1.0 to 2.9 are considered “low” quality, scores from 3.0 to 4.9 are considered “medium” quality, and scores of 5.0 or greater are considered “good” or “high” quality.

The *Family Child Care Environment Rating Scale-Revised* (FCCERS-R) is a widely used instrument for examining the global quality of care provided in family child care homes. It is specifically designed for use in homes serving children birth through 12 years of age.

The FCCERS-R measures the following aspects of quality in family child care homes: Space and Furnishings (e.g., furnishings for relaxation and comfort, space arrangement, display); Personal Care Routines (e.g., greeting/departing, safety practices); Listening and Talking (e.g., helping children understand language, helping children use language); Activities (e.g., fine motor, art, promoting acceptance of diversity); Interaction (e.g., supervision of play and learning, interactions among children); Program Structure (e.g., schedule, group play activities, provisions for children with disabilities); and Parents and Provider (e.g., provisions for parents, balancing personal and care-giving responsibilities). Scores on the FCCERS can range from 1-7 with higher scores indicating higher quality. Total mean scores from 1.0 to 2.9 are considered “low” quality, scores from 3.0 to 4.9 are considered “medium” quality, and scores of 5.0 or greater are considered “good” or “high” quality.

The *School-Age Care Environment Rating Scale* (SACERS) is specifically designed to assess before- and after-school group care programs for school-age children, 5 to 12 years of age. The SACERS measures the following aspects of program quality: Space and Furnishings (e.g., furnishings for relaxation and comfort, room arrangement); Health and Safety (e.g., meals/snacks, safety practices); Activities (e.g., arts & crafts, language/reading, cultural awareness); Interactions (e.g., staff supervision of children, peer interactions); Program Structure (e.g., schedule, free choice, use of community resources); Staff Development (e.g., opportunities for professional growth, supervision and evaluation of staff); and Special Needs Supplementary Items (provisions for children with disabilities). Scores on the SACERS can range from 1-7 with higher scores indicating higher quality. Total mean scores from 1.0 to 2.9 are considered “low” quality, scores from 3.0 to 4.9 are considered “medium” quality, and scores of 5.0 or greater are considered “good” or “high” quality.



The North Carolina Partnership for Children, Inc. Performance-Based Incentive System (PBIS) Final Results

The Performance-Based Incentive System (PBIS) are measures of child well-being for which local Smart Start Partnerships are held accountable. PBIS assesses progress towards realizing Smart Start's mission of advancing a high quality, comprehensive, accountable system of care and education for every child beginning with a healthy birth.

PBIS uses validated data sources from state agencies that directly impact young children (e.g., NC Department of Health and Human Services, Division of Child Development, and Division of Public Health). Published annually, data for the PBIS report reflect the entire fiscal year and/or calendar year. This report includes 2008-09 and 2009-10 PBIS results for North Carolina.

Statewide Report

Year Ending June 30, 2009 and June 30, 2010

PBIS Final Results for North Carolina

Early Care and Education – Supply of Placements

| Criteria | Standards | FY08-09 Results | FY09-10 Results |
|--|---|-----------------|-----------------|
| PLA10: % of regulated child care spaces available for working families | Minimum Std: >=90% High Performing Std: >=100% | 131% | 125% |
| PLA20: % of children receiving child care subsidies who are enrolled in regulated child care programs | Minimum Std: >=90% High Performing Std: >=97% | 100% | 100% |
| PLA30: % of low-income children enrolled in early care and education programs (e.g., subsidized child care, Head Start, More at Four, or Title 1 public school pre-kindergarten) | Minimum Std: >=65% High Performing Std: >=75% | 55% | 55% |

PBIS Final Results for North Carolina

Early Care and Education – Quality of Placements

| Criteria | Standards | FY08-09 Results | FY09-10 Results |
|--|---|-----------------|-----------------|
| PLA40: Quality of early care and education for <u>all</u> children enrolled in early care and education programs – average star rating of facilities Mandatory | Minimum Std: >=3.25 OR >=50% High Performing Std: >=3.25 AND >=50% | 3.74 | 3.84 |
| PLA40: Quality of early care and education for <u>all</u> children enrolled in early care and education programs – % of children enrolled in 4 & 5 star facilities Mandatory | | | |
| PLA50: Quality of early care and education for children receiving <u>subsidy</u> or other assistance (e.g., Head Start, More at Four, or Title 1 public school pre-kindergarten) – average star rating of facilities enrolling children receiving subsidy Mandatory | Minimum Std: >=3.25 OR >=60% High Performing Std: >=3.25 AND >=60% | 3.90 | 3.99 |
| PLA50: Quality of early care and education for children receiving <u>subsidy</u> or other assistance (e.g., Head Start, More at Four, or Title 1 public pre-kindergarten) - % of children receiving subsidy in 4 & 5 star facilities Mandatory | | | |
| PLA60: Quality of early care and education for subsidized children with <u>special needs</u> – average star rating of facilities enrolling special needs, subsidized children | Minimum Std: >=4.00 OR >=75% High Performing Std: >=4.00 AND >=75% | 4.27 | 4.40 |
| PLA60: Quality of early care and education for subsidized children with <u>special needs</u> – % of special needs, subsidized children in 4 & 5 star facilities | | | |
| PLA70: % of children enrolled in nationally accredited child care programs | Minimum Std: >=12% High Performing Std: >=20% | 4% | 4% |

PBIS Final Results for North Carolina

Early Care and Education –Staff Education

| Criteria | Standards | | FY08-09 Results | FY09-10 Results |
|---|-----------------------|---|-----------------|-----------------|
| | Minimum Std: >=60% | High Performing Std: >=60% AND >=35% | | |
| EDU10: % of children enrolled in 1-5 star rated child care centers that have at least <u>5 lead teacher education points</u> Mandatory | | | 56% | 59% |
| EDU10: % of children enrolled in 1-5 star rated child care centers that have at least <u>7 lead teacher education points</u> Mandatory | | | 25% | 28% |
| EDU20: % of children enrolled in 1-5 star rated child care centers that have at least <u>5 administrator education points</u> | Minimum Std: >=60% | High Performing Std: >=60% AND >=35% | 67% | 69% |
| EDU20: % of children enrolled in 1-5 star rated child care centers that have at least <u>7 administrator education points</u> | | | 43% | 46% |
| EDU30: % of children enrolled in 1-5 star rated child care homes that have at least <u>5 family child care provider education points</u> | Minimum Std: >=60% | High Performing Std: >=60% AND >=35% | 35% | 37% |
| EDU30: % of children enrolled in 1-5 star rated child care homes that have at least <u>7 family child care provider education points</u> | | | 14% | 17% |

Family Support

| | | | | |
|---|--|--|-----|-----|
| FS10: Parenting Skills - % of parents who report feeling competent and confident to apply parenting information Select FS10 or FS20 | Minimum Std: >=90% High Performing Std: >=95% | | 96% | 97% |
| FS20: Family Literacy/Language Development - % of parents who report an increase in their participation in literacy activities each week Select FS10 or FS20 | Minimum Std: >=60% High Performing Std: >=70% | | 82% | 80% |

PBIS Final Results for North Carolina

Health

| Criteria | Standards | FY08-09 Results | FY09-10 Results |
|--|--|-----------------|-----------------|
| H10: % of children <u>0-2</u> years who receive early intervention/special education services Mandatory | Minimum Std: >=3% AND >=3% High Performing Std: >=5% AND >=5% | 4.7% | 4.8% |
| H10: % of children <u>3-5</u> years who receive early intervention/special education services Mandatory | | 5% | 5% |
| H20: % of low-income children who receive a well-child exam Mandatory | Minimum Std: >=70% High Performing Std: >=80% | 75% | 76% |
| H40: % of kindergarten children who enter school with untreated tooth decay | Minimum Std: <=23% High Performing Std: <=23% AND <=1.3 | 17% | Not Available |
| H40: Average number of decayed, missing, or filled teeth | | 1.5 | Not Available |
| H50: Rate of infant deaths within the first year of life | Minimum Std: <=9.1 High Performing Std: <=7.41 | 8.2 | 7.9 |
| H60: % of children who are obese | Minimum Std: <=12.27% High Performing Std: <=10% | 15.4% | 15.4% |
| H70: % of children with elevated blood lead levels | | 0.5% | 0.4% |

PBIS Final Results for North Carolina

Early Care and Education – Teacher Compensation

| Criteria | Standards | Results |
|--|--|-------------------------------------|
| COMP10: Median salary levels for early care and education teachers with a 2-year degree Mandatory | Minimum Std: >=\$9.65 AND >=\$12.06 | Data source currently not available |
| COMP10: Median salary levels for early care and education teachers with a 4-year degree Mandatory | High Performing Std: >=\$10.25 AND >=\$13.27 | |

Early Care and Education – Staff Benefits

| | | |
|---|--|-------------------------------------|
| BE10: % of regulated centers that provide full or partially paid health insurance | Minimum Std: >=60% High Performing Std: >=75% | Data source currently not available |
| BE20: % of regulated centers that offer paid sick leave | Minimum Std: >=70% | Data source currently not available |
| BE20: % of regulated centers that offer at least 6 days of paid sick leave | High Performing Std: >=80% | Data source currently not available |

Early Care and Education – Staff Stability

| | | |
|---|--|-------------------------------------|
| S10: Staff turnover rate in regulated centers | Minimum Std: <=25% High Performing Std: <=20% | Data source currently not available |
|---|--|-------------------------------------|



RATED LICENSE FOR CHILD CARE CENTERS WITH PRESCHOOL AND SCHOOL AGE CLASSROOMS



| PROGRAM REQUIREMENT | EDUCATION REQUIREMENT |
|--|---|
| <ul style="list-style-type: none"> Meets minimum licensing requirements. <p style="text-align: center;">1 pt.</p> | <p>All staff must meet minimum licensing requirements which includes:</p> <ul style="list-style-type: none"> On site child care administrator: must be 21 years old and have a Level I NCECAC³ or equivalent; or have HS diploma and have 2 years of early childhood work experience or a BA or AAS degree in ECE/CD or CDA or community college ECE certificate/diploma or 1 year early childhood work experience and the NCECC⁴, and have completed or be enrolled in 2 semester credit hours of ECE administration, or be working toward a Level I NCECAC³ or equivalent. Program coordinator: must be 18 yrs. old with a HS diploma or GED and have or be enrolled in 2 semester credit hours in child and youth development and 2 semester credit hours in school-age programming, or have NCECC² or equivalent and BSAC⁴ Training, or have a NCECAC³ or equivalent and BSAC Training. Lead teachers: must be 18 yrs old and have the NCECC⁴ or equivalent; or have a HS diploma or GED and have 1 year of child care experience working in a center or 2 years experience as a licensed family child care home operator or have completed a two-year high school child care program or have 20 additional hours of training in child development within the first 6 months of employment, and be working toward the NCECC⁴ or equivalent. Teachers counted in ratios: must be 18 years old with a HS diploma or GED, and have 1 year of child care experience working in a center or 2 years experience as a licensed family child care home operator or have completed a two-year high school child care program or have 20 additional hours of training in child development within the first 6 months of employment. Group leader (whoever is supervising the group of school-age children) must be 18 yrs. old with a HS diploma or GED and complete BSAC Training. Assistant group leader (whoever may be assisting the group leader) must be 16 yrs old and complete BSAC Training. <p style="text-align: center;">1 pt.</p> |
| <ul style="list-style-type: none"> Meets minimum licensing requirements; Meets all enhanced standards <u>except either</u> enhanced ratios <p style="text-align: center;">OR</p> <p>enhanced space</p> <p style="text-align: center;">2 pts.</p> | <p>All staff must meet the following in addition to the requirements for 1 point. For staff working with both preschool and school aged children, the following may be counted as part of the education and experience already required for 2 points.</p> <ul style="list-style-type: none"> On site child care administrator: must meet minimum requirements and have a Level I NCECAC³ or equivalent and 2 years of full-time verifiable early childhood experience or 1 year exp in child care administration; must have at least 150 hours of verifiable experience working with school-aged children in a licensed child care program, or at least 300 hours of verifiable experience working with school-aged children in an unlicensed school-age care or camp setting, or shall complete the BSAC Training. Program coordinator: has completed minimum requirements (including 4 semester hours); and has completed or is enrolled in three additional semester hours of school-age care related coursework; or has at least 200 hours of verifiable experience working with school-aged children in a licensed child care program; or at least 300 hours of verifiable experience working with school-aged children in an unlicensed school-age care or camp setting. Lead teachers: must meet minimum requirements and 75% must have the NCECC⁴ or equivalent and must have or be enrolled in 3 semester hours in ECE/CD⁵. Teachers counted in the ratios: all must meet minimum requirements; and 50% are enrolled in 3 semester hours in ECE/CD⁵ or have 1 year of full-time verifiable early childhood experience. Group Leader: No additional requirements. Assistant Group Leader: No additional requirements. <p style="text-align: center;">2 pts.</p> |

¹FDCRS= Family Day Care Rating Scale

⁵ECE/CD = Early Childhood Education/

²ERS= Environmental Rating Scales (ITERS-R/ECERS-R/SACERS)

Child Development

⁶SACERS = School-Age Care Environment Rating Scale

⁴NCECC = North Carolina Early Childhood Credential

Child Development



RATED LICENSE FOR CHILD CARE CENTERS WITH PRESCHOOL AND SCHOOL AGE CLASSROOMS



| | |
|---|---|
| <ul style="list-style-type: none"> • Meets minimum licensing requirements; • All enhanced standards <u>except</u> either enhanced ratios OR enhanced space <u>and</u> • ERS = lowest classroom score at least 4.0 <p style="text-align: center;">3 pts</p> | <p>All staff must meet the following in addition to the requirements for 1 point. For staff working with both preschool and school aged children, the following may be counted as part of the education and experience already required for 3 points.</p> <ul style="list-style-type: none"> • On site child care administrator: must meet minimum requirements and have a Level I NCECAC³ or equivalent <u>and</u> 6 semester hours in ECE/CD⁵; and at least 2 years of full-time verifiable early childhood experience or 1 year exp in child care administration; must have at least 300 hours of verifiable experience working with school-aged children in a licensed child care program, or at least 450 hours of verifiable experience working with school-aged children in an unlicensed school-age care or camp setting, or shall complete the BSAC Training. • Program coordinator: has completed minimum requirements (including 4 semester hours); and has completed three additional semester hours of school-age care related coursework; or has at least 300 hours of verifiable experience working with school-aged children in a licensed child care program; or at least 450 hours of verifiable experience working with school-aged children in an unlicensed school-age care or camp setting. • Lead teachers: all must meet minimum requirements and have the NCECC⁴ or equivalent; 75% must have 3 semester hours in ECE/CD⁵ and be enrolled in an additional 3 semester hours in ECE/CD⁵ or have 1 year of full-time verifiable early childhood experience. • Teachers counted in the ratios: all must meet minimum requirements; 50% must have the NCECC⁴ or equivalent <u>or</u> have completed 3 semester hours in ECE/CD⁵ or have 2 years of full-time verifiable early childhood experience. • Group Leader: all must meet minimum requirements; 25% of the individuals designated as group leaders shall each have at least 100 hours of verifiable experience working with school-aged children in a licensed child care program, or shall have at least 150 hours of verifiable experience working with school-aged children in an unlicensed school-age care or camp setting or shall have completed or be enrolled in at least two semester hours of school-age care related coursework. • Assistant Group Leader: No additional requirements. <p style="text-align: center;">3 pts.</p> |
| <ul style="list-style-type: none"> • Meets minimum licensing requirements; • All enhanced standards except enhanced space <u>and</u> • ERS = avg. 4.5 with no one classroom score lower than 4.0 <p style="text-align: center;">4 pts</p> | <p>All staff must meet the following in addition to the requirements for 1 point. For staff working with both preschool and school aged children, the following may be counted as part of the education and experience already required for 4 points.</p> <ul style="list-style-type: none"> • On site child care administrator: must meet minimum requirements and have a Level I NCECAC³ or equivalent <u>and</u> 18 semester hours in ECE/CD⁵ and at least 1 year of full-time verifiable child care admin experience; or and have a Level I NCECAC³ or equivalent <u>and</u> 6 semester hours in ECE/CD⁵ and at least 10 years of full-time verifiable early childhood administration experience; have at least 450 hours of verifiable experience working with school-aged children in a licensed child care program, or at least 600 hours of verifiable experience working with school-aged children in an unlicensed school-age care or camp setting, or shall complete the BSAC Training. • Program coordinator: has completed minimum requirements (including 4 semester hours)and; has completed three additional semester hours of school-age care related coursework and shall have at least 200 hours of verifiable experience working with school-aged children in a licensed child care program or at least 300 hours of verifiable experience working with school-aged children in an unlicensed school-age care or camp setting; or has at least 450 hours of verifiable experience working with school-aged children in a licensed child care program; or at least 600 hours of verifiable experience working with school-aged children in an unlicensed school-age care or camp setting. <p style="text-align: center;">4 pts.</p> |

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⁶SACERS = School-Age Care Environment Rating Scale

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⁴NCECC = North Carolina Early Childhood Credential

⁵ECE/CD = Early Childhood Education/

Child Development



RATED LICENSE FOR CHILD CARE CENTERS WITH PRESCHOOL AND SCHOOL AGE CLASSROOMS



| | |
|--|--|
| | <ul style="list-style-type: none"> • Lead teachers: all must meet minimum requirements and have the NCECC⁴ or equivalent; 75% must have 6 semester hours in ECE/CD⁵ and be enrolled in an additional 3 semester hours in ECE/CD⁵ or must have 3 semester hours in ECE/CD⁵ and 3 years of full-time verifiable early childhood experience <u>or</u> have 5 years of full-time verifiable early childhood work experience. • Teachers counted in the ratios: all must meet minimum requirements; 50% must have the NCECC⁴ or equivalent. • Group Leader: all must meet minimum requirements; 25% of the individuals designated as group leaders shall each have at least 100 hours of verifiable experience working with school-aged children in a licensed child care program, or shall have at least 150 hours of verifiable experience working with school-aged children in an unlicensed school-age care or camp setting, or have completed at least two semester hours of school-age care related coursework. • Assistant Group Leader: No additional requirements. <p style="text-align: right;">4 pts</p> |
|--|--|

| | |
|--|---|
| <ul style="list-style-type: none"> • Meets minimum licensing requirements; • All enhanced standards except enhanced space and • ERS = avg. 4.75 classroom score with no one classroom score lower than 4.0 <p style="text-align: right;">5 pts.</p> | <p>All staff must meet the following in addition to the requirements for 1 point. For staff working with both preschool and school aged children, the following may be counted as part of the education and experience already required for 5 points.</p> <ul style="list-style-type: none"> • On site child care administrator: must meet minimum requirements and have a Level II NCECAC³ or equivalent and at least 2 years full-time verifiable early childhood work experience; must have at least 600 hours of verifiable experience working with school-aged children in a licensed child care program, or at least 900 hours of verifiable experience working with school-aged children in an unlicensed school-age care or camp setting, or shall complete the BSAC Training. • Program coordinator: has completed minimum requirements (including 4 semester hours); and has completed three additional semester hours of school-age care related coursework and shall be enrolled in three additional semester hours of school-age care related coursework; or has at least 600 hours of verifiable experience working with school-age children in a licensed child care program; or at least 750 hours of verifiable experience working with school-aged children in an unlicensed school-age care or camp setting. • Lead teachers: all must meet minimum requirements and have the NCECC⁴ or equivalent; 75% must have 9 semester hours in ECE/CD⁵ and be enrolled in an additional 3 semester hours in ECE/CD⁵ and 1 year of full-time verifiable early childhood experience. • Teachers counted in ratios: all must meet minimum requirements; 50% must have the NCECC⁴ or equivalent and 3 semester hours in ECE/CD⁵. • Group Leader: all must meet minimum requirements; 50% of the individuals designated as group leaders shall each have at least 300 hours of verifiable experience working with school-aged children in a licensed child care program, or at least 450 hours of verifiable experience working with school-aged children in an unlicensed school-age care or camp setting, or shall have completed at least two semester hours of school-age care related coursework. • Assistant Group Leader: shall be at least 16 years of age and shall complete the BSAC training, or shall have at least 250 hours of verifiable experience working with school-aged children in a licensed child care program or at least 400 hours of verifiable experience working with school-aged children in an unlicensed school-age care or camp setting. <p style="text-align: right;">5 pts.</p> |
|--|---|

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Child Development



RATED LICENSE FOR CHILD CARE CENTERS WITH PRESCHOOL AND SCHOOL AGE CLASSROOMS



| | |
|--|---|
| <ul style="list-style-type: none"> • Meets minimum licensing requirements; • All enhanced standards and • ERS = avg. 5.0 with no one classroom score lower than 4.0 <p style="text-align: center;">6 pts.</p> | <p>All staff must meet the following in addition to the requirements for 1 point. For staff working with both preschool and school aged children, the following may be counted as part of the education and experience already required for 6 points.</p> <ul style="list-style-type: none"> • On site child care administrator: must meet minimum requirements and have a Level II NCECAC³ or equivalent and 18 semester hours in ECE/CD⁵ and at least 3 years full-time verifiable work experience in an early childhood center teaching young children, or three years of administrative experience, or three years of a combination of both; must have at least 750 hours of verifiable experience working with school-aged children in a licensed child care program, or at least 1150 hours of verifiable experience working with school-aged children in an unlicensed school-age care or camp setting, or shall complete the BSAC Training. • Program Coordinator: has completed minimum requirements (including 4 semester hours) and; has completed at least six additional semester hours of school-age care related coursework and has at least 750 hours of verifiable experience working with school-aged children in a licensed child care program or at least 900 hours of verifiable experience working with school-aged children in an unlicensed school-age care or camp setting; or has a BA/BS degree or higher with at least three additional semester hours of school-age care related coursework. • Lead teachers: all must meet minimum requirements and have the NCECC⁴ or equivalent; 50% must have an AAS degree in ECE/CD⁵ or an AAS degree in any major with 12 semester hours in ECE/CD⁵ and 1 year full-time verifiable early childhood work experience; or have completed 60 semester hours towards a BA/BS degree program with at least 12 semester hours in early childhood education and one year full-time verifiable early childhood work experience. • Teachers counted in ratios: all must meet minimum requirements; 50% must have the NCECC⁴ or equivalent and 3 semester hours in ECE/CD⁵ and 1 year full-time verifiable early childhood work experience. • Group Leader: all must meet minimum requirements; 50% of the individuals designated as group leaders shall each have at least 600 hours of verifiable experience working with school-aged children in a licensed child care program; or at least 900 hours of verifiable experience working with school-aged children in an unlicensed school-age care or camp setting; or shall have completed at least two semester hours of school-age care related coursework and have completed or be enrolled in at least two additional semester hours of school-age related coursework. • Assistant Group Leader: shall be at least 17 years of age and shall complete the BSAC training; or shall have at least 250 hours of verifiable experience working with school-aged children in a licensed child care program or at least 400 hours of verifiable experience working with school-aged children in an unlicensed school-age care or camp setting. <p style="text-align: center;">6 pts.</p> |
|--|---|

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RATED LICENSE FOR CHILD CARE CENTERS WITH PRESCHOOL AND SCHOOL AGE CLASSROOMS



- Meets minimum licensing requirements;
- All enhanced standards and enhanced ratios_minus 1 and
- ERS = lowest_classroom score_at least 5.0

7 pts

All staff must meet the following in addition to the requirements for 1 point. For staff working with both preschool and school aged children, the following may be counted as part of the education and experience already required for 7 points.

- **On site child care administrator:** must meet minimum requirements and have a Level III NCECAC³ or equivalent and at least 4 years full-time verifiable work exp. teaching in an early childhood center or administrative experience (or combination of both); must have at least 900 hours of verifiable experience performing administrative duties in a licensed child care program serving school-aged children, or at least 1350 hours of verifiable experience performing administrative duties in an unlicensed school-age care or camp setting, or shall complete the BSAC Training.
- **Program coordinator:** has completed minimum requirements (including 4 semester hours) and; has completed at least six additional semester hours of school-age care related coursework and has at least 900 hours of verifiable experience working with school-aged children in a licensed child care program or at least 1350 hours of verifiable experience working with school-aged children in an unlicensed school-age care or camp setting; or a has completed at least nine additional semester hours of school-age related coursework and has at least 600 hours of verifiable experience working with school-aged children in a licensed child care program or at least 900 hours of verifiable experience working with school-aged children in an unlicensed school-age care or camp setting; or has a BA/BS degree or higher with at least six additional semester hours of school-age related coursework and has at least 300 hours of verifiable experience working with school-aged children in a licensed school-age care program or 450 semester hours of working with school-aged children in an unlicensed school-age care or camp setting.
- **Lead teachers:** all must meet minimum requirements and have the NCECC⁴ or equivalent; 75% must have an AAS degree in ECE/CD⁵ or an AAS degree in any major with 12 semester hours in ECE/CD⁵, and 2 years full-time verifiable early childhood work experience.
- **Teachers counted in ratios:** all must meet minimum requirements; 50% must have the NCECC⁴ or equivalent and 6 semester hours in ECE/CD⁵ and 2 years full-time verifiable early childhood work experience.
- **Group leader:** all must meet minimum requirements; 75% of group leaders must have at least 600 hours experience working with school-age children in a licensed child care program; or at least 900 hours of verifiable experience working with school-aged children in an unlicensed school age care or camp setting; or shall have completed at least two semester hours of school-age care related coursework and be enrolled in at least two additional semester hours of school-age related coursework.
- **Assistant group leader:** must be at least 18 years old and shall complete the BSAC Training.
7 pts.

Composite Scoring for Star Rating

In each column determine the number of points attained based upon the highest standards met. Total the points from each column to determine the composite score.

| <u>Total Number of Points</u> | <u>Star Rating</u> |
|-------------------------------|--------------------|
| 4 through 6 | Two Stars |
| 7 through 9 | Three Stars |
| 10 through 12 | Four Stars |
| 13 through 15 | Five Stars |

**Note: You may choose to earn one quality point towards the total points earned on your rated license assessment. See Child Care Rule .2823 for a list of educational and programmatic options.*

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Child Development

⁶SACERS = School-Age Care Environment Rating Scale



RATED LICENSE FOR FAMILY CHILD CARE HOMES



| PROGRAM REQUIREMENT | EDUCATION REQUIREMENT |
|---|---|
| <ul style="list-style-type: none"> Meets minimum licensing requirements. <p style="text-align: center;">1 pt.</p> | <p>Operator meets minimum licensing requirements contained which includes:</p> <ul style="list-style-type: none"> Be at least 21 years old (exempt if operating prior to 1-1-98) Must have a high school diploma or equivalent (exempt if operating prior to 1-1-98) Must take 12 hours of annual in-service training (8 hours if 10 years exp. or more) <p style="text-align: center;">1 pt.</p> |
| <ul style="list-style-type: none"> Meets minimum licensing requirements; Has written operational policies. <p style="text-align: center;">2 pts.</p> | <p>Operator meets minimum licensing requirements, plus:</p> <ul style="list-style-type: none"> Have completed the NC Family Child Care Credential or equiv. OR- Have completed at least 4 semester credit hours of ECE/CD² - OR - Have at least 5 years of full-time verifiable early childhood work experience and completed 8 additional in-service hours annually <p style="text-align: center;">2 pts.</p> |
| <ul style="list-style-type: none"> Meets minimum licensing requirements; Has written operational policies; FDCRS¹ score of 4.0 <p style="text-align: center;">3 pts</p> | <p>Operator meets minimum licensing requirements, plus:</p> <ul style="list-style-type: none"> Have completed the NC Family Child Care Credential or equiv. <p style="text-align: center;">3 pts.</p> |
| <ul style="list-style-type: none"> Meets minimum licensing requirements; Has written operational policies; FDCRS¹ score of 4.25 <p style="text-align: center;">4 pts</p> | <p>Operator meets minimum licensing requirements, plus:</p> <ul style="list-style-type: none"> Have completed the NC Family Child Care Credential or equiv. Have completed at least 6 semester credit hours of ECE/CD² <p style="text-align: center;">4 pts</p> |

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Child Development

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RATED LICENSE FOR FAMILY CHILD CARE HOMES



| | |
|--|---|
| <ul style="list-style-type: none"> • Meets minimum licensing requirements; • Has written operational policies; • FDCRS¹ score of 4.5 <p style="text-align: center;">5 pts.</p> | <p>Operator meets minimum licensing requirements, plus:</p> <ul style="list-style-type: none"> • Have completed the NC Family Child Care Credential or equiv. • Have completed at least 12 semester credit hours of ECE/CD² • Two of 12 semester hours in early childhood education are in child care administration or one year verifiable early childhood work experience. <p style="text-align: center;">5 pts.</p> |
| <ul style="list-style-type: none"> • Meets minimum licensing requirements; • Has written operational policies; • FDCRS¹ score of 4.75 • Of the 5 preschoolers enrolled, only 4 children <age 1 <p style="text-align: center;">6pts.</p> | <p>Operator meets minimum licensing requirements, plus:</p> <ul style="list-style-type: none"> • Have completed the NC Family Child Care Credential or equiv. • Have completed at least 18 semester credit hours of ECE/CD² • Five of 18 semester hours in early childhood education are in child care administration or two years verifiable early childhood work experience. <p style="text-align: center;">6 pts.</p> |
| <ul style="list-style-type: none"> • Meets minimum licensing requirements; • Has written operational policies; • FDCRS¹ score of 5.0 • Of the 5 preschoolers enrolled, only 3 children <age 1 <p style="text-align: center;">7 pts</p> | <p>Operator meets minimum licensing requirements, plus:</p> <ul style="list-style-type: none"> • Have an A.A.S. or B.A. in any major with 12 semester credit hours of ECE/CD² AND have 2 years full-time verifiable early childhood work experience - OR - • Have an A.A.S. or B.A. in ECE/CD² AND have 18 months of full-time verifiable early childhood work experience <p style="text-align: center;">7 pts.</p> |

Composite Scoring for Star Rating

In each column determine the number of points attained based upon the highest standards met. Total the points from each column to determine the composite score.

| <u>Total Number of Points</u> | <u>Star Rating</u> |
|-------------------------------|--------------------|
| 4 through 6 | Two Stars |
| 7 through 9 | Three Stars |
| 10 through 12 | Four Stars |
| 13 through 15 | Five Stars |

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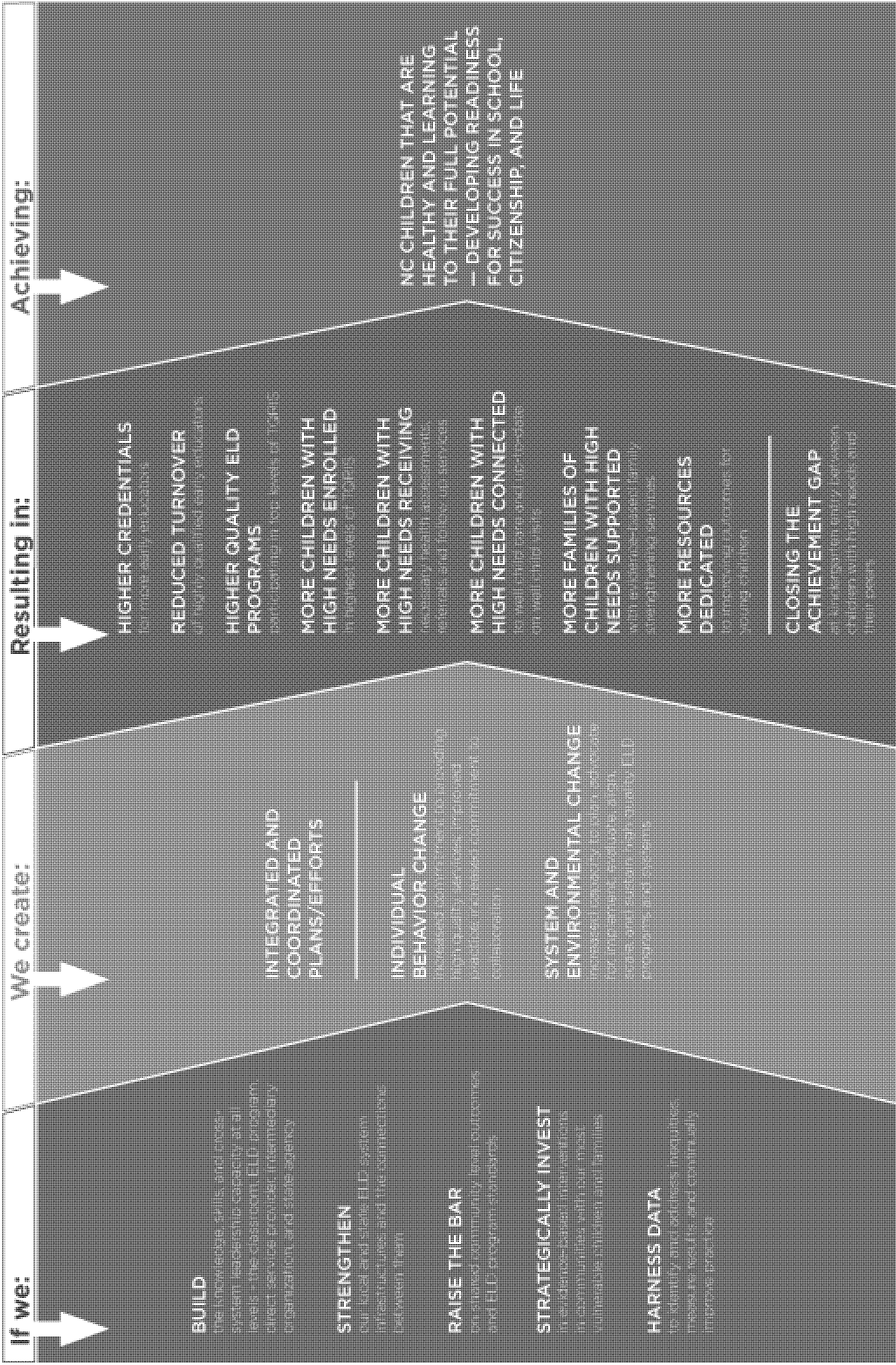
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NORTH CAROLINA'S RACE TO THE TOP EARLY LEARNING CHALLENGE

THEORY OF CHANGE



North Carolina's RTT-ELC Projects and Activities

The table below lists the projects and their activities for each Participating State Agency. The relevant Selection Criteria and funding amounts (grant and other) are also provided. The Selection Criteria for each activity corresponds to the section in the application that describes the activity. Because D.2 includes many activities, the particular activity numbers are also provided for those.

| Early Childhood Advisory Council, Office of the Governor | | | | |
|---|----------------------------------|---|----------------------|---------------------|
| Project Name | Activity | Selection Criteria | Other Funding | Grant Amount |
| 1. ELC Management & Implementation Support | | A.2, A.3, A.4, Absolute Priority 1 | \$550,000 | \$6,708,211 |
| | Grants Management | A.4, Budget Narrative | \$550,000 | \$4,478,211 |
| | Evaluation | A.4, Budget Narrative, | | \$1,000,000 |
| | RTT-ELC TA Reserve | A.4, Budget Narrative | | \$400,000 |
| | Transformation Zone Support | A.2, | | \$830,000 |
| 2. Integrated Data System | | E.2, Absolute Priority 1 | | \$8,894,351 |
| 3. Professional Development Capacity Building | | D.2, Absolute Priority 1 | | \$75,000 |
| | Professional Development Council | D.2, Activity 11 | | \$25,000 |
| | Online Master's Degree Programs | D.2, Activity 5 | | \$50,000 |

| Project Name | Activity | Selection Criteria | Other Funding | Grant Amount |
|------------------------------------|---|---|----------------------|---------------------|
| 18. Partnership Initiatives | | A.2, A.3, B.2, C.3, Absolute Priority 1, Invitational Priority 5 | | \$10,043,872 |
| | Transformation Zone & Capacity Building | A.2 | | \$2,757,572 |
| | Leadership Collaborative | A.3 | | \$2,112,736 |
| | Faith-Based ELD Program Engagement | B.2, Activity 1 | | \$338,588 |
| | Assuring Better Health & Child Outcomes | C.3 | | \$2,665,609 |
| | Child Care Health Consultants | C.3 | | \$2,169,367 |

| Division of Child Development and Early Education | | | | |
|--|--|--|----------------------|----------------------|
| Project Name | Activity | Selection Criteria | Other Funding | Grant Funding |
| 4. Promoting Participation in Revised TQRIS | | B.1, B.2, Absolute Priority 1, Competitive Preference Priority 2, | | \$2,017,266 |
| | Incentives to Improve Work Environment | B.1 | | \$750,000 |
| | Support to Enter the TQRIS | B.2, Competitive Preference Priority 2 | | \$1,242,266 |
| | Task Force on Licensing | B.2, Competitive Preference Priority 2 | | \$25,000 |
| 5. TQRIS Program Quality Measurement Development | | B.3, Absolute Priority 1 | | \$982,870 |

| Project Name | Activity | Selection Criteria | Other Funding | Grant Funding |
|--|--|--|----------------------|----------------------|
| 6. Increasing Access to High Quality ELD Programs | | B.4, D.2, Absolute Priority 1 | | \$4,491,852 |
| | Support 1 & 2 star Programs Attain a Higher Star Rating | B.4 | | \$1,394,430 |
| | Increase Access to High Quality ELD for Infants/Toddlers | B.4 | | \$2,497,422 |
| | Early Childhood Educator Statewide Workforce Study | D.2, Activity 14 | | \$600,000 |
| 7. TQRIS Validation | | B.5, Absolute Priority 1 | | \$2,393,000 |
| 8. Enhanced Professional Development | | B.4, D.2, Absolute Priority 1 | | \$5,419,340 |
| | Infant/Toddler Specialist | B.4 | | \$280,000 |
| | Coaching, Mentoring, and TA Course | D.2, Activity 6 | | \$25,000 |
| | Child Care Resource & Referral Enhancement | D.2, Activity 9 | | \$4,834,340 |
| | Healthy Behavior Specialist | D.2, Activity 10 | | \$280,000 |
| 9. Early Learning & Development (ELD) Standards | | C.1, Absolute Priority 1, Invitational Priority 4 | | \$281,000 |
| 10. Certification & Licensure | | D.2, Absolute Priority 1 | | \$1,425,000 |
| | B-K Teacher Licensure | D.2, Activity 1 | | \$800,000 |
| | Educator Efficacy Endorsement & Certification | D.2, Activity 2 | | \$625,000 |

| Project Name | Activity | Selection Criteria | Other Funding | Grant Funding |
|--|--------------------------------------|--|----------------------|----------------------|
| 11. Access & Articulation | | D.2, Absolute Priority 1 | | \$593,000 |
| | Community College Accreditation | D.2, Activity 3 | | \$200,000 |
| | Community College Innovation Fund | D.2, Activity 4 | | \$393,000 |
| 12. Compensation & Retention | | D.2, Absolute Priority 1 | | \$7,197,000 |
| | WAGES | D.2, Activity 12 | | \$4,000,000 |
| | T.E.A.C.H. [®] Scholarships | D.2, Activity 13 | | \$3,197,000 |
| 13. Cultural Competence | | D.2, Activity 7 Absolute Priority 1 | | \$495,760 |
| 14. ELD Program Administrator Support (Director Leadership Institute) | | D.2, Activity 8 Absolute Priority 1 | | \$1,214,340 |

| Office of Early Learning, Department of Public Instruction | | | | |
|---|--|--|----------------------|----------------------|
| Project Name | Activity | Selection Criteria | Other Funding | Grant Funding |
| 15. K-3 Assessment | | E.1,C.3, Absolute Priority 1, Invitational Priority 4 | \$480,000 | \$9,769,801 |
| | K-3 Assessment | E.1, Absolute Priority 1, Invitational Priority 4 | | \$8,769,801 |
| | Using Data to Improve Classrooms Instruction | Invitational Priority 4, C.3, Absolute Priority 1 | | \$1,000,000 |
| 16. Family Engagement | | B.1, C.4, Absolute Priority 1 | | \$2,000,000 |

| Division of Public Health | | | | |
|----------------------------------|----------------------------------|--|----------------------|----------------------|
| Project Name | Activity | Selection Criteria | Other Funding | Grant Funding |
| 17. Family Strengthening | | C.4, C.3 Absolute Priority 1, Invitational Priority 5 | \$289,900 | \$5,989,460* |
| | NorthEast Connects | C.3, C.4, Absolute Priority 1 | | \$1,998,750 |
| | Family Strengthening Initiatives | C.4, Absolute Priority 1 | | \$3,969,210 |

**The project cost is slightly higher than the sum of the two activity costs because it includes funds for overseeing the two activities.*

“As anyone knows who has worked in the field, implementation of new practice is the biggest challenge of all.”

—Hollin & McMurren, 2001

Implementation: The Missing Link Between Research and Practice

THERE IS A GREAT DEAL OF DISCUSSION about the need to revitalize the nation’s infrastructure. New roads, bridges, schools, and public buildings need to be built using the latest in green technology. Current infrastructure needs to be repaired and retrofitted. This brief makes the case that our human services infrastructure for effective implementation requires a similar investment so that effective programs and practices can be widely adopted and used to produce socially significant outcomes. In the United States, the federal government spends over \$95 billion a year to fund research to help create new interventions and over \$1.6 trillion a year to support services to citizens (Clancy, 2006). However, research results are not being used with sufficient quantity and quality to impact human services and have not provided the intended benefits to consumers and communities. For example, the Institute of Medicine (2001) found that human services typically are inconsistent, often ineffective, and sometimes harmful to consumers. These conclusions were echoed in reviews by the Surgeon General (U.S. Department of Health and Human Services, 1999; 2001) and the President’s New Freedom Commission on Mental Health (2003). The failure to utilize research rests in large part on a faulty or non-existent implementation infrastructure. Current implementation attempts are not making use of the best implementation science related to practice, service, and system change. There are too many weak bridges to nowhere and too much hopeful, but faulty, thinking about how science will move to service.

The “to” in science to service

In the past two decades researchers and policy makers have focused considerable attention on how to define an “evidence-based” program. Such definitions are helpful when practitioners, providers, and policy makers need to *choose what they will invest in on behalf of consumers*. But such lists are not much help in moving science to service. As we attempt to make use of the results of sound science, we are coming to realize that the “to” in science to service represents a whole new set of activities called “implementation.” For many years, science to service has been seen as a passive process that involves “diffusion” and “dissemination of information” that makes its way into the hands of enlightened champions, leaders, and practitioners who then put these innovations into practice (Rogers, 1995; Simpson, 2002). In this approach, researchers do their part by publishing their findings then it is up to managers and practitioners to do their part by reading the literature and making use of the innovations in their work with consumers. This passive process is well accepted and serves as the foundation for most federal and state policies related to making use of evidenced-based

programs and other human service innovations. For example, federal technical assistance (TA) grants fund information gathering, publications and meetings to share information, and training sessions to provide more detailed information in a lecture-discussion format. Using this process, hundreds of millions of dollars are spent each year on the diffusion and dissemination of information in human service domains. While such diffusion and dissemination efforts are necessary they are not sufficient for supporting implementation efforts to solve national problems.

Implementation: The missing link

New evidence is accumulating regarding a more purposeful, active, and effective approach to implementation. Implementation is the art and science of incorporating innovations into typical human service settings to benefit children, families, adults, and communities. We use the term “innovation” to include programs and practices that have a strong research base (e.g. “evidence-based programs”) as well as other programs and practices that have potential benefit to consumers, communities, or provider organizations (e.g. data based deci-

The mission of the National Implementation Research Network (NIRN) is to advance the science and practice of implementation, organization change, and system transformation to help solve social problems.

sion support systems, electronic record systems, targeted fund raising approaches, skill-based hiring methods).

Recently, a comprehensive review of the implementation evaluation literature and current successful practices was completed and a synthesis of that information resulted in new ways to view the methods needed to make better use of science in typical human service settings (Blase & Fixsen, 2003; Blase, Fixsen, Naoom, & Wallace, 2005; Fixsen, Naoom, Blase, Friedman, & Wallace, 2005; Wallace, Blase, Fixsen & Naoom, 2008). From an implementation point of view, doing more and better research on a program or practice itself does not lead to more successful implementation. A series of meta-analyses and detailed assessments of the strength of research findings for certain practices and programs may help a consumer, agency, or community select a program. However, more data on program outcomes will not help implement that program with fidelity and benefits for the intended recipients. "Discovering what works does not solve the problem of program effectiveness. Once models and best practices are identified, practitioners are faced with the challenge of implementing programs properly. A poorly implemented program can lead to failure as easily as a poorly designed one" (Mihalic, Irwin, Fagan, Ballard, & Elliott, 2004).

Results from the synthesis of the implementation literature and best practices yielded two major theoretical frameworks that can guide practice and research efforts to move science to service more effectively and efficiently. The first framework describes the stages of implementation. The second framework provides a view of the core components of implementation.

Stages of Implementation

The literature is clear that implementation is a process that takes two to four years to complete in most provider organizations. It is a recursive process with steps that are focused on achieving benefits for children, families, provider organizations, human service systems, and communities. It appears there are six functional stages of implementation: exploration, installation, initial implementation, full implementation, innovation, and sustainability. The stages are not linear as each impacts the other in complex ways. For example, sustainability factors are very much a part of exploration and full implementation directly impacts sustainability. Or, an organization may move from full implementation back to initial implementation in the midst of unusually high levels of staff turnover.

Core Implementation Components

Based on the commonalities among successfully implemented programs across many fields, core implementation components have been identified (Fixsen et al., 2005). The goal of implementation is to have practitioners (e.g. foster parents, caseworkers, therapists, teachers, physicians) use innovations effectively. To accomplish this, high-fidelity practitioner behavior is created and supported by core implementation components (also called "implementation drivers"). These components are staff selection, pre-service and in-service training, ongoing coaching and consultation, staff performance evaluation, decision support data systems, facilitative administrative supports, and system interventions. These interactive processes are *integrated* to maximize their influence on staff behavior and organizational functioning. The interactive core implementation components also *compensate* for one another in that a weakness in one component can be overcome by strengths in other components.

Conclusion

Stages of Implementation and stage-related work together with effective use of the Core Implementation Components are two key frameworks for creating an effective implementation infrastructure. We need to build, utilize, and evaluate implementation infrastructures and strategies if we are to achieve significant outcomes for consumers and communities. We must learn how to implement well-researched programs and practices effectively on a national scale. In their report of findings from the Blueprint Replication Initiative, Elliott and Mihalic (2004) stated that although ten Blueprint programs studied had completed the necessary efficacy and effectiveness trials and had met the rigorous evaluation standards required for certification as a Blueprint program, they were not prepared to deliver their programs on a useful scale. Only four of the ten programs had the organizational capacity to deliver their program to ten or more new sites a year. According to the authors, "Although we have taken giant strides in determining what works and promoting the use of science-based programs, we have lagged behind in building the internal capacity of designers to deliver their programs" (Elliott & Mihalic, 2004, p. 48). Building implementation infrastructure, effective implementation and scale-up strategies, and capacity is an international priority if we are to reap full advantage from the evidence based program movement. The bridge from science to service must be built, repaired, maintained and improved. ☺

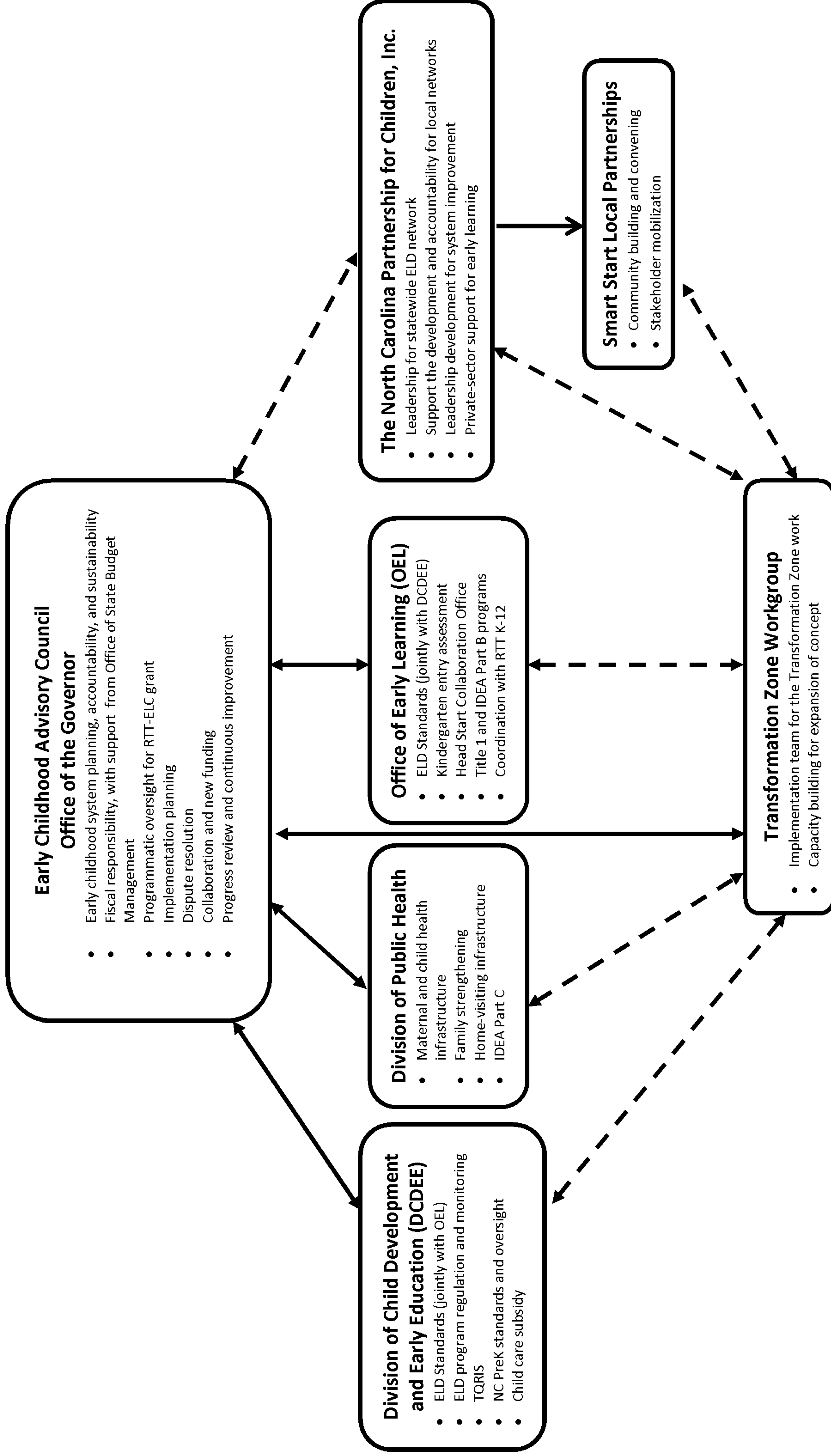


All references included in this document can be found at <http://www.fpg.unc.edu/~nirn/resources/publications/Monograph/>

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National Implementation Research Network, or visit <http://nirn.fpg.unc.edu>

North Carolina Race to the Top – Early Learning Challenge Governance Organizational Chart



MODEL PARTICIPATING STATE AGENCY MEMORANDUM OF UNDERSTANDING

This Memorandum of Understanding (“MOU”) is entered into by and between the North Carolina Early Childhood Advisory Council (“Lead Agency”) and the North Carolina State Department of Health and Human Services Division of Child Development and Early Education (“Participating State Agency”). The purpose of this agreement is to establish a framework of collaboration, as well as articulate specific roles and responsibilities in support of the State in its implementation of an approved Race to the Top-Early Learning Challenge grant project.

I. ASSURANCES

The Participating State Agency hereby certifies and represents that it:

- 1) Agrees to be a Participating State Agency and will implement those portions of the State Plan indicated in Exhibit I, if the State application is funded;
- 2) Agrees to use, to the extent applicable and consistent with the State Plan and Exhibit I:
 - (a) A set of statewide Early Learning and Development Standards;
 - (b) A set of statewide Program Standards;
 - (c) A statewide Tiered Quality Rating and Improvement System; and
 - (d) A statewide Workforce Knowledge and Competency Framework and progression of credentials.
- 3) Has all requisite power and authority to execute and fulfill the terms of this MOU;
- 4) Is familiar with the State’s Race to the Top-Early Learning Challenge grant application and is supportive of and committed to working on all applicable portions of the State Plan;
- 5) Will provide a Final Scope of Work only if the State’s application is funded and will do so in a timely fashion but no later than 90 days after a grant is awarded; and will describe the Participating State Agency’s specific goals, activities, timelines, budgets, and key personnel (“Participating State Agency Plan”) in a manner that is consistent with the Preliminary Scope of Work (Exhibit I) and with the Budget included in section VIII of the State Plan (including existing funds, if any, that the Participating State Agency is using for activities and services that help achieve the outcomes of the State Plan); and
- 6) Will comply with all of the terms of the Race to the Top-Early Learning Challenge Grant, this agreement, and all applicable Federal and State laws and regulations, including laws and regulations applicable to the Race to the Top-Early Learning Challenge program, and the applicable provisions of EDGAR (34 CFR Parts 75, 77, 79, 80, 82, 84, 85, 86, 97, 98 and 99).

II. PROJECT ADMINISTRATION

A. PARTICIPATING STATE AGENCY RESPONSIBILITIES

In assisting the Lead Agency in implementing the tasks and activities described in the State's Race to the Top-Early Learning Challenge grant application, the Participating State Agency will:

- 1) Implement the Participating State Agency Scope of Work as identified in the Exhibit I of this agreement;
- 2) Abide by the governance structure outlined in the State Plan;
- 3) Abide by the Participating State Agency's Budget included in section VIII of the State Plan (including the existing funds from Federal, State, private and local sources, if any, that the Participating State Agency is using to achieve the outcomes in the RTT-ELC State Plan);
- 4) Actively participate in all relevant meetings or other events that are organized or sponsored by the State, by the U.S. Department of Education ("ED"), or by the U.S. Department of Health and Human Services ("HHS");
- 5) Post to any Web site specified by the State, ED, or HHS, in a timely manner, all non-proprietary products and lessons learned developed using Federal funds awarded under the RTT-ELC grant;
- 6) Participate, as requested, in any evaluations of this grant conducted by the State, ED, or HHS;
- 7) Be responsive to State, ED, or HHS requests for project information including on the status of the project, project implementation, outcomes, and any problems anticipated or encountered, consistent with applicable local, State and Federal privacy laws.

B. LEAD AGENCY RESPONSIBILITIES

In assisting the Participating State Agencies in implementing their tasks and activities described in the State's Race to the Top-Early Learning Challenge application, the Lead Agency will:

- 1) Work collaboratively with, and support the Participating State Agency in carrying out the Participating State Agency Scope of Work, as identified in Exhibit I of this agreement;

- 2) Timely award the portion of Race to the Top-Early Learning Challenge grant funds designated for the Participating State Agency in the State Plan during the course of the project period and in accordance with the Participating State Agency's Scope of Work, as identified in Exhibit I, and in accordance with the Participating State Agency's Budget, as identified in section VIII of the State's application;
- 3) Provide feedback on the Participating State Agency's status updates, any interim reports, and project plans and products;
- 4) Keep the Participating State Agency informed of the status of the State's Race to the Top-Early Learning Challenge grant project and seek input from the Participating State Agency, where applicable, through the governance structure outlined in the State Plan;
- 5) Facilitate coordination across Participating State Agencies necessary to implement the State Plan; and
- 6) Identify sources of technical assistance for the project.

C. JOINT RESPONSIBILITIES

- 1) The Lead Agency and the Participating State Agency will each appoint a key contact person for the Race to the Top-Early Learning Challenge grant.
- 2) These key contacts from the Lead Agency and the Participating State Agency will maintain frequent communication to facilitate cooperation under this MOU, consistent with the State Plan and governance structure.
- 3) Lead Agency and Participating State Agency personnel will work together to determine appropriate timelines for project updates and status reports throughout the grant period.
- 4) Lead Agency and Participating State Agency personnel will negotiate in good faith toward achieving the overall goals of the State's Race to the Top-Early Learning Challenge grant, including when the State Plan requires modifications that affect the Participating State Agency, or when the Participating State Agency's Scope of Work requires modifications.

D. STATE RECOURSE IN THE EVENT OF PARTICIPATING STATE AGENCY'S FAILURE TO PERFORM

If the Lead Agency determines that the Participating State Agency is not meeting its goals, timelines, budget, or annual targets, or is in some other way not fulfilling applicable requirements, the Lead Agency will notify the Participating

State Agency of its failure to fulfill the requirements of the MOU. The Lead Agency and the Participating State Agency will attempt to resolve the disagreement through a collaborative process. If the parties are unable to resolve the disagreement through the collaborative process, the Lead Agency will notify the Participating State Agency that it will have 30 days to fulfill the applicable requirements of this MOU. If the Participating State Agency does not fulfill the applicable requirements within 30 days, the Lead Agency may terminate this MOU or initiate such other enforcement measures as are available to the Lead Agency, under applicable State or Federal law.

III. MODIFICATIONS

This Memorandum of Understanding may be amended only by written agreement signed by each of the parties involved, in consultation with ED.

IV. DURATION

This Memorandum of Understanding shall be effective, beginning with the date of the last signature hereon and, if a Race to the Top- Early Learning Challenge grant is received by the State, ending upon the expiration of the Race to the Top- Early Learning Challenge grant project period.

V. SIGNATURES

Authorized Representative of Lead Agency:

Anne Bryan 10/14/11
Signature Date

Anne Bryan Senior Policy Advisor
Print Name Title to the Governor

Authorized Representative of Participating State Agency:

Deborah J. Cassidy 10/14/11
Signature Date

Deborah J. Cassidy Director
Print Name Title

PARTICIPATING STATE AGENCY SCOPE OF WORK

DIVISION OF CHILD DEVELOPMENT AND EARLY EDUCATION

The Participating State Agency hereby agrees to participate in the State Plan, as described in the State's application, and more specifically commits to undertake the tasks and activities described in detail below.

| Selection Criterion | Participating Party | Type of Participation |
|--|---|---|
| <i>Example Row— shows an example of criterion (B)(1) for the State agency that oversees state-funded preschool, IDEA, and Head Start Collab Office</i> | <ul style="list-style-type: none"> • State-funded preschool • IDEA preschool special ed • Head Start Collab Office | <i>Representatives from each program are sitting on the state committee to define statewide QRIS program standards</i> |
| | <ul style="list-style-type: none"> • Head Start Collab Office | <i>Responsible for cross-walking Head Start performance standards with the new Program Standards</i> |
| (A)(3) | <ul style="list-style-type: none"> • DCDEE (CCDF, State-funded preschool, TQRIS) | Serve on the RTT-ELC Coordinating Team Responsible for regularly updating ECAC on RTT-ELC work |
| (B)(1) | <ul style="list-style-type: none"> • DCDEE (CCDF, State-funded preschool, TQRIS) | Responsible for revising TQRIS Responsible for implementing revised TQRIS |
| (B)(2) | <ul style="list-style-type: none"> • DCDEE (CCDF, State-funded preschool, TQRIS) | Responsible for promoting participation in TQRIS Lead and provide staff support for the part-day ELD work group Responsible for oversight and successfully developing new infant/toddler slots in high-quality ELD programs in Innovation Zone |
| (B)(3) | <ul style="list-style-type: none"> • DCDEE (CCDF, State-funded preschool, TQRIS) | Responsible for organizing and leading multi-state consortium about TQRIS measurements Responsible for creating and pilot-testing a new program quality measure for TQRIS |
| (B)(4) | <ul style="list-style-type: none"> • DCDEE (CCDF, State-funded preschool, TQRIS) | Responsible for overseeing and successfully implementing all B.4 projects statewide and in the transformation zone Responsible for implementing revised law limiting subsidy payments to 3-5 star programs Responsible for revising subsidy waiting list procedures to keep separate subsidy lists by age to ensure equal access to high-quality ELD programs |
| (B)(5) | <ul style="list-style-type: none"> • DCDEE (CCDF, State-funded preschool, TQRIS) | Responsible for identifying an independent evaluator to validate TQRIS Responsible for overseeing the TQRIS validation study work |
| (C)(1) | <ul style="list-style-type: none"> • DCDEE (CCDF, State-funded preschool, TQRIS) | Responsible for developing materials and training about the revised ELD standards, in |

June Foyan 10/14/11
Signature (Authorized Representative of Lead Agency) Date

Della Cassil 10/14/11
Signature (Authorized Representative of Participating State Agency) Date

**MODEL PARTICIPATING STATE AGENCY
MEMORANDUM OF UNDERSTANDING**

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- 3) Has all requisite power and authority to execute and fulfill the terms of this MOU;
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V. SIGNATURES

Authorized Representative of Lead Agency:

Anne Bryan 10/14/11
Signature Date
Anne Bryan Senior Policy Advisor
Print Name Title
to the Governor

Authorized Representative of Participating State Agency:

[Signature] 10/13/11
Signature Date
KEVIN RYAN Chief, Women's + Children's Health Section
Print Name Title

authority delegated by Dr. Jeff Engel

PARTICIPATING STATE AGENCY SCOPE OF WORK

DIVISION OF PUBLIC HEALTH

The Participating State Agency hereby agrees to participate in the State Plan, as described in the State's application, and more specifically commits to undertake the tasks and activities described in detail below.

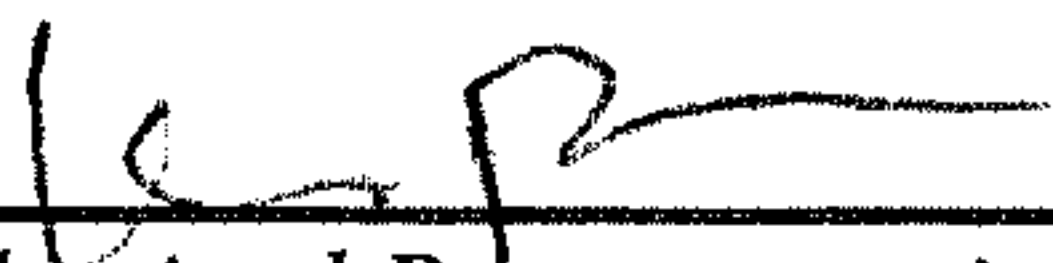
| Selection Criterion | Participating Party | Type of Participation |
|----------------------------|---|--|
| (A)(2) | <ul style="list-style-type: none"> DPH (Women's and Children's Health Section) | Serve on the RTT-ELC Coordinating Team to implement the reform agenda in the State Plan Responsible for regularly updating ECAC on RTT-ELC work |
| (A)(3) | <ul style="list-style-type: none"> DPH (Women's and Children's Health Section) | Serve on the ECAC to align and coordinate early learning and development across the state |
| (B)(4) | <ul style="list-style-type: none"> DPH (Women's and Children's Health Section) | Responsible for implementing the triage and family strengthening activities in (C)(3) which will include facilitating families' access to high-quality ELD programs especially for children with high needs |
| (C)(2) | <ul style="list-style-type: none"> DPH (Women's and Children's Health Section) | Participate in the cross-agency Task Force on Child Assessment |
| (C)(3) | <ul style="list-style-type: none"> DPH (Women's and Children's Health Section) | Develop and implement a Child Finding, Triage, and Community Connections project in the Early Learning Challenge Innovation Zone. Collaborate with NCPC to ensure successful implementation of C.3 projects |
| (C)(4) | <ul style="list-style-type: none"> DPH (Women's and Children's Health Section) | Develop and implement evidence based family strengthening programs in the Early Learning Challenge Innovation Zone Collaborate with NCPC to support family strengthening efforts in the Innovation Zone |
| (D)(2) | DPH (Women's and Children's Health Section) | Support DCDEE's workforce support projects in D.2 by providing public health expertise when needed. |

Continued on next page....

| Selection Criterion | Participating Party | Type of Participation |
|---------------------|---|--|
| (E)(1) | DPH (Women's and Children's Health Section) | Participate in the K-3 Assessment Task Force |
| (E)(2) | <ul style="list-style-type: none"> DPH (Women's and Children's Health Section) | Participate in the data systems governance committee Collaborate to develop and implement the integrated data system plans Implement agency-specific data system modifications and ensure data entry related to new fields Participate in development of Training/TA and stakeholder engagement to support the enhanced data system |


10/14/11

 Signature (Authorized Representative of Lead Agency) Date


10/13/11

 Signature (Authorized Representative of Participating State Agency) Date

MODEL PARTICIPATING STATE AGENCY MEMORANDUM OF UNDERSTANDING

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V. SIGNATURES

Authorized Representative of Lead Agency:

| | |
|-------------------|--|
| <u>Anne Bryan</u> | <u>10/14/11</u> |
| Signature | Date |
| <u>Anne Bryan</u> | <u>Senior Policy Advisor to the Governor</u> |
| Print Name | Title |

Authorized Representative of Participating State Agency:

| | |
|--------------------------------|---|
| <u>Jane St Clair Atkinson</u> | <u>10/12/11</u> |
| Signature | Date |
| <u>Jane St. Clair Atkinson</u> | <u>State Superintendent of Public Instruction</u> |
| Print Name | Title |

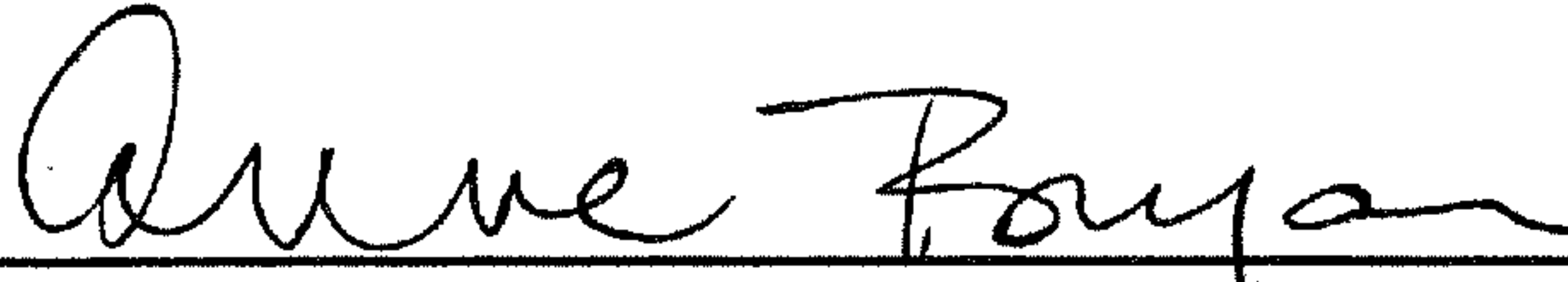
PARTICIPATING STATE AGENCY SCOPE OF WORK

Office of Early Learning, Department of Public Instruction

The Participating State Agency hereby agrees to participate in the State Plan, as described in the State's application, and more specifically commits to undertake the tasks and activities described in detail below.

| Selection Criterion | Participating Party | Type of Participation |
|---------------------|---|---|
| (A)(3) | <ul style="list-style-type: none"> • OEL, including the Head Start State Collaboration Office, Part C Services, and Title I of ESEA Services | Serve on the RTT-ELC Coordinating Team Responsible for regularly updating ECAC on RTT-ELC work Build and maintain connections between the RTT-ELC work with the RTT-K-12 work in NC |
| (B)(1) | <ul style="list-style-type: none"> • OEL, including the Head Start State Collaboration Office, Part C Services, and Title I of ESEA Services | Provide expertise and support, as needed, on the revised TQRIS program standards Continue participation in the TQRIS Advisory Committee |
| (B)(2) | <ul style="list-style-type: none"> • OEL, including the Head Start State Collaboration Office, Part C Services, and Title I of ESEA Services | Provide expertise and support, as needed, regarding the participation of school-based ELD programs in TQRIS |
| (B)(3) | <ul style="list-style-type: none"> • OEL, including the Head Start State Collaboration Office, Part C Services, and Title I of ESEA Services | Provide support, as needed, on TQRIS program quality tools Continue to participate with DCDEE in the L2 federal pilot project |
| (B)(4) | <ul style="list-style-type: none"> • OEL, including the Head Start State Collaboration Office, Part C Services, and Title I of ESEA Services | Support DCDEE's TQRIS efforts |
| (C)(1) | <ul style="list-style-type: none"> • OEL, including the Head Start State Collaboration Office, Part C Services, and Title I of ESEA Services | Responsible for developing materials and training about the revised ELD standards, in collaboration with DCDEE |
| (C)(2) | <ul style="list-style-type: none"> • OEL, including the Head Start State Collaboration Office, Part C Services, and Title I of ESEA Services | Responsible for providing staff support for cross-agency Task Force on Child Assessment Supporting the use of formative assessments in TQRIS, as needed Participate in professional development projects that support child assessments and teacher-child interaction assessments, as needed |
| (C)(3) | <ul style="list-style-type: none"> • OEL, including the Head Start State Collaboration Office, Part C Services, and Title I of ESEA Services | Collaborate with NCPC, DCDEE, and DPH as needed to ensure successful implementation of C.3 projects |
| (C)(4) | <ul style="list-style-type: none"> • OEL, including the Head Start | Continue participating in DCDEE's revision |

| Selection Criterion | Participating Party | Type of Participation |
|---------------------|---|---|
| | State Collaboration Office, Part C Services, and Title I of ESEA Services | process of TQRIS, focusing particularly on program standards Collaborate with DCDEE regarding professional development (PD) about new family engagement standards Head Start Collaboration Office responsible for overseeing the Head Start Hubs to support ELD programs' use of family engagement standards Collaborate with DPH, as needed, to support family strengthening efforts in the Innovation Zone |
| (D)(2) | <ul style="list-style-type: none"> OEL, including the Head Start State Collaboration Office, Part C Services, and Title I of ESEA Services | Support DCDEE's workforce support projects in D.2 by providing expertise when needed |
| (E)(1) | <ul style="list-style-type: none"> OEL, including the Head Start State Collaboration Office, Part C Services, and Title I of ESEA Services | Lead and provide staff to support the work of the K-3 Assessment Task Force Responsible for ensuring the successful development of a K-3 Assessment, the pilot-test, training, professional development, and implementation of the K-3 Assessment Collaborate with others in DPI to develop and implement strong PD regarding how to use the K-3 Assessment to inform instructional practice |
| (E)(2) | <ul style="list-style-type: none"> OEL, including the Head Start State Collaboration Office, Part C Services, and Title I of ESEA Services | Participate in the data systems governance committee Collaborate to develop and implement the integrated data system plans Implement agency-specific data system modifications and ensure data entry related to new fields Participate in development of Training/TA and stakeholder engagement to support the enhanced data system |


10/14/11

 Signature (Authorized Representative of Lead Agency) Date


10/12/11

 Signature (Authorized Representative of Participating State Agency) Date

**MODEL PARTICIPATING STATE AGENCY
MEMORANDUM OF UNDERSTANDING**

This Memorandum of Understanding (“MOU”) is entered into by and between the North Carolina Early Childhood Advisory Council (“Lead Agency”) and the North Carolina State Board of Education (“Participating State Agency”). The purpose of this agreement is to establish a framework of collaboration, as well as articulate specific roles and responsibilities in support of the State in its implementation of an approved Race to the Top-Early Learning Challenge grant project.

I. ASSURANCES

The Participating State Agency hereby certifies and represents that it:

- 1) Agrees to be a Participating State Agency and will implement those portions of the State Plan indicated in Exhibit I, if the State application is funded;
- 2) Agrees to use, to the extent applicable and consistent with the State Plan and Exhibit I:
 - (a) A set of statewide Early Learning and Development Standards;
 - (b) A set of statewide Program Standards;
 - (c) A statewide Tiered Quality Rating and Improvement System; and
 - (d) A statewide Workforce Knowledge and Competency Framework and progression of credentials.
- 3) Has all requisite power and authority to execute and fulfill the terms of this MOU;
- 4) Is familiar with the State’s Race to the Top-Early Learning Challenge grant application and is supportive of and committed to working on all applicable portions of the State Plan;
- 5) Will provide a Final Scope of Work only if the State’s application is funded and will do so in a timely fashion but no later than 90 days after a grant is awarded; and will describe the Participating State Agency’s specific goals, activities, timelines, budgets, and key personnel (“Participating State Agency Plan”) in a manner that is consistent with the Preliminary Scope of Work (Exhibit I) and with the Budget included in section VIII of the State Plan (including existing funds, if any, that the Participating State Agency is using for activities and services that help achieve the outcomes of the State Plan); and
- 6) Will comply with all of the terms of the Race to the Top-Early Learning Challenge Grant, this agreement, and all applicable Federal and State laws and regulations, including laws and regulations applicable to the Race to the Top-Early Learning Challenge program, and the applicable provisions of EDGAR (34 CFR Parts 75, 77, 79, 80, 82, 84, 85, 86, 97, 98 and 99).

II. PROJECT ADMINISTRATION

A. PARTICIPATING STATE AGENCY RESPONSIBILITIES

In assisting the Lead Agency in implementing the tasks and activities described in the State's Race to the Top-Early Learning Challenge grant application, the Participating State Agency will:

- 1) Implement the Participating State Agency Scope of Work as identified in the Exhibit I of this agreement;
- 2) Abide by the governance structure outlined in the State Plan;
- 3) Abide by the Participating State Agency's Budget included in section VIII of the State Plan (including the existing funds from Federal, State, private and local sources, if any, that the Participating State Agency is using to achieve the outcomes in the RTT-ELC State Plan);
- 4) Actively participate in all relevant meetings or other events that are organized or sponsored by the State, by the U.S. Department of Education ("ED"), or by the U.S. Department of Health and Human Services ("HHS");
- 5) Post to any Web site specified by the State, ED, or HHS, in a timely manner, all non-proprietary products and lessons learned developed using Federal funds awarded under the RTT-ELC grant;
- 6) Participate, as requested, in any evaluations of this grant conducted by the State, ED, or HHS;
- 7) Be responsive to State, ED, or HHS requests for project information including on the status of the project, project implementation, outcomes, and any problems anticipated or encountered, consistent with applicable local, State and Federal privacy laws.

B. LEAD AGENCY RESPONSIBILITIES

In assisting the Participating State Agencies in implementing their tasks and activities described in the State's Race to the Top-Early Learning Challenge application, the Lead Agency will:

- 1) Work collaboratively with, and support the Participating State Agency in carrying out the Participating State Agency Scope of Work, as identified in Exhibit I of this agreement;

- 2) Timely award the portion of Race to the Top-Early Learning Challenge grant funds designated for the Participating State Agency in the State Plan during the course of the project period and in accordance with the Participating State Agency's Scope of Work, as identified in Exhibit I, and in accordance with the Participating State Agency's Budget, as identified in section VIII of the State's application;
- 3) Provide feedback on the Participating State Agency's status updates, any interim reports, and project plans and products;
- 4) Keep the Participating State Agency informed of the status of the State's Race to the Top-Early Learning Challenge grant project and seek input from the Participating State Agency, where applicable, through the governance structure outlined in the State Plan;
- 5) Facilitate coordination across Participating State Agencies necessary to implement the State Plan; and
- 6) Identify sources of technical assistance for the project.

C. JOINT RESPONSIBILITIES

- 1) The Lead Agency and the Participating State Agency will each appoint a key contact person for the Race to the Top-Early Learning Challenge grant.
- 2) These key contacts from the Lead Agency and the Participating State Agency will maintain frequent communication to facilitate cooperation under this MOU, consistent with the State Plan and governance structure.
- 3) Lead Agency and Participating State Agency personnel will work together to determine appropriate timelines for project updates and status reports throughout the grant period.
- 4) Lead Agency and Participating State Agency personnel will negotiate in good faith toward achieving the overall goals of the State's Race to the Top-Early Learning Challenge grant, including when the State Plan requires modifications that affect the Participating State Agency, or when the Participating State Agency's Scope of Work requires modifications.

D. STATE RECOURSE IN THE EVENT OF PARTICIPATING STATE AGENCY'S FAILURE TO PERFORM

If the Lead Agency determines that the Participating State Agency is not meeting its goals, timelines, budget, or annual targets, or is in some other way not fulfilling applicable requirements, the Lead Agency will notify the Participating

State Agency of its failure to fulfill the requirements of the MOU. The Lead Agency and the Participating State Agency will attempt to resolve the disagreement through a collaborative process. If the parties are unable to resolve the disagreement through the collaborative process, the Lead Agency will notify the Participating State Agency that it will have 30 days to fulfill the applicable requirements of this MOU. If the Participating State Agency does not fulfill the applicable requirements within 30 days, the Lead Agency may terminate this MOU or initiate such other enforcement measures as are available to the Lead Agency, under applicable State or Federal law.

III. MODIFICATIONS

This Memorandum of Understanding may be amended only by written agreement signed by each of the parties involved, in consultation with ED.

IV. DURATION

This Memorandum of Understanding shall be effective, beginning with the date of the last signature hereon and, if a Race to the Top- Early Learning Challenge grant is received by the State, ending upon the expiration of the Race to the Top- Early Learning Challenge grant project period.

V. SIGNATURES

Authorized Representative of Lead Agency:

| | |
|-------------------|--|
| <u>Anne Bryan</u> | <u>10/17/11</u> |
| Signature | Date |
| <u>Anne Bryan</u> | <u>senior Policy Advisor to the Governor</u> |
| Print Name | Title |

Authorized Representative of Participating State Agency:

| | |
|----------------------------|-----------------|
| <u>William C. Harrison</u> | <u>10/17/11</u> |
| Signature | Date |
| <u>William C. Harrison</u> | <u></u> |
| Print Name | Title |

PARTICIPATING STATE AGENCY SCOPE OF WORK

State Board of Education

The organization hereby agrees to participate in the State Plan, as described in the State's application, and more specifically commits to undertake the tasks and activities described in detail below.

| Selection Criterion | Participating Party | Type of Participation |
|---------------------|--|---|
| (A)(3) | <ul style="list-style-type: none"> • State Board of Education | Serve on the RTT-ELC Coordinating Team Help build and maintain connections between the RTT-ELC work with the RTT-K-12 work in NC |
| (B)(2) | <ul style="list-style-type: none"> • | Provide expertise and support, as needed, regarding the participation of school-based Early Learning and Development programs in the Tiered Quality Rating and Improvement System |
| (C)(1) | <ul style="list-style-type: none"> • | Collaborate in the alignment between the Early Learning and Development Standards and the K-12 Common Core and Essential Elements |
| (E)(1) | | Review and approve the K-3 Assessment Task Force recommendations Review and approve the development of a K-3 Assessment |
| (E)(2) | | Support the cross-agency efforts to develop and implement an early childhood integrated data system that links to the State Longitudinal Data System |


 _____ 10/14/11
 Signature (Authorized Representative of Lead Agency) Date


 _____ 10/12/11
 Signature (Authorized Representative of Participating State Agency) Date


PARTICIPATING STATE AGENCY SCOPE OF WORK

EARLY CHILDHOOD ADVISORY COUNCIL

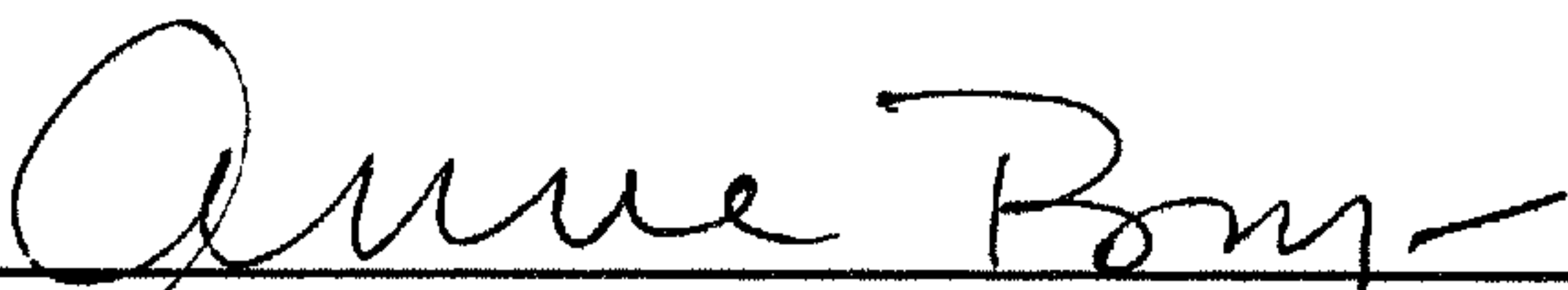
The Participating State Agency hereby agrees to participate in the State Plan, as described in the State's application, and more specifically commits to undertake the tasks and activities described in detail below.

| Selection Criterion | Participating Party | Type of Participation |
|----------------------------|--|--|
| (A)(2) | <ul style="list-style-type: none"> • ECAC | Responsible for reviewing and revising state goals Responsible for monitoring state's progress toward meeting collective goals |
| (A)(3) | <ul style="list-style-type: none"> • ECAC | Lead the RTT-ELC Coordinating Team Provide programmatic oversight for the RTT-ELC work Provide state-level support for Innovation Zone work Responsible for helping to reduce state agency barriers to effective implementation Support and foster collaboration among key agencies and organizations to meet NC's RTT-ELC goals |
| (A)(4) | <ul style="list-style-type: none"> • ECAC | Responsible for developing a sustainability plan |
| (B)(1) | <ul style="list-style-type: none"> • ECAC | Provide oversight and advice regarding B.1 efforts |
| (B)(2) | <ul style="list-style-type: none"> • ECAC | Provide oversight and advice regarding B.2 efforts |
| (B)(3) | <ul style="list-style-type: none"> • ECAC | Provide oversight and advice regarding B.3 efforts |
| (B)(4) | <ul style="list-style-type: none"> • ECAC | Provide oversight and advice regarding B.4 efforts |
| (B)(5) | <ul style="list-style-type: none"> • ECAC | Provide oversight and advice regarding B.5 efforts |
| (C)(1) | <ul style="list-style-type: none"> • ECAC | Provide oversight and advice regarding C.1 efforts |
| (C)(2) | <ul style="list-style-type: none"> • ECAC | Provide oversight and advice regarding C.2 efforts |
| (C)(3) | <ul style="list-style-type: none"> • ECAC | Provide oversight and advice regarding C.3 efforts |
| (C)(4) | <ul style="list-style-type: none"> • ECAC | Provide oversight and advice regarding C.4 efforts |
| (D)(2) | <ul style="list-style-type: none"> • ECAC | Provide oversight and advice regarding D.2 efforts |
| (E)(1) | <ul style="list-style-type: none"> • ECAC | Provide oversight and advice regarding E.1 efforts |

| Selection Criterion | Participating Party | Type of Participation |
|---------------------|--|--|
| (E)(2) | <ul style="list-style-type: none"> • ECAC | Provide oversight and advice about E.2 efforts Participate in the data systems governance committee Foster collaboration to develop and implement the integrated data system plans |


10-14-11

 Signature (*Authorized Representative of Lead Agency*) Date


10-14-11

 Signature (*Authorized Representative of Participating State Agency*) Date

NOTE: For the tasks and activities listed here, the Early Childhood Advisory Council is both the Lead Agency and the Participating State Agency; therefore, no memorandum of understanding is needed. This scope of work is included for information.

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

October 10, 2011

Dear Secretaries Duncan and Sebelius:

On behalf of the North Carolina Child Care Resource and Referral (CCR&R) Council, which is responsible for providing leadership and management to ensure a high quality statewide child care resource and referral system, we are writing in support of North Carolina's application for the Race to the Top – Early Learning Challenge grant.

The Council is committed to a strong statewide system of support for NC's early childhood providers, for NC's families who use early childhood services, and for NC's communities who depend on the early childhood system. Governor Perdue's Early Childhood Advisory Council has worked to submit a proposal designed to lead North Carolina toward transformational results as we seek to assure that every young child in our state is ready for success in school and in life. As you will learn through your review, the proposal outlines key goals and a range of effective and compelling strategies to promote school readiness for children with high needs across the state. Many of these strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

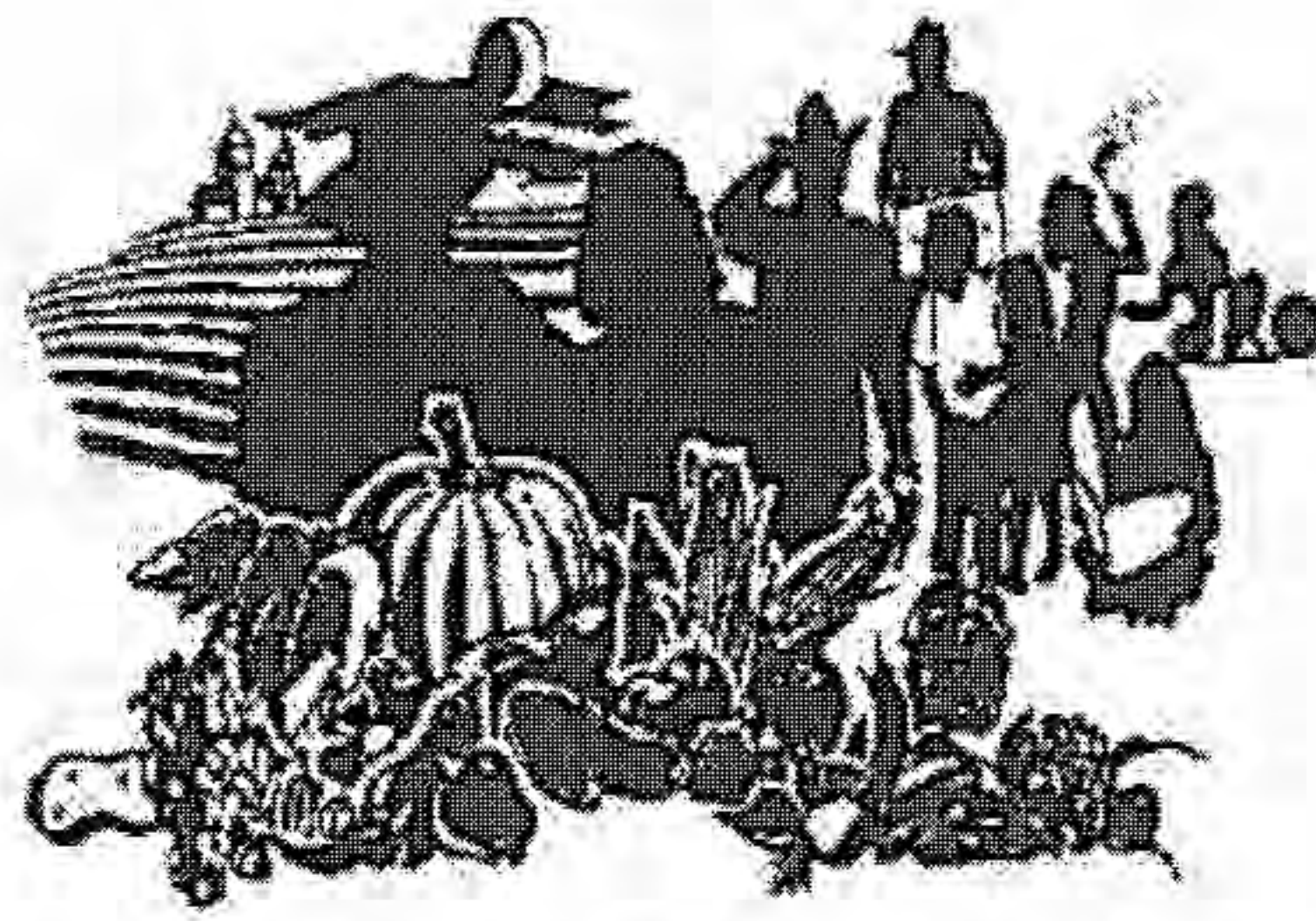
The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system designed to prepare children for success, and is an opportunity to leverage those resources to create a more advanced model. The Early Learning Challenge grant funds will allow North Carolina to take additional bold steps.

The North Carolina Child Care Resource and Referral Council, its 14 regional lead child care resource and referral agencies and local CCR&Rs partner with all system participants to deliver services in each of North Carolina's 100 counties which positively impact the quality of early childhood education. The Council looks forward to partnering with our state's early care and education system to support the work outlined in the Race to the Top – Early Learning Challenge grant proposal toward our shared goals.

Sincerely,

(b)(6)

Janet Singerman
President
Child Care Resources Inc.



EAST COAST MIGRANT HEAD START PROJECT

2700 Wycliff Road, Suite 302 ▪ Raleigh, North Carolina 27607

Telephone: (919) 420-0334 ▪ Fax: (919) 783-8368

September 30, 2011

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

Dear Secretaries Duncan and Sebelius,

As the Interim Chief Executive Officer for East Coast Migrant Head Start Project (ECMHSP), I am writing to support North Carolina's application for the *Race to the Top – Early Learning Challenge* grant.

Governor Perdue's Early Childhood Advisory Council has prepared an excellent proposal designed to lead North Carolina toward transformational results as we seek to assure that every young child in our State is ready for success in school and throughout life. The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the State. Many of the strategies reflect a deep understanding of the link between the quality of early learning and positive developmental outcomes for children. North Carolina recognizes that in order for its children to be most successful, the multiple service delivery systems throughout the State must interact effectively. The proposal outlines specific strategies for how each system will contribute to and be held accountable for ensuring every child's success.

The *Early Learning Challenge* proposal builds on North Carolina's long term investment in a coordinated early learning and development system designed to prepare children for success. Receiving the *Early Learning Challenge* funds will create an opportunity for North Carolina to leverage existing resources to create a more advanced model of early care and education.

East Coast Migrant Head Start Project's mission is to "prepare children, especially the children of migrant & seasonal farmworkers, for success". ECMHSP recognizes that by providing holistic, high quality early education services, and by building a strong foundation for children's future academic and social success, the young children of North Carolina will grow to be strong leaders in our nation. ECMHSP is committed to supporting the work outlined in North Carolina's *Race to the Top – Early Learning Challenge* grant proposal.

Sincerely,

(b)(6)

John E. Menditto



The Family Child Care Association of Wake County

P.O. Box 23

Cary, North Carolina 27512

<www.familychildcareassociation.web.officelive.com>

Marva Warren

President
919-250-9955
mskay1@bellsouth.net

Sandra White

Vice President
919-875-8360
Zoegw2002@yahoo.com

Louise Freeman

Treasurer
919-787-9227
mamalufreeman@nc.rr.com

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

October 11, 2011

Dear Secretaries Duncan and Sebelius,

As the Advocacy Chair of the Family Child Care Association of Wake County I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal with input from key stakeholders in North Carolina. The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Other strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

The proposal also builds on North Carolina's long-term investment in a coordinated early learning and development system designed to prepare children for success, and is an opportunity to leverage those resources to create a more advanced model. The Early Learning Challenge grant funds will allow North Carolina to take additional bold steps.

The mission of the Family Child Care Association of Wake County is to support, educate and promote family child care as a profession and child care option in the community, and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal.

As a profession we are writing to give our support of the Race to the Top – Early Learning Challenge grant. However, as a supporter of this grant, we expect that the family child care profession will be included as recipients of any projects or programs that are established with this grant funding.

Sincerely,

Michele Miller-Cox

"We Care For the Future In Our Homes"

MEREDITH

COLLEGE

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

October 13, 2011

Dear Secretaries Duncan and Sebelius,

As Associate Professor of Education at Meredith College, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal designed to lead North Carolina toward transformational results as we seek to assure that every young child in our state is ready for success in school and in life. The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system designed to prepare children for success, and is an opportunity to leverage those resources to create a more advanced model. The Early Learning Challenge grant funds will allow North Carolina to take additional bold steps.

My organization's mission is to develop teachers who appreciate their significant role in a diverse society, and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal toward our shared goals.

Sincerely,

(b)(6)

Marge Terhaar-Yonkers, Ph.D.
Associate Professor, Education

**NORTH CAROLINA EARLY CHILDHOOD ASSOCIATION***...formerly, the North Carolina Day Care Association***NCECA, P.O. BOX 4292, CHAPEL HILL, NC 27515, 919-442-2000**

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

October 5, 2011

Dear Secretaries Duncan and Sebelius,

As the President of the North Carolina Early Childhood Association (NCECA), I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal with input from key stakeholders in North Carolina. The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system designed to prepare children for success, and is an opportunity to leverage those resources to create a more advanced model. The Early Learning Challenge grant funds will allow North Carolina to take additional bold steps.

My organization has been working since 1960 to improve the quality of care in North Carolina. We are committed to making high quality child care available to all children in our state, and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal.

Sincerely,

(b)(6)

Janice Price



PO Box 959
Chapel Hill, NC 27514
919-942-7442
www.ncicdp.org

September 24, 2011

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

Dear Secretaries Duncan and Sebelius,

As the President of the North Carolina Institute for Child Development Professionals (Institute) I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal designed to lead North Carolina toward transformational results as we seek to assure that every young child in our state is ready for success in school and in life.

The mission of the Institute is to promote the implementation of a comprehensive professional development and recognition system that links education and compensation for child development professionals to ensure high quality care and education services for children and families.

The Institute is committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal toward our shared goals. The proposal outlines key goals and a range of well-developed, targeted strategies to promote school readiness for children with high needs across the state. The strategies reflect a deep understanding of the link between the quality of early learning, outcomes for children and the importance of supporting a great early childhood workforce. Each strategy reflects the ongoing commitment of the state to strive toward the goal of providing quality child care for all children through an data-driven, comprehensive systemic approach.

North Carolina leads the nation in the development and implementation of workforce recognition, reward and support models. The Early Learning Challenge grant will allow North Carolina to take additional bold steps to fully implement the first-in-the-nation, field-wide Early Educator Certification system. Early Educator Certification, a workforce recognition and reward system, will not only contribute to the creation of an aggregate data system inclusive of educator education but will supports the critical connection with and alignment of the early childhood and K-3 teacher education standards and rewards.

Sincerely,

Anna Mercer-McLean
Board President and Director of Community School for People under Six

North Carolina Interagency Coordinating Council

LaTonya McIver, Parent Co- Chair

Theresa Flynn, MD, Professional Co-Chair

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

October 10, 2011

Dear Secretaries Duncan and Sebelius,

On behalf of the North Carolina Interagency Coordinating Council (NC-ICC), we are writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant prepared by Governor Perdue's Early Childhood Advisory Council. We are particularly happy to document strong support for the planning and operationalizing of a statewide early childhood longitudinal data system in North Carolina. Such a system would significantly enhance interagency capacity for service system, evaluation, improvement, and advocacy. It represents a perfect vehicle, given the stage of the state's early childhood system development, to better coordinate and integrate different agency and program specific approaches to data collection. It builds directly on the recommendations of previous planning and will provide a strong framework and impetus for continuing to move forward by improving the quality, utility, comprehensiveness, and accessibility of child, program, and staff data. Another outcome will be the maintenance and strengthening of a functional connection between research and practice. A final observation is that it will help inform and direct the state's comprehensive system of professional training across all the early childhood agencies.

We look forward to being an active collaborator in this new initiative that will focus on children with high needs, including infants, toddlers, and preschoolers with disabilities and developmental delays. If you have any questions, feel free to contact Laura Curtis, NC-ICC Coordinator, Early Intervention Branch, at 919-707-5532 or via email, Laura.Curtis@dhhs.nc.gov.

Sincerely,

(b)(6)

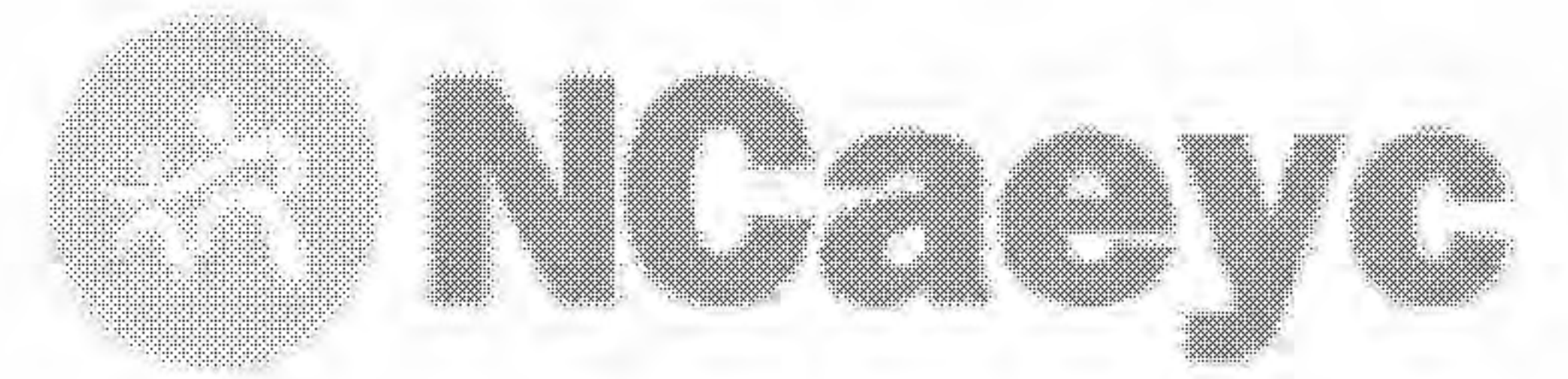
LaTonya McIver
Parent Co-Chair

(b)(6)

Theresa Flynn, MD
Professional Co-Chair

North Carolina Interagency Coordinating Council
for Children from Birth to Five with Disabilities and Their Families

Cc: Laura Curtis, NC-ICC Coordinator, Early Intervention Branch, Division of Public Health
Sherry Franklin, Part C Coordinator, Early Intervention Branch, Division of Public Health
Dr. Vivian James, 619 Coordinator, Department of Public Instruction
Dr. Deborah Carroll, Early Intervention Branch Head, Division of Public Health
Dr. Kevin Ryan, Women's and Children's Health Section Chief, Division of Public Health



U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

October 3, 2011

Dear Secretaries Duncan and Sebelius,

As the Executive Director of the North Carolina Association for the Education of Young Children (NCAeeyc), I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal designed to lead North Carolina toward transformational results as we seek to assure that every young child in our state is ready for success in school and in life. The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system designed to prepare children for success, and is an opportunity to leverage those resources to create a more advanced model. The Early Learning Challenge grant funds will allow North Carolina to take additional bold steps.

NCAeeyc's mission is to be the voice of early childhood professionals who work with or on behalf of young children birth through age eight. As NCAeeyc strives to promote and inspire excellence in the early care and education of North Carolina's young children, we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal toward our shared goals.

Sincerely,

(b)(6)

Lorie C. Barnes
Executive Director

North Carolina Association for the Education of Young Children
an affiliate of naeyc

2209 Century Drive, Suite 550, Raleigh, NC 27612

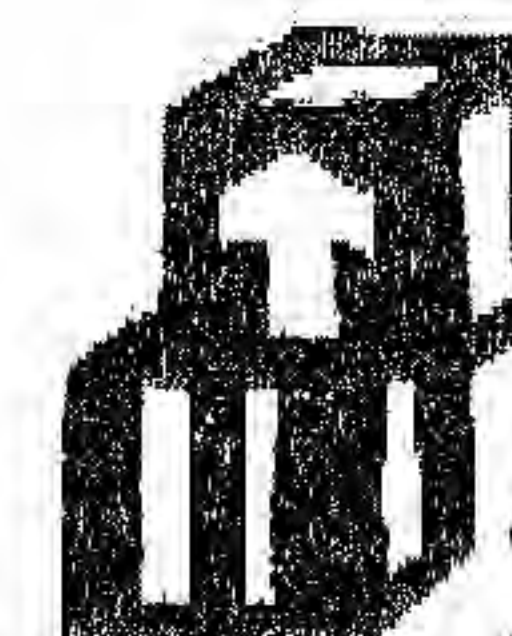
919-510-5034 (p)

919-510-5033 (f)

www.NCaeyc.org



North Carolina Head Start Association



Patricia Colón, MSA
President
601 Royall Ave., Goldsboro, NC 27534
(P) 919-580-1796 (F) 919-736-4268

www.ncheadstart.org

Micker Richardson, Executive Director
(P) 252-506-0479 (F) 252-294-1138
(E) mrichardson@ncheadstart.org

October 12, 2011

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

Dear Secretaries Duncan and Sebelius:

As the Director for Children and Families of WAGES Head Start/Early Head Start Program and President of the North Carolina Head Start Association (NCHSA), I am writing in support of North Carolina's application for the Race to the Top – Early Learning Challenge grant.

A proposal has been prepared by Governor Perdue's Early Childhood Advisory Council that is designed to lead North Carolina toward transformational results as we seek to assure that every young child in our state is ready for success in school and in life. The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state.

Many of these tactics reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Other strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable – as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system designed to prepare children for success, and is an opportunity to leverage those resources to create a more advanced model. The Early Learning Challenge grant funds will allow North Carolina to take additional bold steps.

WAGES Head Start/Early Head Start provides comprehensive child development and family services to vulnerable children 0-5 years-old and their families. With our shared goals in mind, we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal.

(b)(6)

Patricia Colón
NCHSA President
WAGES Head Start/Early Head Start Director for Children and Families

Marie McDonald, 1st Vice President
(P) 252-223-1670
(E) maria.mcdonald@costalcommunityaction.com

Charlen Jones, 2nd Vice President
(P) 336-367-4993, ext. 232

Katrina Morales, Parent Representative
(P) 336-786-6155, ext. 228

Dr. Barbara Heckman, Staff Representative
(P) 252-223-1682
(E) Barbara.heckman@costalcommunityaction.com

Shirley Whitley, Treasurer
(P) 919-934-2145
(E) swhsdfr@yahoo.com

Betty DePina, Secretary
(P) 828-693-1711
(E) betty@woca.net

Tom Folsom, Parliamentarian
(P) 910-259-7603

Lacy Bell, Jr., Ex-Officio
(P) 910-592-7323
(E) headstart@sampsonnc.com



2322 River Road
Burlington, NC 27217

Phone: 336.513.0063
Fax: 336.226.1152

www.alamancechildren.org

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84,412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

September 21, 2011

Dear Secretaries Duncan and Sebelius,

As the Interim Executive Director of the Alamance Partnership for Children, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal with input from key stakeholders in North Carolina, including representatives from Smart Start local partnerships and our state organization, The North Carolina Partnership for Children, Inc.

The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system and is an opportunity to leverage those resources to build on our success. Smart Start's vision is that every child reaches his or her potential and is prepared for success in a global community, and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal.

Sincerely,

(b)(6)

Carrie Theall, MLIS
Interim Executive Director

Smart
ALBEMARLE **START** PARTNERSHIP

Serving Northeastern North Carolina

www.albemarlessp.org

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

September 29, 2011

Dear Secretaries Duncan and Sebelius,

As the President of Albemarle Smart Start Partnership, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal with input from key stakeholders in North Carolina, including representatives from Smart Start local partnerships and our state organization, The North Carolina Partnership for Children, Inc.

The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system and is an opportunity to leverage those resources to build on our success. Smart Start's vision is that every child reaches his or her potential and is prepared for success in a global community, and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal.

Sincerely,

(b)(6)

Dr. Denauvo M. Robinson, President

1403 Parkview Drive/Edgewood Center, Elizabeth City, North Carolina 27909-6533

Phone: 252-333-1233

Fax: 252-333-1201

Toll Free: 800-262-8314



Alexander County

Partnership For Children



U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

September 22, 2011

Dear Secretaries Duncan and Sebelius,

As the Executive Director of the Alexander County Partnership for Children I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal with input from key stakeholders in North Carolina, including representatives from Smart Start local partnerships and our state organization, The North Carolina Partnership for Children, Inc.

The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system and is an opportunity to leverage those resources to build on our success. Smart Start's vision is that every child reaches his or her potential and is prepared for success in a global community, and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal.

Sincerely,

(b)(6)

Susan G. Cogdill
Executive Director



"Building Brighter Futures"

994 North Main Street
P.O. Box 1643, Sparta NC 28675
Phone: (336) 372-2846
Fax: (336) 372-7705
Website: www.alleghanykids.com
Email: apfc@skybest.com

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

October 3, 2011

Dear Secretaries Duncan and Sebelius,

As the Executive Director of the Allegheny Partnership for Children, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal with input from key stakeholders in North Carolina, including representatives from Smart Start local partnerships and our state organization, The North Carolina Partnership for Children, Inc.

The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Other strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system and is an opportunity to leverage those resources to build on our success. Smart Start's vision is that every child reaches his or her potential and is prepared for success in a global community, and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal.

Sincerely,

(b)(6)

Kim W. Shaw
Executive Director



U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

October 4, 2011

Dear Secretaries Duncan and Sebelius,

As the Executive Director of the Anson County Partnership for Children (a Smart Start partnership) I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal which will strengthen the work of the model early learning and education system led by the state organization, The North Carolina Partnership for Children, Inc.

The proposal outlines key goals and strategies to promote school readiness for children with high needs across the state. The strategies reflect a link between the quality of early learning environments and outcomes for children. There is great need for increasing services to vulnerable children in low population and low wealth counties across the state. Many services and systems which were in place in these counties in the 1990's have been slowly dismantled by budget cuts to Smart Start over the last decade. Your investment in a plan to target the most vulnerable young children in the most vulnerable counties in our state would go far in overcoming the disproportionate damage that has been done to children in poor communities in North Carolina.

High quality early care that is accessible to all, especially the underserved children growing up in low wealth communities, is essential to closing the achievement gap for all children. Smart Start's vision is that every child reaches his or her potential and is prepared for success, and we are committed to supporting North Carolina's Race to the Top – Early Learning Challenge grant proposal.

Sincerely,

(b)(6)

Elaine B. Scarborough
Executive Director

"Helping make Anson County a better place to be a child and to raise a child"

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

September 30, 2011

Dear Secretaries Duncan and Sebelius,

As the Executive Director of Ashe County Partnership for Children, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal with input from key stakeholders in North Carolina, including representatives from Smart Start local partnerships and our state organization, The North Carolina Partnership for Children, Inc.

The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

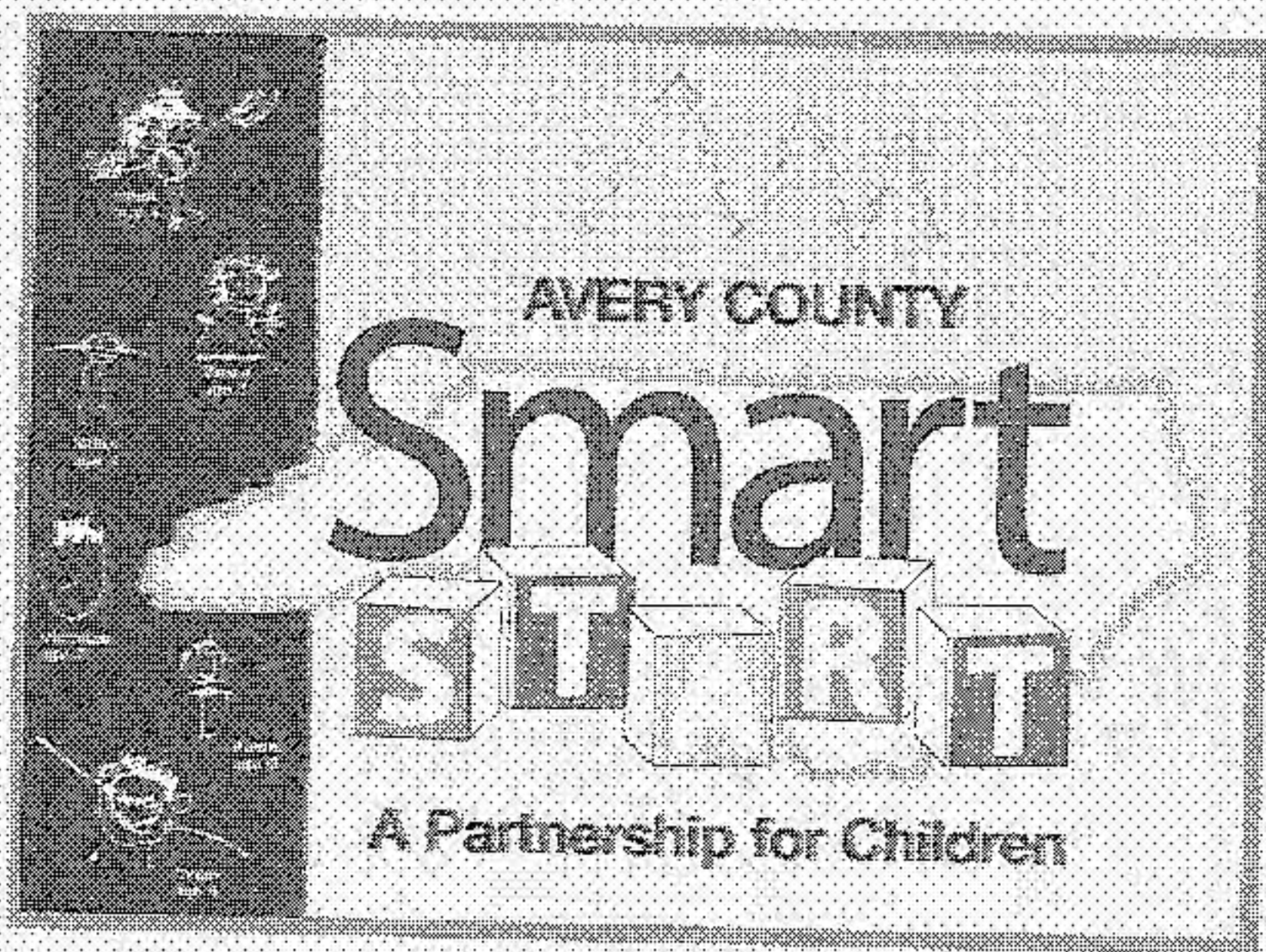
The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system and is an opportunity to leverage those resources to build on our success. Smart Start's vision is that every child reaches his or her potential and is prepared for success in a global community, and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal.

Sincerely,

(b)(6)

Sarah Wolf
Executive Director





405 Hardee's Alley
PO Box 1455
Newland, NC 28657

voice: 828-733-2899
fax: 828-733-9122
e-mail: acpfc@bellsouth.net

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

October 3, 2011

Dear Secretaries Duncan and Sebelius,

As the Executive Director of the Avery County Smart Start: A Partnership for Children, Inc., a member of the Smart Start network in North Carolina, I am writing to reiterate the need to rebuild our state's model early care and education system to strengthen outcomes for young children, and to discuss the ways that our *Race to the Top -- Early Learning Challenge* grant proposal has the potential to do so.

Over the past several years, the fragile infrastructure for service delivery to vulnerable children in low-population areas has been slowly dismantled. Without other resources in these poor counties, the decline is amplified and the losses have been devastating. By targeting those who have least, North Carolina's proposal would show promise to restore opportunities for children and their families equitably, and would overcome the disproportionate damage inflicted by austerity measures and funding shortages in poor communities that are already suffering immensely.

Additional funds and eligibility criteria for child care subsidies in low-resource areas are also critical to a comprehensive recovery. The investment in high quality early care that is accessible to all -- particularly to those in rural communities -- is essential to enabling the most vulnerable to 'enter the race' that we are committed to win.

Finally, a recommitment to locally-driven and -designed systems and services that interface, and are responsive at every level, are necessary success factors and are the linchpins of North Carolina's effort.

With these priorities in mind, I urge you to strengthen North Carolina's long-term investment in early learning by selecting and funding our grant proposal. Much of the progress made in other states is due, in large part, to the successful model created and the pioneering work done here in North Carolina.

Sincerely,

(b)(6)

Sara B. Yackey
Executive Director

file

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

September 22, 2011

Dear Secretaries Duncan and Sebelius,

As the Board President of the Beaufort Hyde Partnership for Children, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal with input from key stakeholders in North Carolina, including representatives from Smart Start local partnerships and our state organization, The North Carolina Partnership for Children, Inc.

The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system and is an opportunity to leverage those resources to build on our success. Smart Start's vision is that every child reaches his or her potential and is prepared for success in a global community, and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal.

Sincerely,

(b)(6)

Penny G. Sermons, Director, LRC/Library
Beaufort County Community College



A PARTNERSHIP FOR CHILDREN, INC.

228-B WEST BROAD STREET • P.O. BOX 2255
ELIZABETHTOWN, NC 28337
Phone: 910-862-3335 • Fax: 910-862-7031
E-mail: bcpfced@yahoo.com

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

September 28, 2011

Dear Secretaries Duncan and Sebelius,

As the Board of Directors of Bladen Smart Start – A Partnership for Children, Inc., we are writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal with input from key stakeholders in North Carolina, including representatives from Smart Start local partnerships and our state organization, The North Carolina Partnership for Children, Inc.

The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and developmental environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well. As representatives of a small, rural county, we are appreciative of the state's efforts to scaffold these linkages so that all children are prepared to succeed.

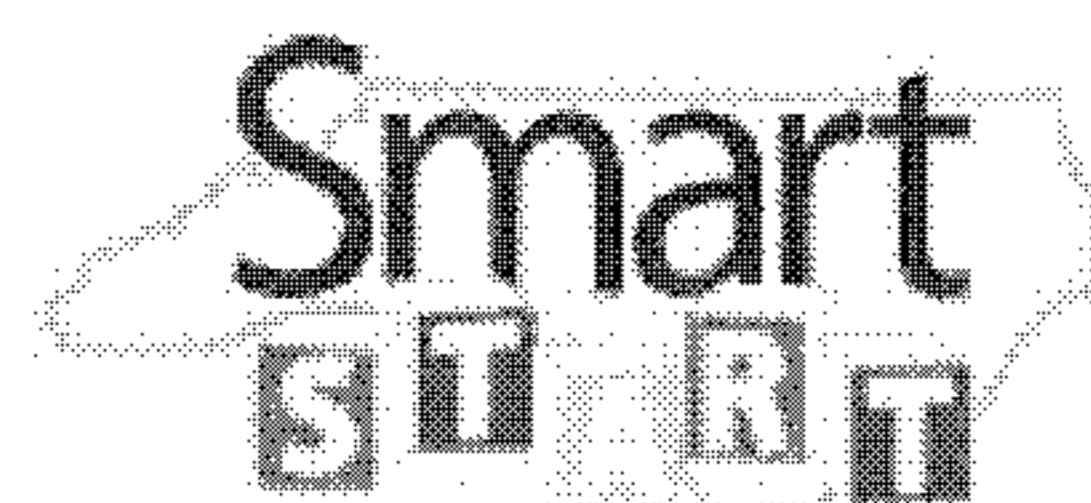
The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system and is an opportunity to leverage those resources to build on our success. As a local community, vested in helping children succeed in a global community, we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal. Please feel free to contact us for additional information.

Sincerely,

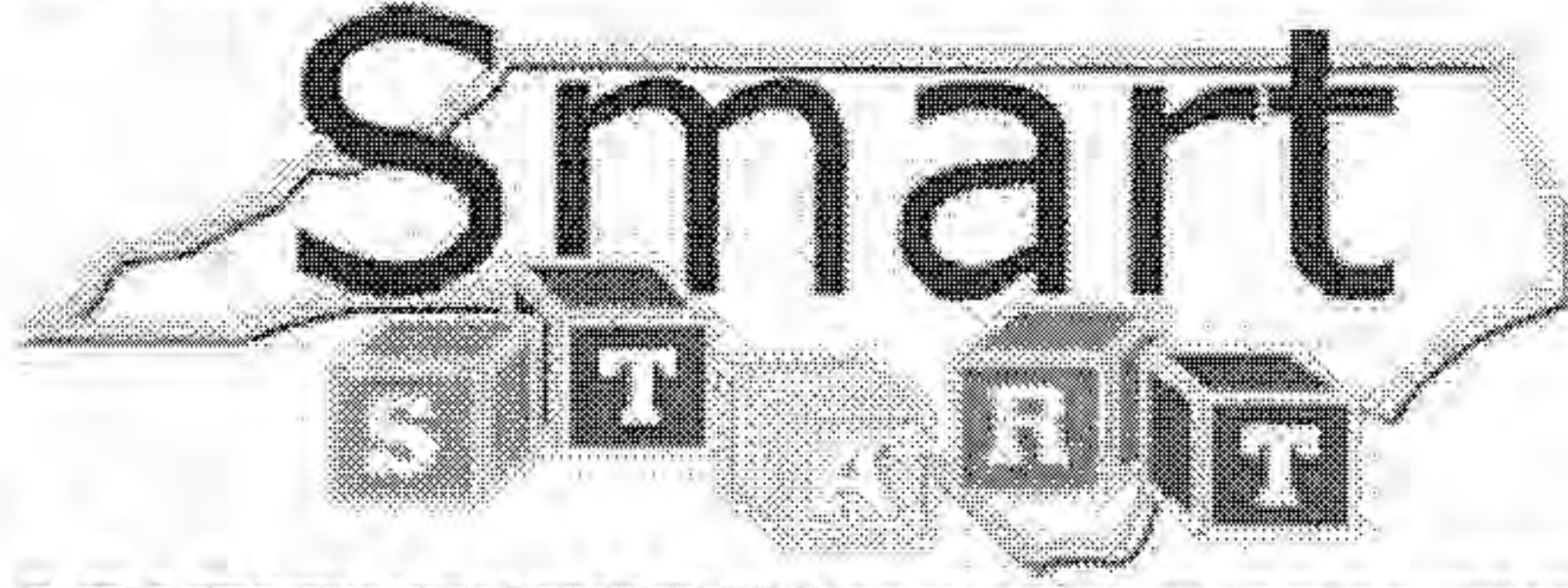
Signature's Attached

Bladen Smart Start Board of Directors and Staff

"To Ensure That Every Bladen County Child, Birth to Five Years Old, has an Equal and Fair Opportunity for Success"



Bladen



A PARTNERSHIP FOR CHILDREN, INC.

228-B WEST BROAD STREET • P.O. BOX 2255
ELIZABETHTOWN, NC 28337
Phone: 910-862-3335 • Fax: 910-862-7031
E-mail: bcpfced@yahoo.com

Board of Directors

(b)(6)

F
A
R
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C

[Handwritten signature]

Staff

(b)(6)

[Handwritten signature]

"To Ensure That Every Bladen County Child, Birth to Five Years Old, has an Equal and Fair Opportunity for Success"





Burke County Smart Start, Inc.

Making a Difference in Our Children's Lives!

September 23, 2011

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

Dear Secretaries Duncan and Sebelius,

As the Executive Director of the Burke County Smart Start, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal with input from key stakeholders in North Carolina, including representatives from Smart Start local partnerships and our state organization, The North Carolina Partnership for Children, Inc.

The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

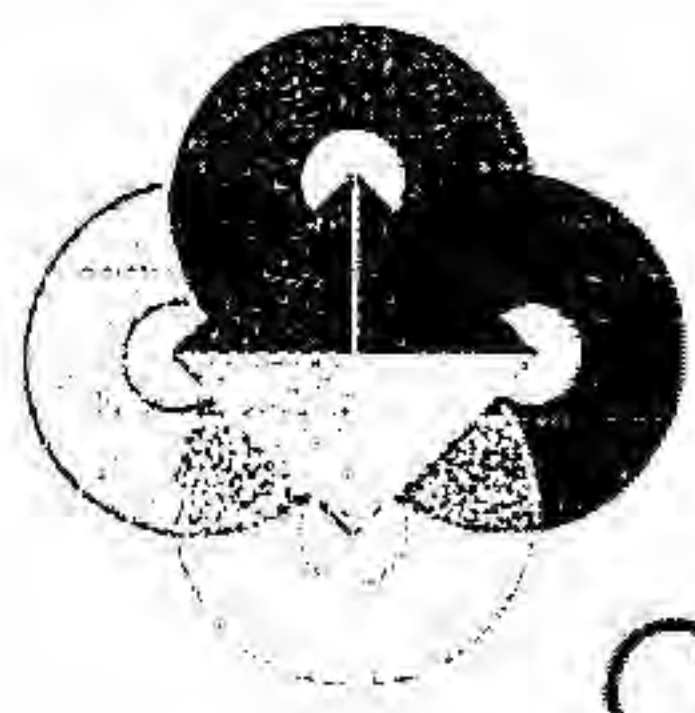
The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system and is an opportunity to leverage those resources to build on our success. Smart Start's vision is that every child reaches his or her potential and is prepared for success in a global community, and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal.

Sincerely,

(b)(6)

Joan B. Rovenstine
Executive Director

/vrd



Cabarrus Partnership
for children

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

September 22, 2011

Dear Secretaries Duncan and Sebelius,

As the Executive Director of the Cabarrus Partnership for Children, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal with input from key stakeholders in North Carolina, including representatives from Smart Start local partnerships and our state organization, The North Carolina Partnership for Children, Inc.

The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system and is an opportunity to leverage those resources to build on our success. Smart Start's vision is that every child reaches his or her potential and is prepared for success in a global community, and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal.

Sincerely,

(b)(6)

Ann Benfield, Executive Director



CALDWELL COUNTY



— A Partnership For Young Children —

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

September 29, 2011

Dear Secretaries Duncan and Sebelius,

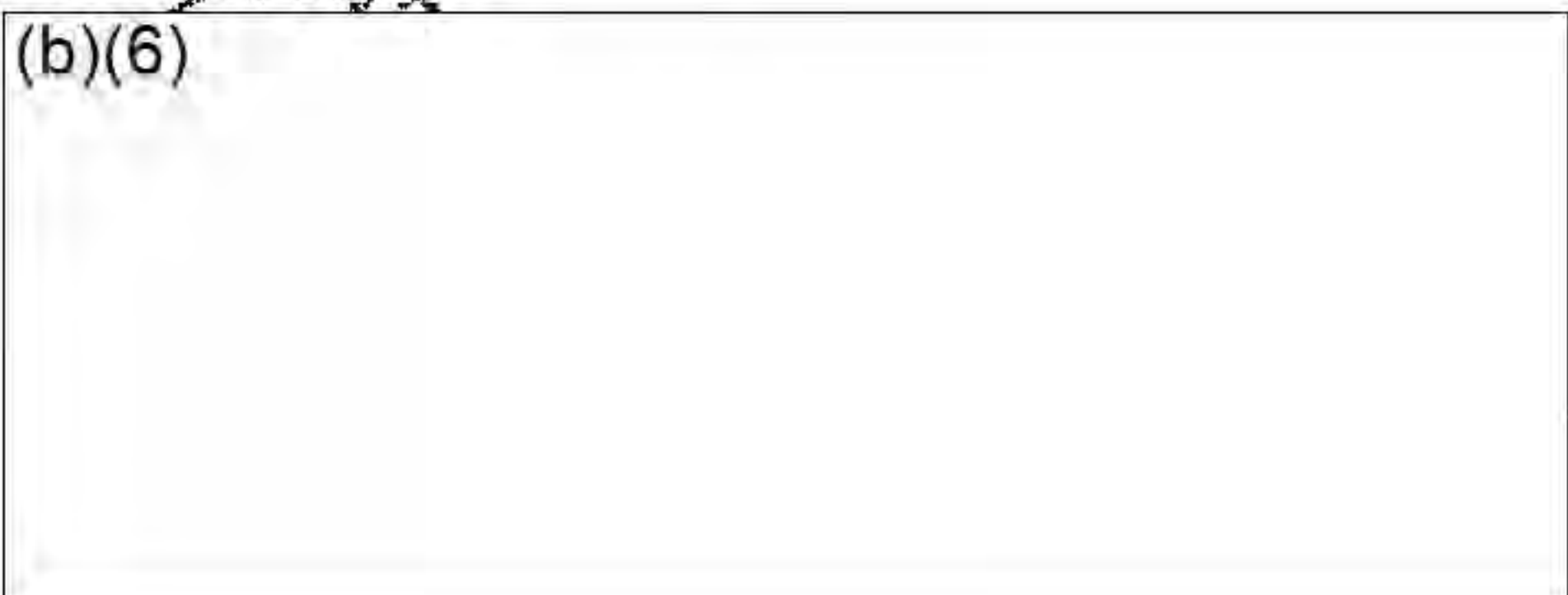
As the Executive Director of the Caldwell County Smart Start, A Partnership for Young Children, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal with input from key stakeholders in North Carolina, including representatives from Smart Start local partnerships and our state organization, The North Carolina Partnership for Children, Inc.

The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system and is an opportunity to leverage those resources to build on our success. Smart Start's vision is that every child reaches his or her potential and is prepared for success in a global community, and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal.

Sincerely,

(b)(6)





Growing Brighter Tomorrows

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

September 29, 2011

Dear Secretaries Duncan and Sebelius,

As the Executive Director of the Carteret County Partnership for Children, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal with input from key stakeholders in North Carolina, including representatives from some Smart Start local partnerships and our state organization, The North Carolina Partnership for Children, Inc.

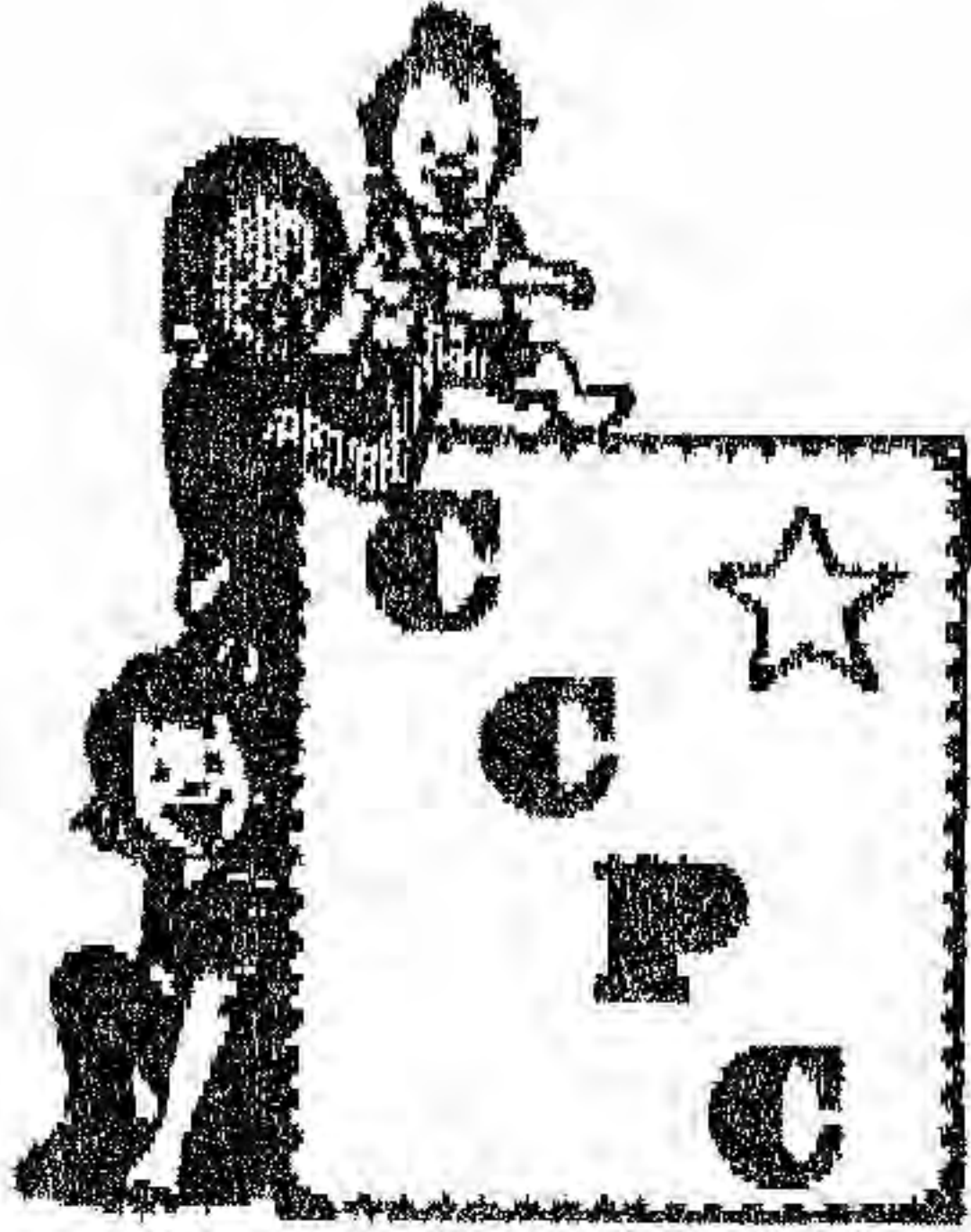
I am told the proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies should reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies should reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well. Hopefully these strategies also consider the unique challenges facing smaller partnerships in rural areas.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system and is an opportunity to leverage those resources to build on our success. Smart Start's vision is that every child reaches his or her potential and is prepared for success in a global community, and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal.

Sincerely,

(b)(6)

Sherry Peel



Caswell County Partnership for Children

P.O. Box 664
Yanceyville, NC 27379
(336) 694-1538
Fax: (336) 694-7666
Web Address: www.caswellchildren.org

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

September 30, 2011

Dear Secretaries Duncan and Sebelius,

As the Executive Director of the Caswell County Partnership for Children, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal with input from key stakeholders in North Carolina.

The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

The proposal also builds on North Carolina's long term investment in a coordinated, locally-driven and designed early learning and development system. The proposal has the potential to help support and rebuild our state's model early care and education system that has consistently produced the outcomes young children need to succeed.

Smart Start's vision is that every child reaches his or her potential and is prepared for success in a global community, and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal.

Sincerely,

(b)(6)

Sandra Hudspeth
Executive Director



"Investing in Young Children"

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

September 22, 2011

Dear Secretaries Duncan and Sebelius,

I am pleased to submit my enthusiastic support of North Carolina's application for the Race to the Top – Early Learning Challenge grant. I have served as the Executive Director of the Catawba County Partnership for Children for the past fourteen years and I am confident that North Carolina is perfectly positioned for success on this critical opportunity. Under the amazing leadership of Governor Perdue, the state's Early Childhood Advisory Council has prepared a proposal with input from key stakeholders in North Carolina, including representatives from Smart Start local partnerships and our state organization, The North Carolina Partnership for Children, Inc.

The proposal outlines key goals and a range of well thought-out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system and is an opportunity to leverage those resources to build on our success. Smart Start's vision is that every child reaches his or her potential and is prepared for success in a global community, and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal.

Sincerely,

(b)(6)

Kim Lyke Salyards
Executive Director

P.O. Box 3123, Hickory, NC 28603
2110 Main Avenue SE, Hickory, NC 28602
Phone: 828-695-6505 Fax: 828-328-4551
www.catawbakids.com



September 30, 2011

Genevieve R. Megginson
Executive Director

BOARD OF DIRECTORS

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U.S. Department of Education
Application Control Center
Attention: **CFDA Number 84.412**
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

Dear Secretaries Duncan and Sebelius,

As the Executive Director of the Chatham County Partnership for Children, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a comprehensive proposal designed to assure that every NC young child is ready for success in school and in life. North Carolina's proposal outlines key goals and strategies to promote school readiness for children with high needs across the state. These strategies reflect a clear understanding of the link between the quality of early environments and outcomes for children. North Carolina's proposal reflects a deep appreciation for the many factors that interact to affect child outcomes and a thorough understanding of how our early childhood learning and child development systems must interact and be accountable for those results.

North Carolina has led the nation in investments in a coordinated early childhood system. The Race to the Top – Early Learning Challenge grant offers an opportunity to leverage those resources to create a more advanced model, allowing North Carolina to take additional bold steps.

Chatham County Partnership for Children's mission is to promote opportunities for all our young children to grow up safe, healthy, and able to succeed. In collaboration with our community partners, we plan, fund, and implement quality early childhood education, health, and family support initiatives. We are committed to supporting the work outlined in NC's Race to the Top – Early Learning Challenge grant proposal.

Sincerely,

(b)(6)

Genevieve Megginson
Executive Director



WORKING TOGETHER

Formed in 1994 to bring Smart Start and other resources to Chatham County, the Partnership supports and develops quality early care and education for our youngest children, the future.



The Chowan/Perquimans Smart Start Partnership
718 North Broad Street Edenton, NC 27932
Ph. 252-482-3035 fax: 252-482-1324 e-mail: snixon_cpssp@earthlink.net
website: www.cpssp.net

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

October 3, 2011

Dear Secretaries Duncan and Sebelius,

As the Executive Director of the Chowan/Perquimans Smart Start Partnership, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal with input from key stakeholders in North Carolina, including representatives from Smart Start local partnerships and our state organization, The North Carolina Partnership for Children, Inc.

The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system and is an opportunity to leverage those resources to build on our success. Smart Start's vision is that every child reaches his or her potential and is prepared for success in a global community, and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal.

Sincerely,

(b)(6)

Susan B. Nixon

CLEVELAND COUNTY
PARTNERSHIP FOR
CHILDREN

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

September 26, 2011

Dear Secretaries Duncan and Sebelius,

As the Executive Director of the Cleveland County Partnership for Children, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal with input from key stakeholders in North Carolina, including representatives from Smart Start local partnerships and our state organization, The North Carolina Partnership for Children, Inc.

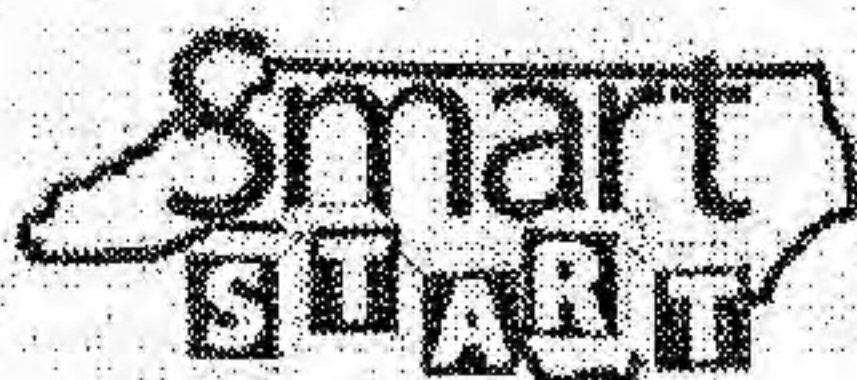
The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system and is an opportunity to leverage those resources to build on our success. Smart Start's vision is that every child reaches his or her potential and is prepared for success in a global community, and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal.

Sincerely,

(b)(6)

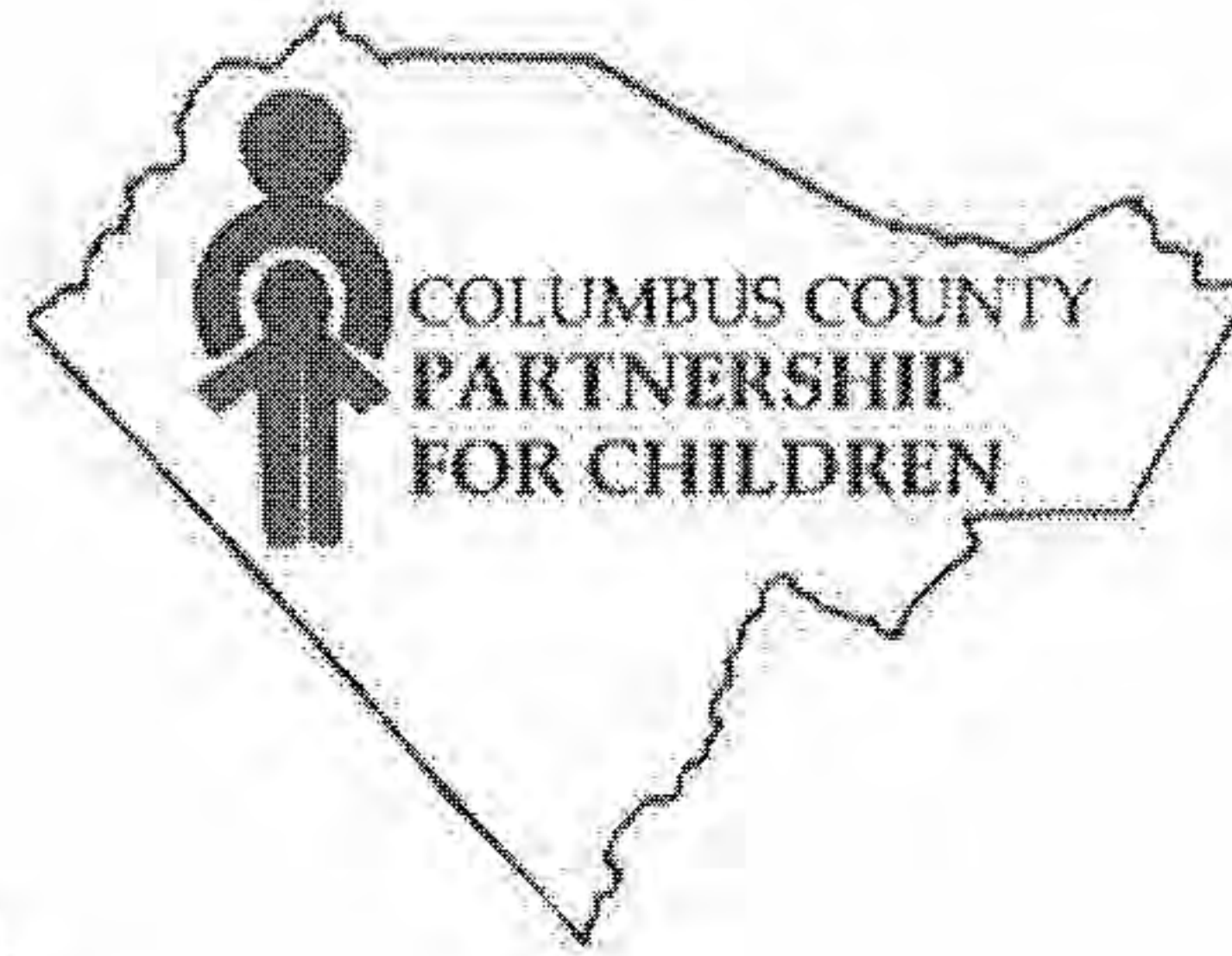
Executive Director



"Creating Brighter Futures for Children"



109 W. Main Street
Whiteville, NC 28472



Telephone: 910-642-8226

Fax: 910-642-8494

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

October 3, 2011

Dear Secretaries Duncan and Sebelius,

As the Executive Director of the Columbus County Partnership for Children, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal with input from key stakeholders in North Carolina, including representatives from Smart Start local partnerships and our state organization, The North Carolina Partnership for Children, Inc.

The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system and is an opportunity to leverage those resources to build on our success. Smart Start's vision is that every child reaches his or her potential and is prepared for success in a global community, and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal.

Sincerely,

(b)(6)

Wilbur Smith, Jr.

"Guarantee the Future of Columbus County by Investing in Its Children"





Craven Smart Start, Inc.

2011-2012

Board of Directors

Officers and Executive Committee

Kelly Klemmer, President
Community Representative
Lisa Green, Vice President
LICC Representative
Ann Herndon, Secretary
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Barbara Rodgers, Treasurer
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Administrative Assistant

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

September 22, 2011

Dear Secretaries Duncan and Sebelius,

As the Executive Director of Craven Smart Start, Inc., I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal with input from key stakeholders in North Carolina, including representatives from Smart Start local partnerships and our state organization, The North Carolina Partnership for Children, Inc.

The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable – as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system and is an opportunity to leverage those resources to build on our success. Smart Start's vision is that every child reaches his or her potential and is prepared for success in a global community, and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal.

Sincerely,

(b)(6)

Kelly Klemmer
Board Chair

2111 Neuse Blvd, Suite F, New Bern, NC 28560 252-636-3198 252-637-7074 fax
www.cravensmartstart.org



U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

October 3, 2011

Dear Secretaries Duncan and Sebelius,

As the Executive Director of the Children & Youth Partnership for Dare County, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal with input from key stakeholders in North Carolina, including representatives from Smart Start local partnerships and our state organization, The North Carolina Partnership for Children, Inc.

The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable – as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system and is an opportunity to leverage those resources to build on our success. Smart Start's vision is that every child reaches his or her potential and is prepared for success in a global community, and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal.

Sincerely,

(b)(6)

Loretta Michael

Smart
START



**Down East Partnership
for Children**

P.O. Box 1245 • 215 Lexington Street
Rocky Mount, NC 27802 • (252) 985-4300 • www.depc.org

September 26, 2011

Henrietta Zalkind
Executive Director

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Kelvin Yarell

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

Dear Secretaries Duncan and Sebelius,

As the Executive Director of the Down East Partnership for Children, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal with input from key stakeholders in North Carolina, including representatives from Smart Start local partnerships and our state organization, The North Carolina Partnership for Children, Inc.

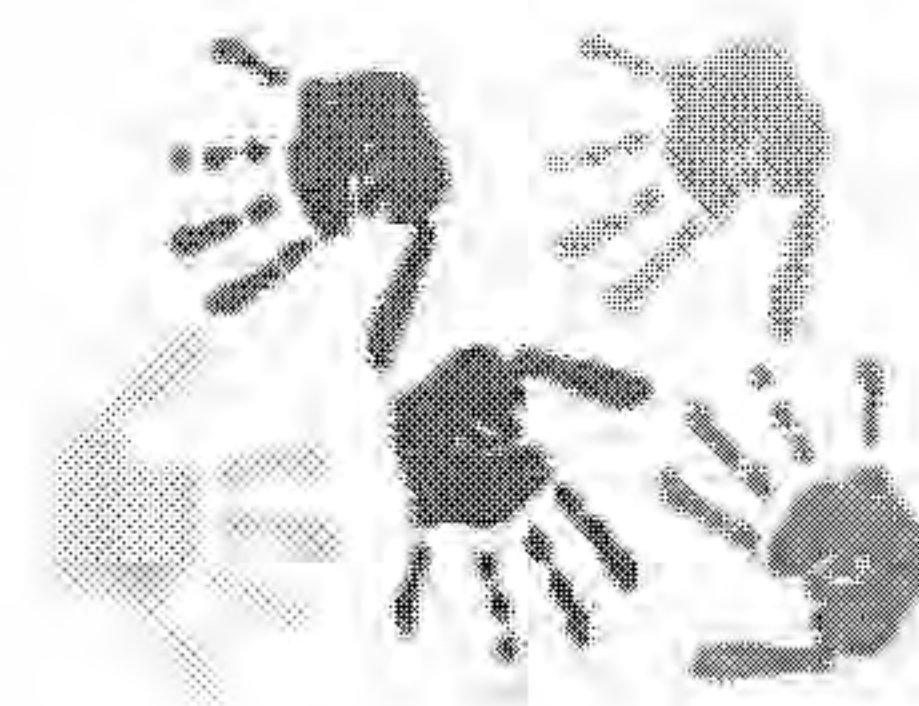
The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system and is an opportunity to leverage those resources to build on our success. Smart Start's vision is that every child reaches his or her potential and is prepared for success in a global community, and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal.

Sincerely,

(b)(6)

Henrietta Zalkind
Executive Director



DUPLIN COUNTY
Partnership for Children

Post Office Box 989, 149 Limestone Road
Kenansville, NC 28349
Telephone (910) 296-2000
Fax (910) 296-1497
www.dcpfc.org

BOARD
OF
DIRECTORS

October 3, 2011

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- Ann Washington
- Zettie Williams

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

Dear Secretaries Duncan and Sebelius,

As the Executive Director of Duplin County Partnership for Children, a small rural County in Eastern North Carolina, I am pleased to offer our support for North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Beverly Perdue's Early Childhood Advisory Council has prepared a proposal with input from key stakeholders in North Carolina, including representatives from Smart Start local partnerships and our state organization, The North Carolina Partnership for Children, Inc.

This application presents key goals and a range of carefully considered strategies that promote school readiness for children with high needs throughout North Carolina. Many strategies reflect a deep understanding of the direct correlation between the quality of early learning experiences and development environments and the outcomes for children. Others strategies reflect an understanding that many factors interrelate and have a significant effect on child outcomes and that all systems must interact, communicate effectively and be held accountable for the outcomes of our children.

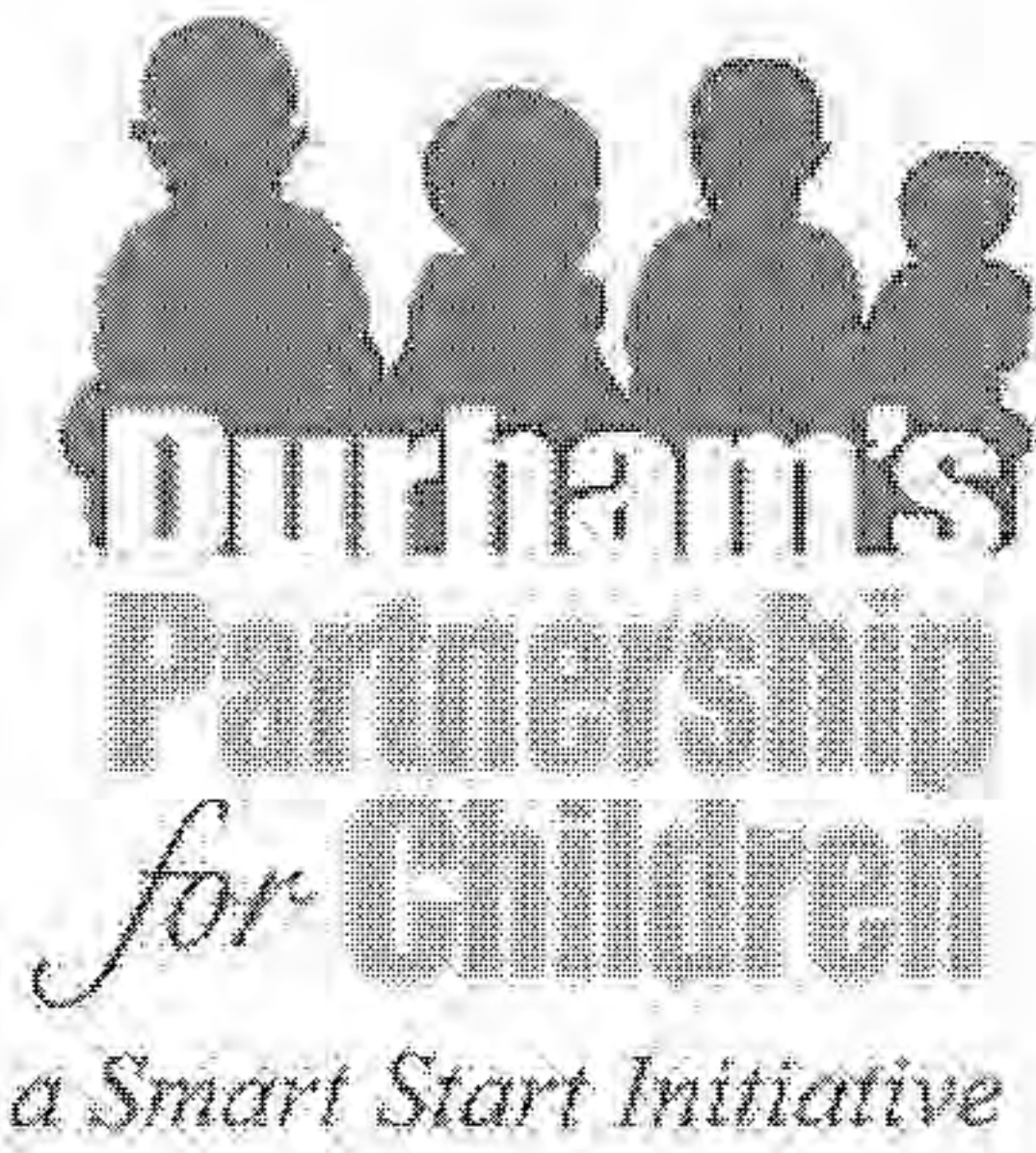
North Carolina has invested much to develop a coordinated early learning system where key stakeholders are involved and this grant is an opportunity to leverage those resources to build on our success. Smart Start's vision is that every child reaches his or her potential and is prepared for success in a global community, and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal.

Sincerely,

(b)(6)

Joan S. Williams
Executive
Director

Joan S. Williams
Executive Director



1201 S. Briggs Avenue
Suite 210
Durham, NC 27703

919-403-6960
Fax 919-403-6963

www.dpfc.net

September 29, 2011

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

Dear Secretaries Duncan and Sebelius,

As the Executive Director of Durham's Partnership for Children in Durham, NC, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal with input from key stakeholders in North Carolina, including representatives from Smart Start local partnerships and our state organization, The North Carolina Partnership for Children, Inc.

We understand the critical work of preparing children to be ready for school. The proposal outlines key goals and a range of well thought out strategies for serving the children across our state, all of which demonstrate a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Other plans in the proposal reflect an appreciation for the fact that many factors interact to affect child outcomes. All of our systems must interact, collaborate, and be held mutually accountable.

North Carolina's long term investment in a coordinated early learning and development system provides a strong foundation and framework on which to build, leveraging statewide resources and expertise that spans nearly two decades. Smart Start's vision is that every child reaches his or her potential and is prepared for success in a global community. We are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal.

Sincerely,

(b)(6)

Laura J.S. Benson
Executive Director





Franklin Granville Vance Smart Start, Inc. * P.O. Box 142 * Henderson, NC 27536
Telephone (252) 433-9110 * Fax 252-433-9230

"Building Brighter Futures For Children"

Carolyn M. Paylor
Executive Director

Cedric K. Jones
Executive Board Chair

U.S Department of Education
Application Control Center
Attention: CFDA Number 84,412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

September 28, 2011

Dear Secretaries Duncan and Sebelius,

As the Executive Director of the Franklin Granville Vance Smart Start located in Henderson North Carolina, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. The Early Childhood Advisory Council, which has been formed by Governor Beverly Purdue, has designed a proposal which is intended to assure that the children of North Carolina continue to achieve results which will assist them to enter school healthy and ready to learn. We feel that the strategies put forth in this proposal reflect a continuation of hard work and a strong understanding of effective methods that achieve quality early learning and development.

North Carolina has invested in the development of early learning for many years now and has developed a statewide system that allows local county entities to assist children and their families to prepare for school success. The Early Learning grants will assist North Carolina to build upon the work it has dedicated itself to in the past.

In that the Franklin Granville Vance Smart Start's mission is to advance a high quality comprehensive, accountable system of care and education for every child beginning with a healthy birth, we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal towards our shared goal.

Sincerely,

(b)(6)

Carolyn M. Paylor, MA. LPC
Executive Director

September 29, 2011

U. S. Department of Education
Application Control Center
Attn: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

Dear Secretaries Duncan and Sebelius:

As the Executive Director of the Guilford County Partnership for Children, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a strong proposal with input from key stakeholders across North Carolina, including representatives from local Smart Start partnerships and the North Carolina Partnership for Children.

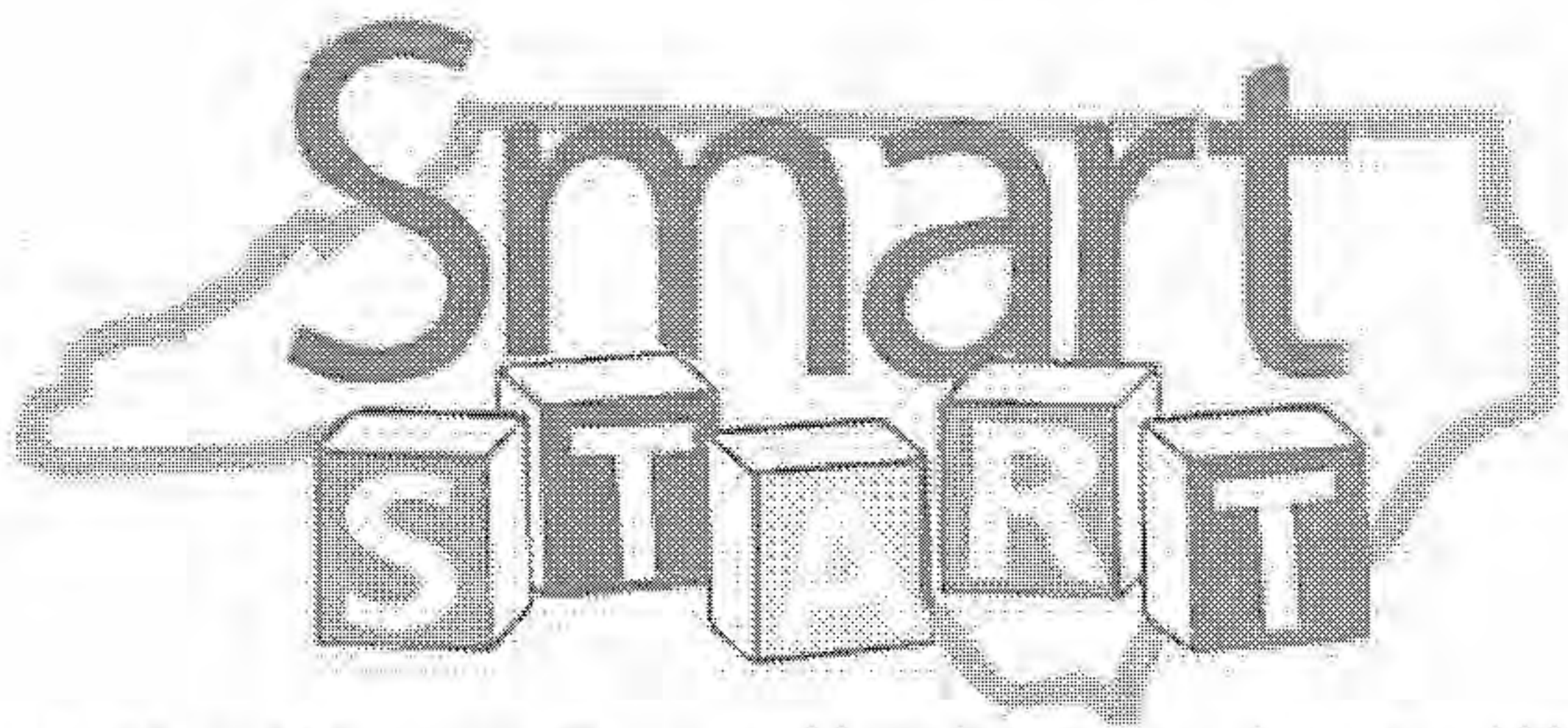
The proposal describes key goals and a continuum of well thought out strategies to assure that all of North Carolina's young children are afforded the opportunity to receive the resources and services they need to prepare for kindergarten and lifetime learning. The strategies reflect a deep understanding of the link between the quality of early learning experiences and outcomes for children. They reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must be collaborative, effective, and accountable.

The proposal builds on North Carolina's long-term investment in a coordinated early learning and development system and is an opportunity to leverage those investments and achieve even greater success. The Guilford County Partnership for Children's vision is that all of our children will enter school healthy, safe, and ready to succeed. We are excited about the opportunities and committed to supporting the work outlined in North Carolina's Race to the Top – Early Learning Challenge grant proposal to help us realize our vision for young children and their families.

Sincerely,

(b)(6)

Jean D. Goodman
Executive Director



Halifax-Warren Smart Start Partnership for Children

September 22, 2011

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

Dear Secretaries Duncan and Sebelius,

The Halifax - Warren Smart Start Partnership for Children, Inc. is pleased to offer its support to North Carolina's effort to receive the Race to the Top – Early Learning Challenge grant. The Early Childhood Advisory Council established by Governor Beverly Perdue has prepared a comprehensive proposal with input from key stakeholders in North Carolina, including representatives from local Smart Start agencies as well as our state organization, the North Carolina Partnership for Children, Inc.

The proposal outlines key goals and a range of strategies to promote school readiness for children with high needs across the state. The strategies reflect a deep understanding of the link between the quality of early learning and developmental environments and the subsequent outcomes for children, as well as an appreciation for the fact that many factors interact to affect child outcomes and our systems must interact as well.

The proposal also builds on North Carolina's long term investments in a coordinated early learning and development system. The additional support of this funding would provide an opportunity to leverage those resources to build on our success. Smart Start's vision is that every child reaches his or her potential and is prepared for success in a global community, and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal.

Sincerely,

(b)(6)

Magda Baugh
Executive Director

Halifax-Warren Smart Start Partnership for Children
PO Box 339 1139 Roanoke Avenue
Roanoke Rapids, NC 27870

phone: 252-537-5621 fax: 252-537-9732 email: smartstart@hwss.org
www.hwss.org

October 5, 2011

U.S. Department of Education

Application Control Center

LBJ Basement Level

400 Maryland Avenue, SW

Washington, DC 20202-4260

Attention: CFDA Number 84.412

Dear Secretaries Duncan and Sebelius:

As the Executive Director of the Hertford-Northampton Smart Start PFC, I am writing to support North Carolina's application for the Race to the Top - Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal with input from key stakeholders in North Carolina, including representatives from Smart Start local partnerships and our state organization, The North Carolina Partnership for Children, Inc.

The proposal outlines key goals and range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Other strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable – as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system and is an opportunity to leverage those resources to build on our success. Smart Start's vision is that every child reaches his or her potential and is prepared for success in a global community, and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal.

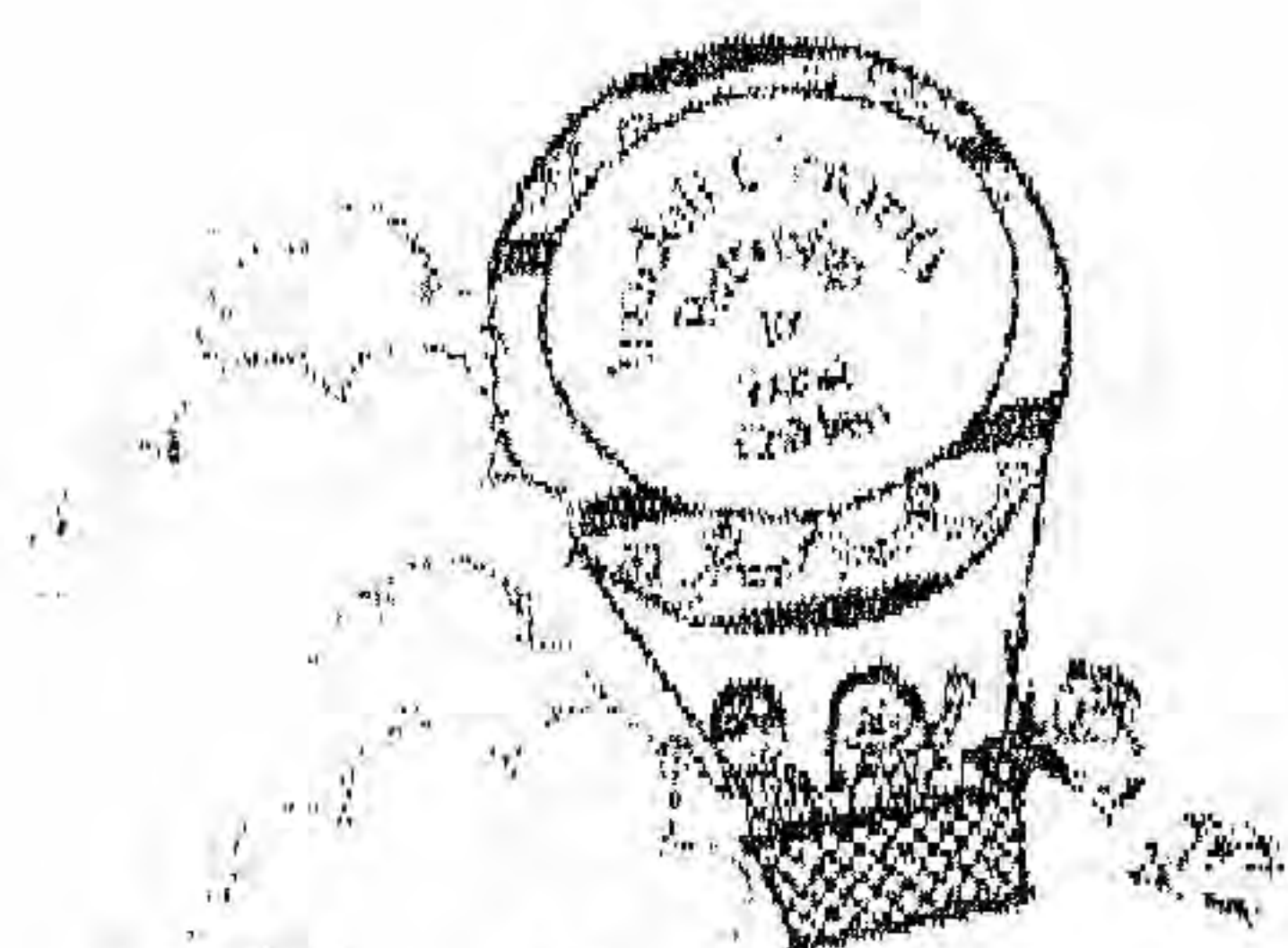
Sincerely,

Cynthia Brown, Executive Director

HERTFORD-NORTHAMPTON SMART START PARTNERSHIP FOR CHILDREN, INC.

Iredell County Partnership for Young Children, Inc.

433 South Meeting Street, Statesville, NC 28677
(704) 878-9980 • fax (704) 878-9961
www.iredellsmartstart.org



*Lifting Children
to Better Beginnings...*



U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

September 28, 2011

Dear Secretaries Duncan and Sebelius,

As the Executive Director of the Iredell County Partnership for Young Children, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal with input from key stakeholders in North Carolina, including representatives from Smart Start local partnerships and our state organization, The North Carolina Partnership for Children, Inc.

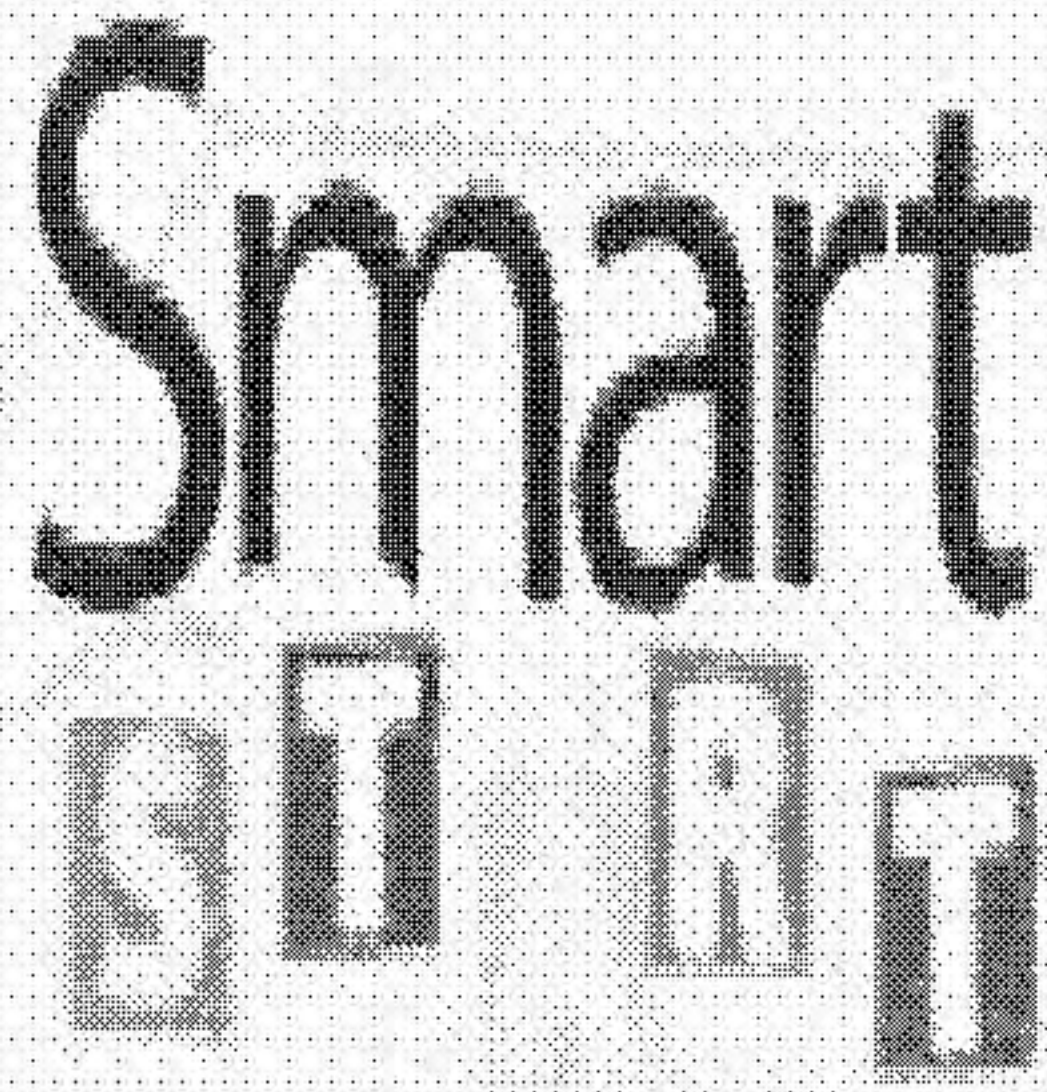
The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system and is an opportunity to leverage those resources to build on our success. Smart Start's vision is that every child reaches his or her potential and is prepared for success in a global community, and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal.

Sincerely,

(b)(6)

Marta Koesling
Executive Director



Jones County Partnership for Children
Post Office Box 186 (115 Market St. #125)
Trenton, NC 28585
(252) 448-5272 Fax (252) 448-1500
Email: jepfc@embarqmail.com

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

September 29, 2011

Dear Secretaries Duncan and Sebelius,

As the Executive Director of the Jones County Partnership for Children, I support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal with input from key stakeholders in North Carolina, including representatives from Smart Start local partnerships and our state organization, The North Carolina Partnership for Children, Inc.

The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system and is an opportunity to leverage those resources to build on our success as we ensure that small, rural low wealth and high poverty rate counties are priorities in these efforts. Smart Start's vision is that every child reaches his or her potential and is prepared for success in a global community, and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal.

Sincerely,

(b)(6)

Dr. Norma H. Sermon-Boyd, Executive Director

LEE COUNTY
**PARTNERSHIP
FOR CHILDREN**

"Building partnerships to enable all young children to reach their full potential"

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level I
400 Maryland Avenue, SW
Washington, DC 20202-4260

September 26, 2011

Dear Secretaries Duncan and Sebelius,

As the executive director of the Lee County Partnership for Children, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal with input from key stakeholders in North Carolina, including representatives from Smart Start local partnerships and our state organization, The North Carolina Partnership for Children, Inc.

The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system and is an opportunity to leverage those resources to build on our success. Smart Start's vision is that every child reaches his or her potential and is prepared for success in a global community, and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal.

Sincerely, /

(b)(6)

Lyn Hankins
Executive Director

(b)(6)

Mikeal Basinger
Chair
Board of Directors

143 Chatham St., Sanford, NC 27330 | Phone: 919-774-9496 | Fax: 919-774-8762 | www.leecountypfc.org





Building Brighter Futures

MADISON COUNTY PARTNERSHIP FOR CHILDREN AND FAMILIES

P.O. Box 1657 • Mars Hill, NC 28754 • (828) 689-1525

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

September 23, 2011

Dear Secretaries Duncan and Sebelius,

As the Executive Director of the Madison County Partnership for Children and Families, Inc., a member of the Smart Start network in North Carolina, I am writing to reiterate the need to rebuild our state's model early care and education system to strengthen outcomes for young children, and to discuss the ways that our *Race to the Top -- Early Learning Challenge* grant proposal has the potential to do so.

Over the past several years, the fragile infrastructure for service delivery to vulnerable children in low-population areas has been slowly dismantled. Without other resources in these poor counties, the decline is amplified and the losses have been devastating. By targeting those who have least, North Carolina's proposal would show promise to restore opportunities for children and their families equitably, and would overcome the disproportionate damage inflicted by austerity measures and funding shortages in poor communities that are already suffering immensely.

Additional funds and eligibility criteria for child care subsidies in low-resource areas are also critical to a comprehensive recovery. The investment in high quality early care that is accessible to all -- particularly to those in rural communities -- is essential to enabling the most vulnerable to 'enter the race' that we are committed to win.

Finally, a recommitment to locally-driven and -designed systems and services that interface, and are responsive at every level, are necessary success factors and are the linchpins of North Carolina's effort.

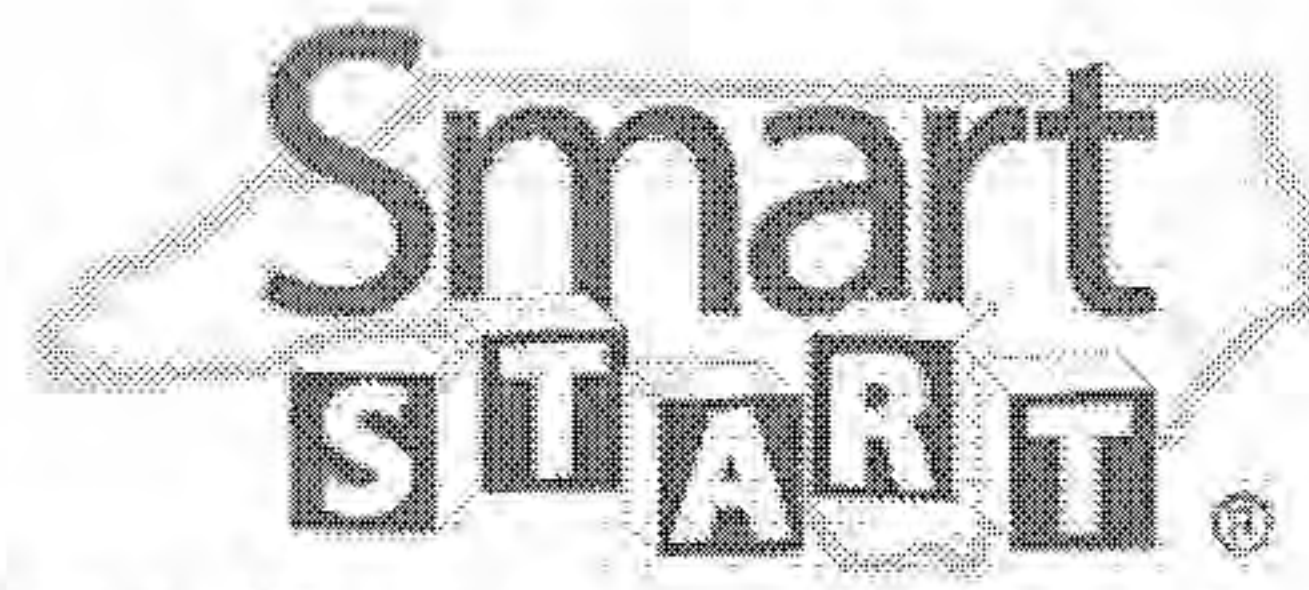
With these priorities in mind, I urge you to strengthen North Carolina's long-term investment in early learning by selecting and funding our grant proposal. Much of the progress made in other states is due, in large part, to the successful model created and the pioneering work done here in North Carolina.

Sincerely,

(b)(6)

[Redacted signature box]

Nancy Alenier



Martin / Pitt Partnership for Children

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

September 23, 2011

Dear Secretaries Duncan and Sebelius,

As the executive director of the Martin/Pitt Partnership for Children, Inc., our communities' local Smart Start organization, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal with input from key stakeholders in North Carolina, including representatives from Smart Start local partnerships and our state organization, The North Carolina Partnership for Children, Inc.

The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable – as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system and is an opportunity to leverage those resources to build on our success. Smart Start's vision is that every child reaches his or her potential and is prepared for success in a global community, and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal.

Sincerely,

(b)(6)

Executive Director
Martin/Pitt Partnership for Children, Inc.



McDOWELL COUNTY PARTNERSHIP
FOR CHILDREN AND FAMILIES, INC.

Board of Directors

Stephanie Goudreau
Chairperson
Amanda Crisp
Vice-Chairperson
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Kristin Mart
Rhonda McFadden
Jennifer Morgan
Sherri Owenby
Debra Pittman
Suzanne Rampey
Jane Schroeder
Jean Taylor
Ashley Wooten

Partnership Staff:

Caroline M. Rodier
Executive Director

Alison Baldwin
Office Manager

*The mission of the
McDowell County
Partnership for
Children & Families,
Inc. is to partner with
the community to meet
the needs of all the
children and families
in McDowell County.*



September 28, 2011

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

Dear Secretaries Duncan and Sebelius:

As the Executive Director of the McDowell County Partnership for Children & Families, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal with input from key stakeholders in North Carolina, including representatives from Smart Start local partnerships and our state organization, The North Carolina Partnership for Children, Inc.

The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system and is an opportunity to leverage those resources to build on our success. North Carolina is well-known as a leader in early education and Smart Start has become a model for early childhood system building that has been replicated by many other states. Smart Start's vision is that every child reaches his or her potential and is prepared for success in a global community, and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal.

Sincerely,

(b)(6)

Caroline M. Rodier
Executive Director



U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

September 30, 2011

Dear Secretaries Duncan and Sebelius,

As the Executive Director of the Mecklenburg Partnership for Children, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal designed to lead North Carolina toward transformational results as we seek to assure that every young child in our state is ready for success in school and in life. The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system designed to prepare children for success, and is an opportunity to leverage those resources to create a more advanced model. The Early Learning Challenge grant funds will allow North Carolina to take additional bold steps.

My organizations mission is to advance a high quality, comprehensive, accountable system of care and education for every child beginning with a healthy birth, and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal toward our shared goals.

Sincerely,

(b)(6)

Jane Meyer
Executive Director

Mecklenburg Partnership for Children
Children & Family Services Center
601 E. 5th Street, Suite 500, Charlotte, NC 28202
Phone: 704-377-6588 • Fax: 704-377-1824
www.smartstartofmeck.org • www.zerotofive.org

Ensuring that all children enter school healthy and ready to succeed.



NORTH
CAROLINA

The voice and vision of special education

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

October 15, 2011

Dear Secretaries Duncan and Sebelius,

As current President of the North Carolina Council for Exceptional Children, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal designed to lead North Carolina toward transformational results as we seek to assure that every young child in our state is ready for success in school and in life. The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system designed to prepare children for success, and is an opportunity to leverage those resources to create a more advanced model. The Early Learning Challenge grant funds will allow North Carolina to take additional bold steps.

My organization's mission is "to improve the quality of life for individuals with exceptionalities and their families through professional excellence and advocacy," and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal toward our shared goals.

Sincerely,

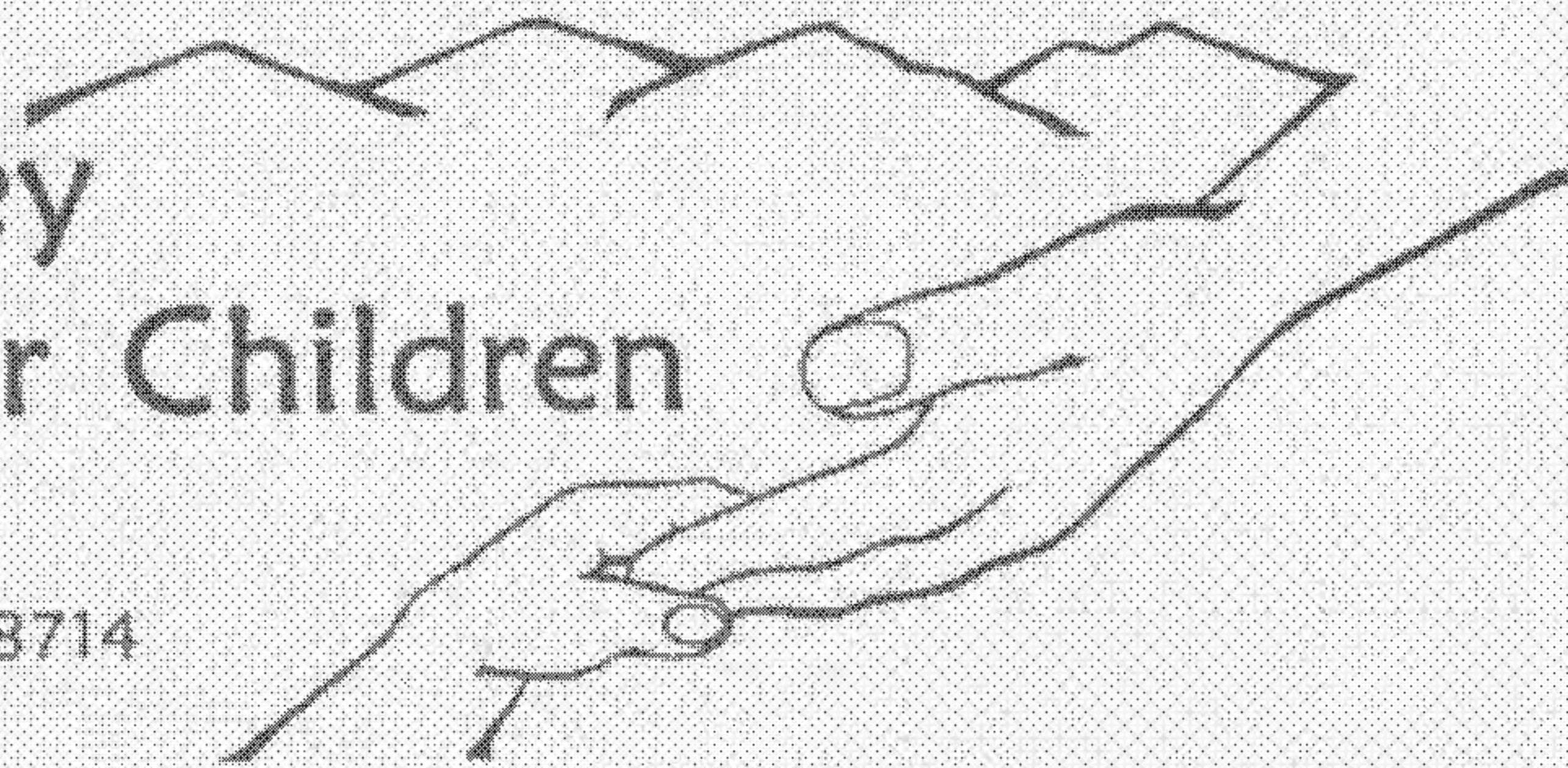
(b)(6)

Marge Terhaar-Yonkers, Ph.D.
Current President, NC CEC
Associate Professor, Education, Meredith College

Mitchell-Yancey Partnership for Children

Post Office Box 1387
Burnsville, North Carolina 28714

Phone (828) 682-0047
Fax (828) 682-7978
email: m-ypfc@storefronttech.us



U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

September 29, 2011

Dear Secretaries Duncan and Sebelius,

As the Executive Director of the Mitchell-Yancey County Partnership for Children, I am writing to support North Carolina's application for the *Race to the Top - Early Learning Challenge* grant. As a member of the Smart Start network that serves families and young children across our state, we are challenged in our work every day with local needs that can be addressed through efforts to strengthen our early care and education system. Governor Perdue's Early Childhood Advisory Council has been preparing a proposal with input from key stakeholders in North Carolina, including representatives from Smart Start local partnerships and our state organization, The North Carolina Partnership for Children, Inc to meet those challenges.

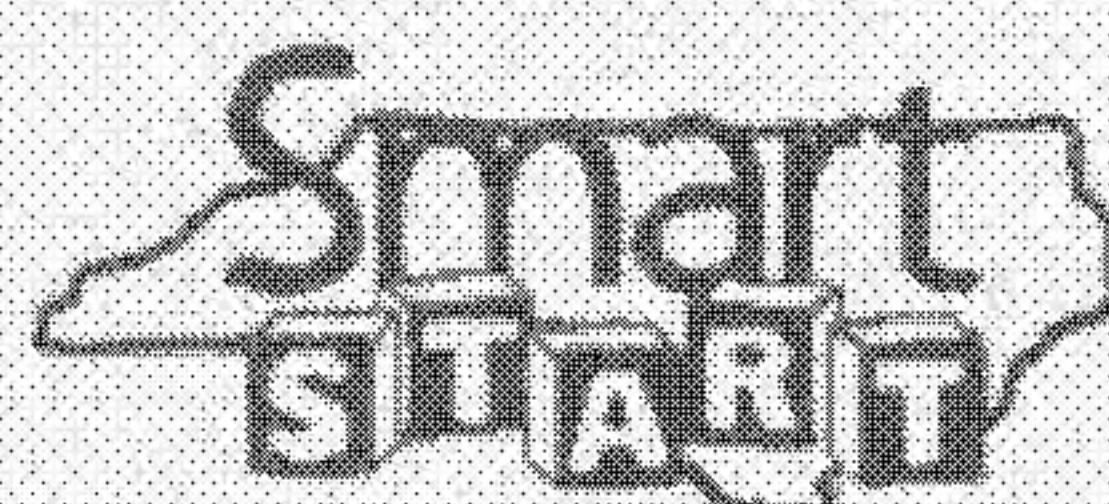
The proposal outlines key goals and strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact - and be accountable - as well. Commitment to working together with families and those within our service community will provide our state the opportunity to meet the challenge and strengthen the outcomes for the young children we serve.

The proposal builds on North Carolina's long term investment in a coordinated early learning and development system and is an opportunity to leverage those resources to build on our success. Smart Start's vision is that every child reaches his or her potential and is prepared for success in a global community, and we are committed to supporting the work outlined in the *Race to the Top - Early Learning Challenge* grant proposal.

Sincerely,

(b)(6)

Jennifer W. Simpson
Executive Director





Montgomery County Partnership for Children

Phone: (910) 576-2363 Fax: (910) 576-2562

404-A North Main Street • Troy, North Carolina • 27371

E-mail: mcpc@brighterfutures.org

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

September 30, 2011

Dear Secretaries Duncan and Sebelius,

As the Executive Director of the Montgomery County Partnership for Children, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant.

Governor Perdue's Early Childhood Advisory Council has prepared a proposal with input from key stakeholders in North Carolina, including representatives from Smart Start local partnerships and our state organization, The North Carolina Partnership for Children, Inc.

The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact, and be accountable, as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system and is an opportunity to leverage those resources to build on our success. Smart Start's vision is that every child reaches his or her potential and is prepared for success in a global community, and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal.

Sincerely,

(b)(6)

Deborah S. Musika
Executive Director



"Ensuring every child's success by turning opportunities into realities!"

Onslow County Partnership for Children

301 Northwest Drive, Jacksonville, NC 28546 Phone: 910-938-0336 Fax: 910-938-0068
www.onslowkids.org

September 29, 2011

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

Dear Secretaries Duncan and Sebelius:

As the Executive Director of the Onslow County Partnership for Children, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal with input from key stakeholders in North Carolina, including representatives from Smart Start local partnerships and our state organization, The North Carolina Partnership for Children, Inc.

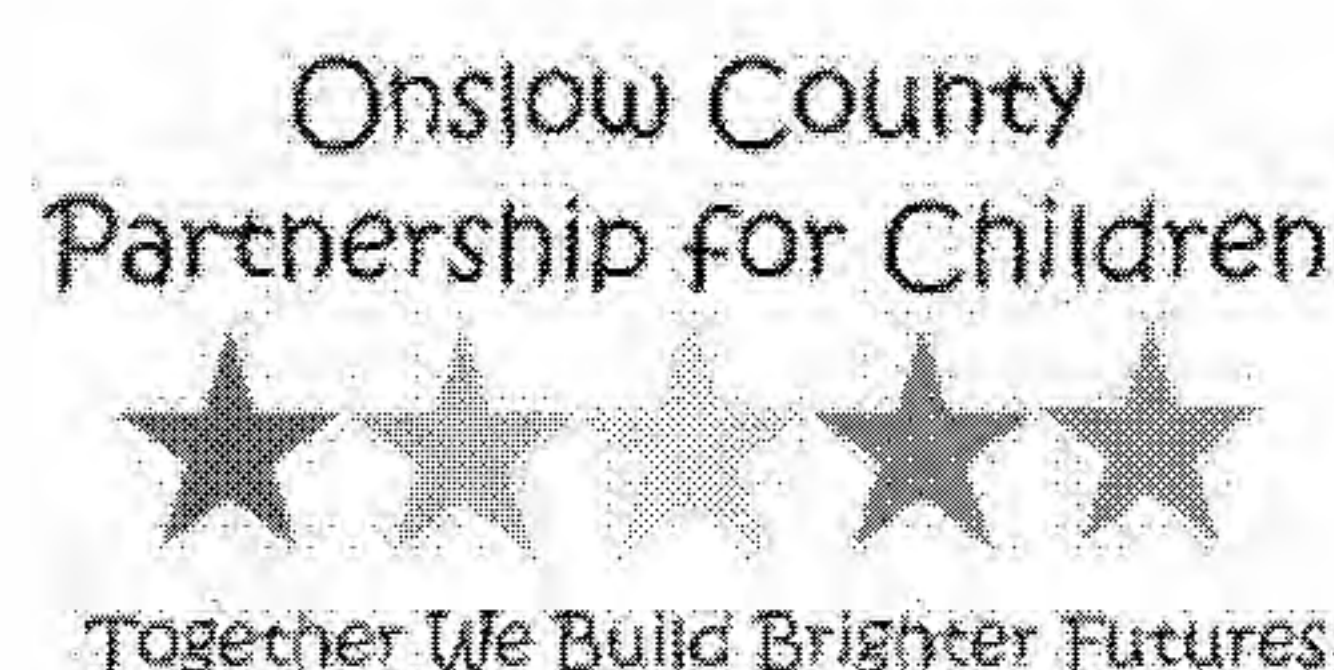
The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system and is an opportunity to leverage those resources to build on our success. Smart Start's vision is that every child reaches his or her potential and is prepared for success in a global community, and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal.

Sincerely,

(b)(6)

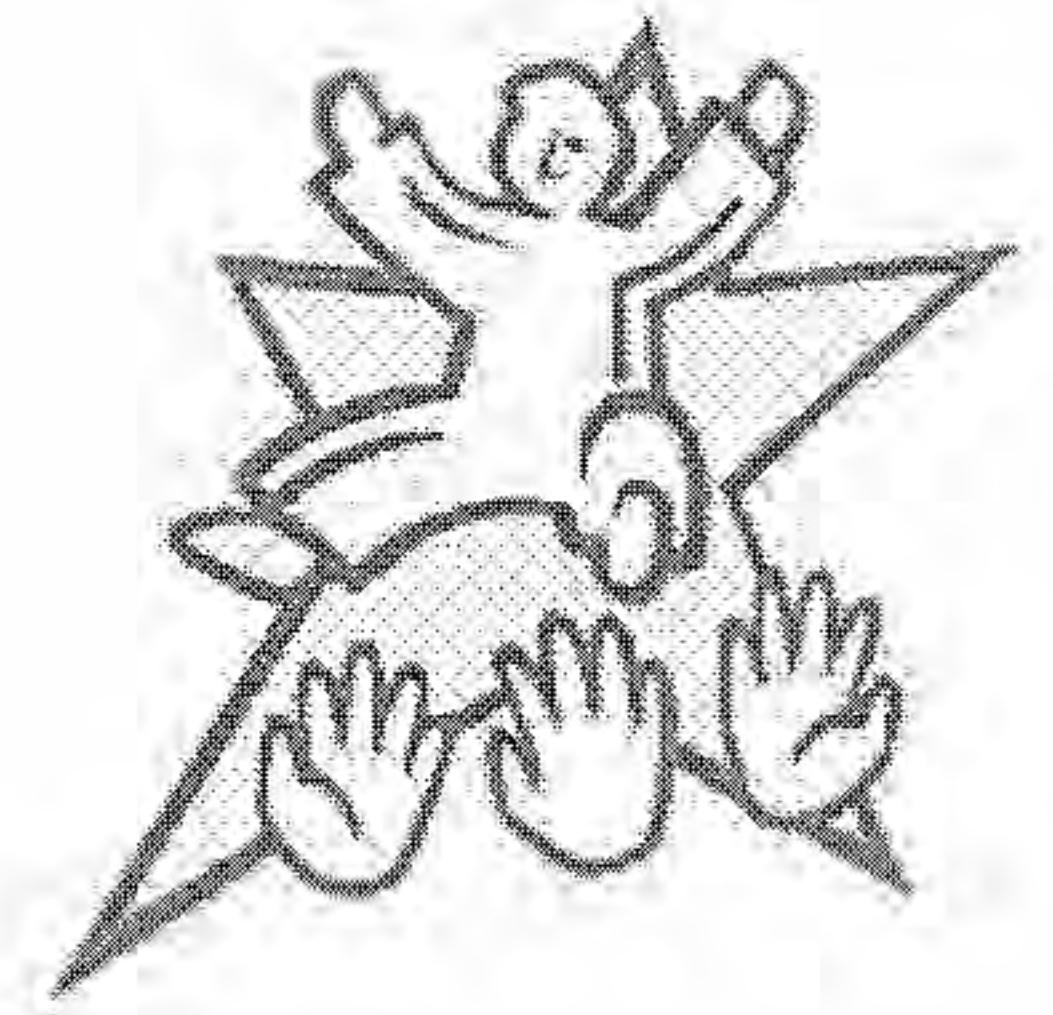
Dawn Rochelle, MSW, LCSW
Executive Director



ORANGE COUNTY PARTNERSHIP FOR YOUNG CHILDREN

120 Providence Road, Suite 101 * Chapel Hill, NC 27514

Phone 919.967.9091 * Fax 919.933.1008 * www.orangesmartstart.org



U.S. Department of Education
Application Control Center/Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

September 30, 2011

Dear Secretaries Duncan and Sebelius,

As the Executive Director of the Orange County Partnership for Young Children, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal with input from key stakeholders in North Carolina, including representatives from Smart Start local partnerships and our state organization, The North Carolina Partnership for Children, Inc. We recognize the enormous opportunity that this grant would provide to the children of our community.

The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well. North Carolina stakeholders in early childhood education and services are ready for this challenge and we fully support this application.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system and is an opportunity to leverage those resources to build on our success. Smart Start's vision is that every child reaches his or her potential and is prepared for success in a global community, and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal.

Our mission, in Orange County, NC, is that all children will enter school healthy and ready to succeed and we know that this is a shared vision for our state and for our country. We want to ensure that children, especially at risk children have the opportunity to reach their full potential. The Orange County Partnership for Young Children fully supports the NC application for the Early Learning Challenge Fund.

Sincerely,

(b)(6)

✓
Margaret Samuels, Executive Director
Orange County Partnership for Young Children
120 Providence Road, Suite 101
Chapel Hill, NC 27514
919-967-9091-phone
919-933-1008-fax
msamuels@orangesmartstart.org
www.orangesmartstart.org

GIVING EVERY CHILD A



IN ORANGE COUNTY



Pamlico Partnership for Children, Inc.

SMART START

PO Box 612 • Bayboro, NC 28515
(252) 745-7850 • Fax (252) 745-7860

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

October 3, 2011

Dear Secretaries Duncan and Sebelius,

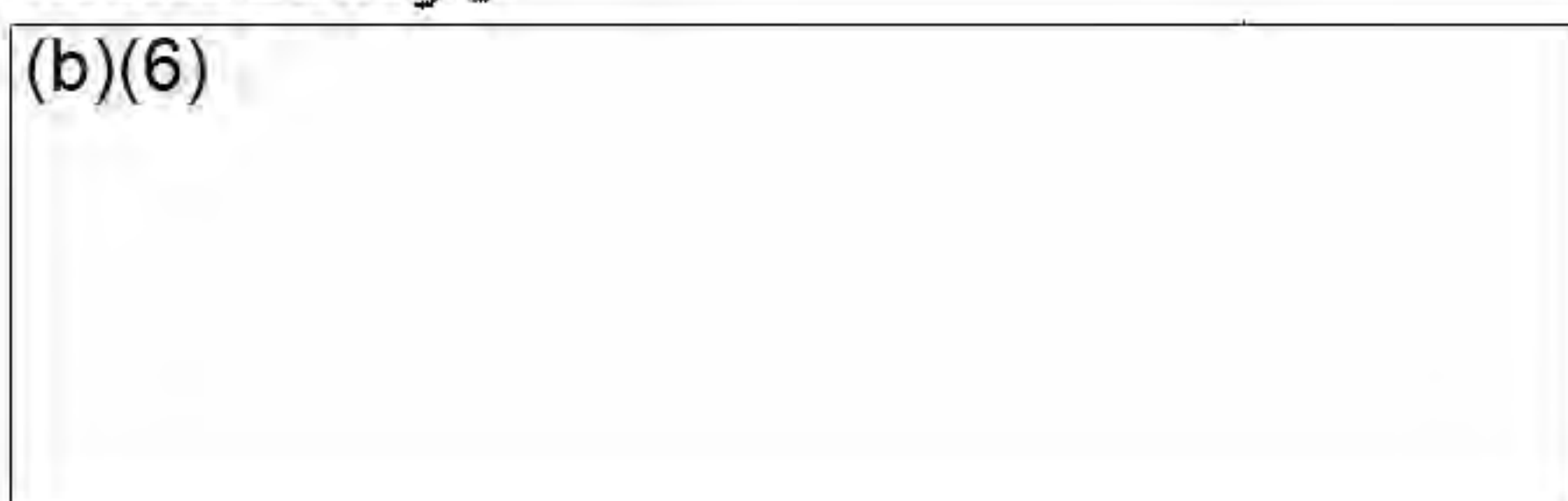
As the Executive Director of the Pamlico Partnership for Children, Inc., I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal designed to lead North Carolina toward transformational results as we seek to assure that every young child in our state is ready for success in school and in life. The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

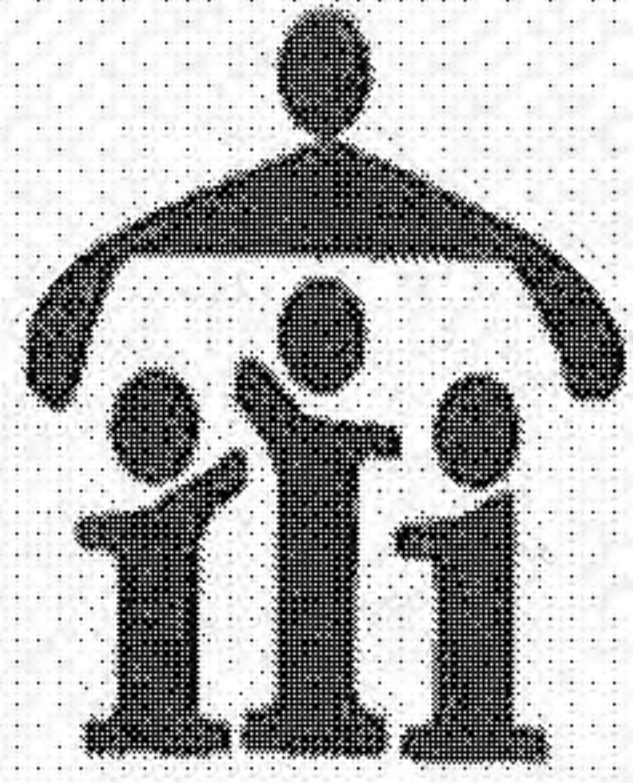
The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system designed to prepare children for success, and is an opportunity to leverage those resources to create a more advanced model. The Early Learning Challenge grant funds will allow North Carolina to take additional bold steps.

The Pamlico Partnership for Children is committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal toward our shared goals.

Sincerely,

(b)(6)





Partners for Children & Families

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

September 29, 2011

Dear Secretaries Duncan and Sebelius,

As the Executive Director of Partners for Children & Families of Moore County, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal with input from key stakeholders in North Carolina, including representatives from Smart Start local partnerships and our state organization, The North Carolina Partnership for Children, Inc.

The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system and is an opportunity to leverage those resources to build on our success. Smart Start's vision is that every child reaches his or her potential and is prepared for success in a global community, and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal.

Sincerely,

(b)(6)

Terry W. Reynolds,
Executive Director



The support you need to help children succeed.

PFC is a 501(c)(3) nonprofit organization supported by public and private funds through Smart Start, More at Four, tax-deductible donations, and grants.

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

September 27, 2011

Dear Secretaries Duncan and Sebelius,

As the leaders of the Partnership for Children of Cumberland County, the Hoke County Partnership for Children and Families, and the Harnett County Partnership for Children, we are writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal designed to lead North Carolina toward transformational results as we seek to assure that every young child in our state is ready for success in school and in life.

The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

As partners working together across multiple counties – all serving Fort Bragg and military, along with civilian, families - to expand a local, innovative integrated data system, we understand the need to be able to demonstrate outcomes and use the results to inform our work. As 75% of Fort Bragg families live off post, it is important to demonstrate the resources provided by early childhood organizations and other community partners in order to leverage additional funding to support the programming. Imagine the possibilities of an integrated system that provides the right information, in the right format, to the right people, at the right time, to make the right decisions. It cuts across borders, sectors and disciplines to open a world of possibilities.

With the Grants Evaluation Management Solution (GEMS), the Partnership for Children of Cumberland County, Inc. (PFC) has partnered with Mosaic to develop an integrated data system that is currently implemented with PFC's 21 Smart Start funded programs and provided to two additional local partnerships as a shared service; and for a fee. GEMS meets the individual and collective needs and capacities of the Smart Start Initiatives; utilizes a common approach to child identification numbers for

all children in the data set enabling eventual connection of child data across different key databases and across time; allows for changes in the common data fields based on consensus of all the participants; can be linked with other related state data bases such as DCD, NC Pre-K and NACCRAware; and allows for data analysis at single and multiple points in time, as well as more extensive longitudinal studies. Local partnerships are struggling to balance the inherent tensions related to today's accountability environment. GEMs allows PFC and local partnerships to: be strategic and businesslike without compromising values and passion; seek collaborative relationships while remaining intensely competitive; find innovative approaches but avoid risk; be transparent without impinging on confidentiality; focus on results while attempting to change human behavior; and meet the often conflicting needs and expectations of multiple stakeholders; including funders.

We have valuable lessons learned to share and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal toward our shared goals.

Children first,

(b)(6)

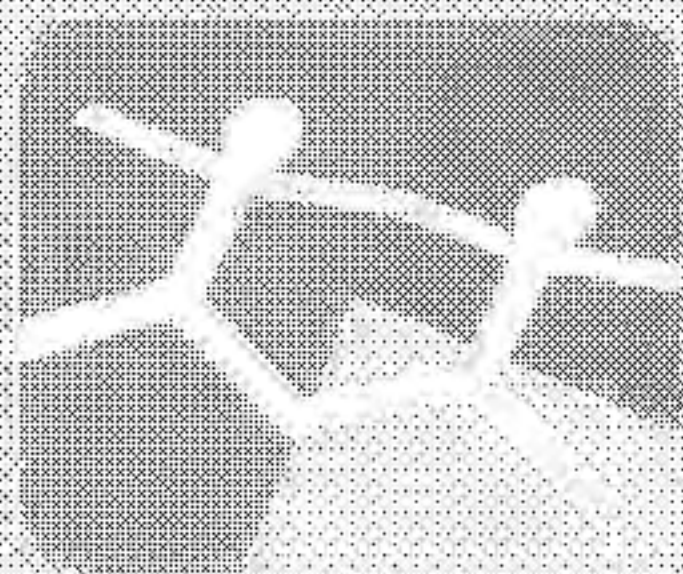
Eva Hansen, President, Partnership for Children of Cumberland County

(b)(6)

Jean Squire, Executive Director, Hoke County Partnership for Children and Families

(b)(6)

Lisa Familo, Executive Director, Harnett County Partnership for Children



U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

September 21, 2011

Dear Secretaries Duncan and Sebelius,

As the Executive Director of the Partnership for Children of Johnston County, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal with input from key stakeholders in North Carolina, including representatives from Smart Start local partnerships and our state organization, The North Carolina Partnership for Children, Inc.

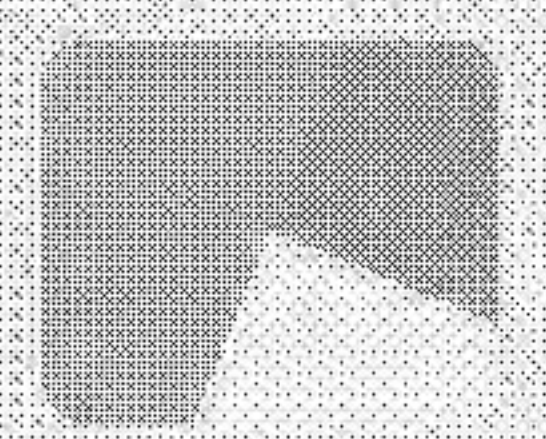
The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system and is an opportunity to leverage those resources to build on our success. Smart Start's vision is that every child reaches his or her potential and is prepared for success in a global community, and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal.

Sincerely,

(b)(6)

Dwight Morris





of Lenoir and Greene Counties

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

September 29, 2011

Dear Secretaries Duncan and Sebelius,

As the Executive Director of the Partnership for Children of Lenoir and Greene Counties, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal with input from key stakeholders in North Carolina, including representatives from other local Partnerships.

The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system and is an opportunity to leverage those resources to build on our success. Our Partnership's mission is developing today's children to become tomorrow's leaders. We are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal.

Sincerely,

(b)(6)

Keith Sylvester, Executive Director.



U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

September 23, 2011

Dear Secretaries Duncan and Sebelius,

As the Executive Director of the Partnership for Children of Lincoln and Gaston Counties, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal with input from key stakeholders in North Carolina, including representatives from Smart Start local partnerships and our state organization, The North Carolina Partnership for Children, Inc.

The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system and is an opportunity to leverage those resources to build on our success. Smart Start's vision is that every child reaches his or her potential and is prepared for success in a global community, and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal.

Sincerely,

(b)(6)

Steve Eaton





Victoria Byrd, *Executive Director*

(910) 592-9399

211 W. Main Street, Clinton NC 28328

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

September 15, 2011

Dear Secretaries Duncan and Sebelius,

As the Executive Director of the Partnership for Children of Sampson County I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal with input from key stakeholders in North Carolina, including representatives from Smart Start local partnerships and our state organization, The North Carolina Partnership for Children, Inc.

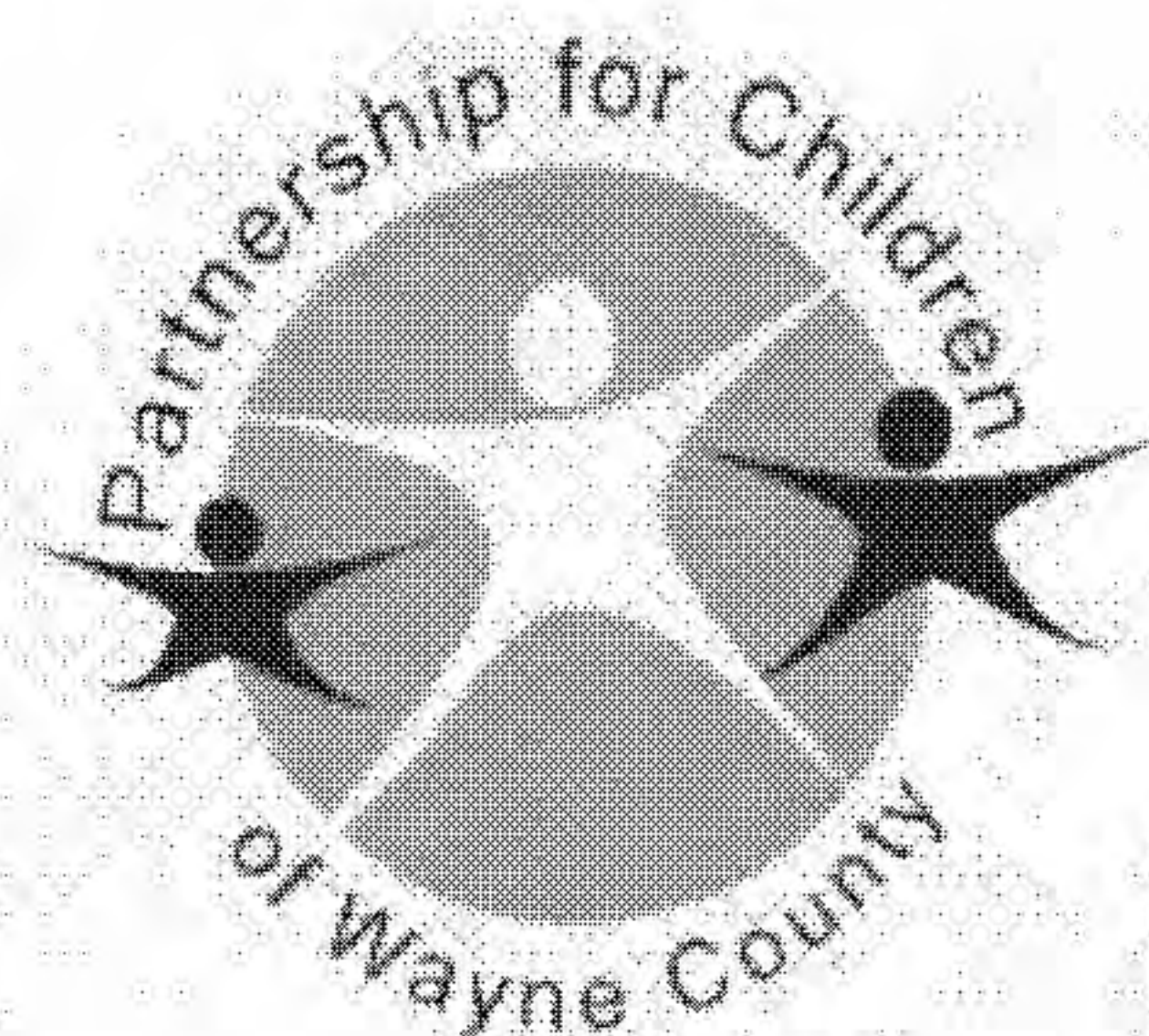
The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system and is an opportunity to leverage those resources to build on our success. Smart Start's vision is that every child reaches his or her potential and is prepared for success in a global community, and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal.

Sincerely,

(b)(6)

Victoria Byrd,
Executive Director



The Partnership for Children of Wayne County

Smart START



"Preparing Children for Success"

September 30, 2011

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

Dear Secretaries Duncan and Sebelius,

As the Chair of the Board of Directors and Executive Director of The Partnership for Children of Wayne County, we are writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal with input from key stakeholders in North Carolina, including representatives from Smart Start local partnerships and our state organization, The North Carolina Partnership for Children, Inc.

The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system and is an opportunity to leverage those resources to build on our success. Smart Start's vision is that every child reaches his or her potential and is prepared for success in a global community, and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal.

Sincerely,

(b)(6)

Sissy Lee-Elmore
Chair, Board of Directors

Charles C. Ivey
Executive Director



U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202 - 4260

September 27, 2011

Dear Secretaries Duncan and Sebelius,

I appreciate the opportunity to support North Carolina's Race to the Top – Early Learning Challenge grant request. I serve as the Director of the Person County Partnership for Children which is committed to helping young children birth to five be best prepared to enter school healthy and ready to learn. I am very excited at the possibilities that this grant will offer for young children of our state and especially children in more vulnerable areas. With so many reductions in services over the last several years, North Carolina's proposal shows promise to restore opportunities for children and their families equitably, and overcome the disproportionate damage inflicted by austerity measures and funding shortages in poor communities that are suffering.

Additional resources and eligibility criteria for child care subsidies in low-wealth areas are also critical to a comprehensive recovery. The investment in high quality early care that is accessible to all - particularly to those in rural communities – is essential to enabling the most vulnerable to have a level playing field as they move through their education years.

It is my hope that you will immediately recognize the strength of North Carolina's proposal and select such for funding. I look forward to the opportunity to help rebuild and re-establish a strong early care and education system in North Carolina.

Thank you so much.

Sincerely,

(b)(6)

Judy R. Batten, Director

cc: File
NCPC

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

September 22, 2011

Dear Secretaries Duncan and Sebelius,

As the Executive Director of the Randolph County Partnership for Children, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal designed to lead North Carolina toward transformational results as we seek to assure that every young child in our state is ready for success in school and in life. The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system designed to prepare children for success, and is an opportunity to leverage those resources to create a more advanced model. The Early Learning Challenge grant funds will allow North Carolina to take additional bold steps.

Our partnership is committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal toward our shared goals. .

Sincerely,

Pauline mckee
Pauline McKee
Executive Director

REGION A PARTNERSHIP FOR CHILDREN

Witness the Miracle...A Nurturing Community...A Loving Family... A Smiling Child

116 Jackson Street ♦ Sylva, NC 28779 ♦ 828.586.0661

www.regionakids.org

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

October 3, 2011

Dear Secretaries Duncan and Sebelius,

As the Executive Director of the Region A Partnership for Children, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. The Region A Partnership for Children has served children and families in the seven westernmost counties of North Carolina through Smart Start since 1994 by providing comprehensive and collaborative health, early care and education and family support programs that afford young children optimum opportunities for school readiness and school success.

North Carolina's application was developed by Governor Perdue's Early Childhood Advisory Council, with input from key stakeholders including local Smart Start Partnerships and the state Smart Start organization, The North Carolina Partnership for Children, Inc. The proposal reflects an understanding of the direct relationship between the quality of early learning environments and outcomes for children. It takes into account the specific needs of children at high risk across the state with an appreciation for the need for a variety of strategies to address the myriad of factors interacting to affect strong positive child outcomes.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system and is an opportunity to leverage those resources to build on our success. Smart Start's vision is that every child reaches his or her potential and is prepared for success in a global community. On behalf of the Region A Partnership for Children Board and staff, I am pleased to offer the full support of the organization to the work outlined in the Race to the Top – Early Learning Challenge grant proposal.

Sincerely,

(b)(6)



Janice M. Edgerton, Executive Director



RICHMOND COUNTY

Partnership for Children

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

September 26, 2011

Dear Secretaries Duncan and Sebelius,

As the executive director of the Richmond County Partnership for Children, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal with input from key stakeholders in North Carolina, including representatives from Smart Start local partnerships and our state organization, The North Carolina Partnership for Children, Inc.

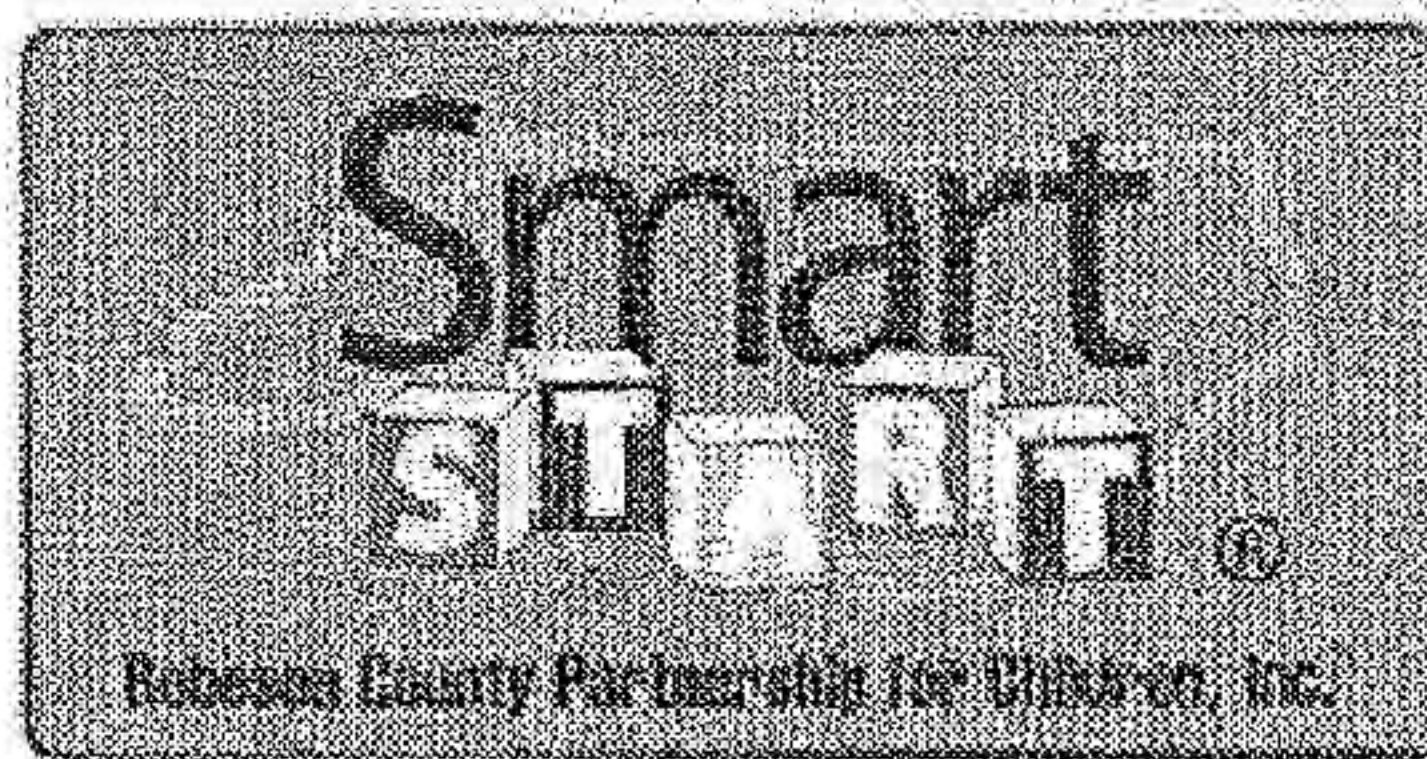
The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system and is an opportunity to leverage those resources to build on our success. Smart Start's vision is that every child reaches his or her potential and is prepared for success in a global community, and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal.

Sincerely,

(b)(6)

Martha Vance Brown



210 East 2nd Street, Lumberton, NC 28358
Tel. (910) 738-6767 • Fax (910) 738-4379

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
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- Wesley Washington
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September 26, 2011

Dear Secretaries Duncan and Sebelius,

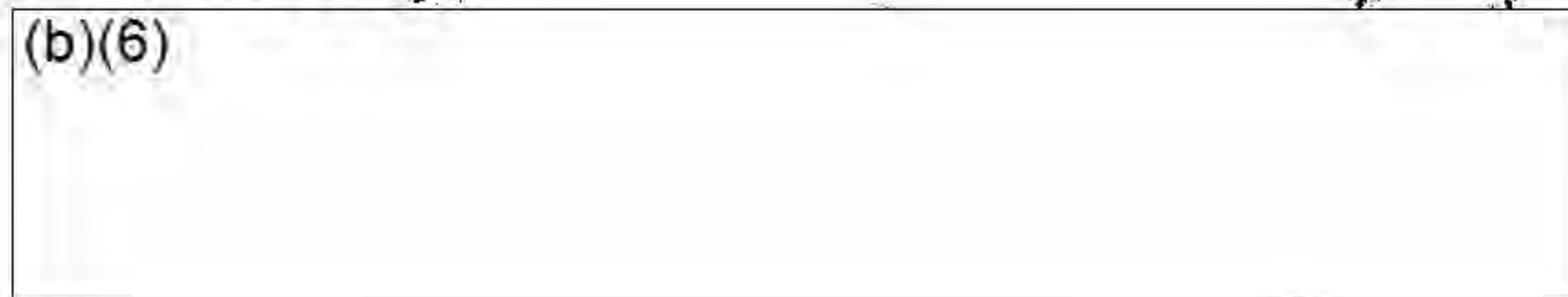
As the Executive Director of the Robeson County Partnership for Children, Inc., I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal with input from key stakeholders in North Carolina, including representatives from Smart Start local partnerships and our state organization, The North Carolina Partnership for Children, Inc.

The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system and is an opportunity to leverage those resources to build on our success. Smart Start's vision is that every child reaches his or her potential and is prepared for success in a global community, and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal.

Sincerely,

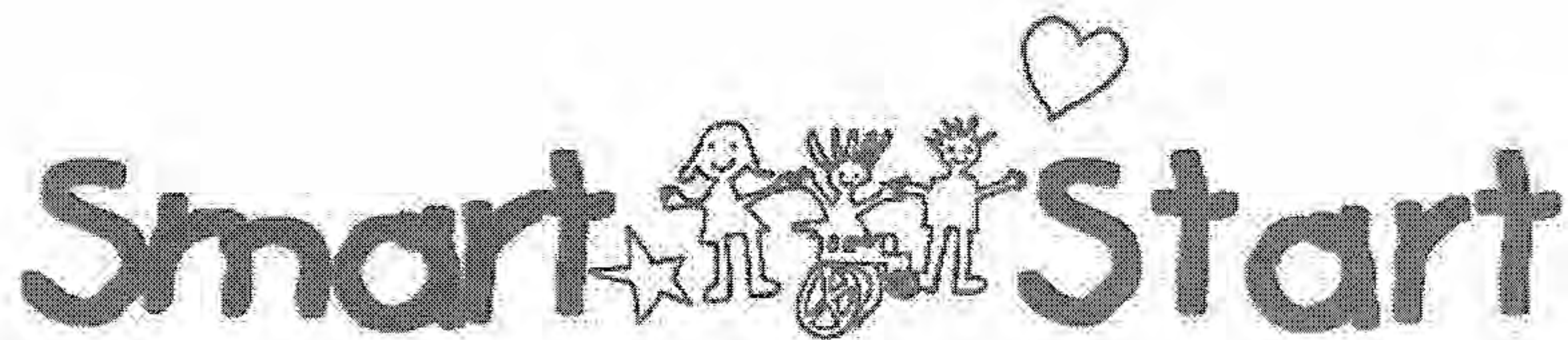
(b)(6)



Jessica Lowery

COMMUNITIES THRIVE WHEN CHILDREN THRIVE

www.robesonpartnership.org



**Rockingham County
Partnership for Children, Inc.**

P. O. Box 325 • Wentworth • NC • 27375
7572 NC Hwy 87 • Reidsville • NC • 27320
336-342-9676 • 336-342-9962 (fax)
www.rockinghamkids.org

September 30, 2011

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

Dear Secretaries Duncan and Sebelius,

As the Executive Director of the Rockingham County Partnership for Children, the local Smart Start agency, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal with input from key stakeholders in North Carolina, including representatives from Smart Start local partnerships and our state organization, The North Carolina Partnership for Children, Inc.

The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system and is an opportunity to leverage those resources to build on our success. Smart Start's vision is that every child reaches his or her potential and is prepared for success in a global community, and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal.

Sincerely,

(b)(6)

Heather Adams Kilpatrick
Executive Director



*The Mission of the Rockingham County Partnership for Children
is to ensure that all children enter school healthy and ready to succeed.*





U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

September 28, 2011

Dear Secretaries Duncan and Sebelius,

As the Executive Director of the Rutherford/Polk Smart Start Partnership, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal with input from key stakeholders in North Carolina, including representatives from Smart Start local partnerships and our state organization, The North Carolina Partnership for Children, Inc.

The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system and is an opportunity to leverage those resources to build on our success. Smart Start's vision is that every child reaches his or her potential and is prepared for success in a global community, and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal.

Sincerely,

(b)(6)

M. Barry Gold¹
Executive Director

Scotland County Partnership for Children and Families ♦ Smart Start
227 South Main Street ♦ Laurinburg, North Carolina 28352 ♦ (910) 276-3333

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U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

October 3, 2011

Dear Secretaries Duncan and Sebelius,

As the Executive Director of the Scotland County Partnership for Children and Families I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal with input from key stakeholders in North Carolina, including representatives from Smart Start local partnerships and our state organization, The North Carolina Partnership for Children, Inc.

The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system and is an opportunity to leverage those resources to build on our success. Smart Start's vision is that every child reaches his or her potential and is prepared for success in a global community, and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal.

Sincerely,

(b)(6)





**Smart
START**

OF BRUNSWICK COUNTY

Setting Sail for School Success!

September 22, 2011

P. O. Box 3050
Charlotte, North Carolina 28459
Tel 910-754-3166 • Fax 910-754-3188
www.smartstartbrunswick.org

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

Dear Secretaries Duncan and Sebelius,

As the Executive Director of Smart Start of Brunswick County, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal with input from key stakeholders in North Carolina, including representatives from Smart Start local partnerships and our state organization, The North Carolina Partnership for Children, Inc.

The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system and is an opportunity to leverage those resources to build on our success. Smart Start's vision is that every child reaches his or her potential and is prepared for success in a global community, and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal.

Sincerely,

(b)(6)

Linda Girona
Executive Director
Smart Start of Brunswick County, Inc

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One Youth at a Time
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Asheville Savings Bank

Ron Bradford
Executive Director

U.S. Department of Education
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Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

September 27, 2011

Dear Secretaries Duncan and Sebelius,

As the Executive Director of the Smart Start of Buncombe County, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal with input from key stakeholders in North Carolina, including representatives from Smart Start local partnerships and our state organization, The North Carolina Partnership for Children, Inc.

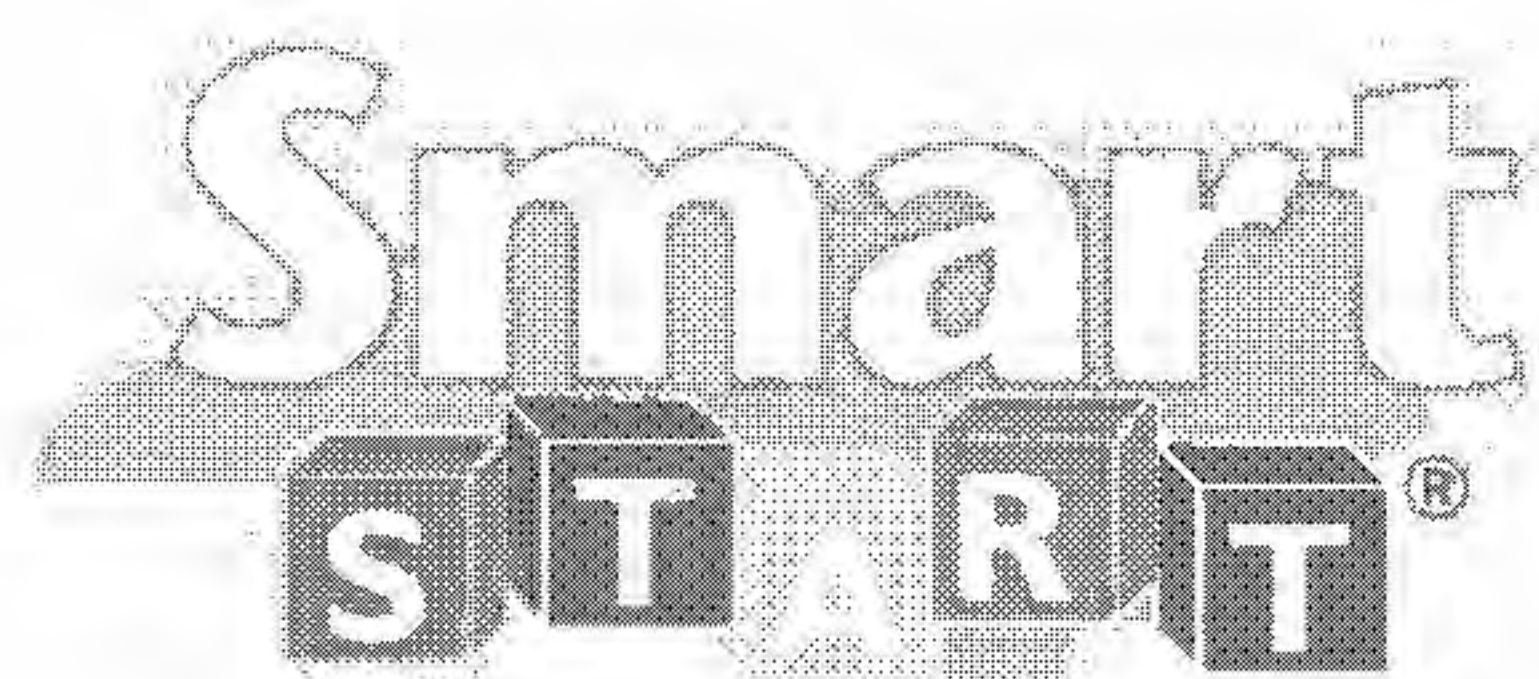
The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system and is an opportunity to leverage those resources to build on our success. Smart Start's vision is that every child reaches his or her potential and is prepared for success in a global community, and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal.

Sincerely,

(b)(6)

Executive Director



Supporting school readiness programs for young children and their families.
2229 Riverside Drive, Asheville, NC 28804 • phone: 828.285.9333 • fax: 828.285.9933
www.smartstart-buncombe.org

Smart Start of Davidson County

235 East Center Street • Lexington, NC 27292 • Phone (336) 249-6688 • Fax (336) 249-6687



U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

September 26, 2011

Dear Secretaries Duncan and Sebelius,

As the Executive Director of Smart Start of Davidson County, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal with input from key stakeholders in North Carolina, including representatives from Smart Start local partnerships and our state organization, The North Carolina Partnership for Children, Inc.

The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system and is an opportunity to leverage those resources to build on our success. Smart Start's vision is that every child reaches his or her potential and is prepared for success in a global community, and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal.

Sincerely,

(b)(6)

Linda Leonard
Executive Director

September 21, 2011

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

Dear Secretaries Duncan and Sebelius,

As the Board Chair and Executive Director of the Smart Start of Davie County, We are writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal with input from key stakeholders in North Carolina, including representatives from Smart Start local partnerships and our state organization, The North Carolina Partnership for Children, Inc.

We appreciate the fact that the proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. In Davie County, approximately 22% of the children who enter kindergarten do so academically or socially delayed. This is a statistic that Smart Start of Davie works daily to reduce and just one example of why we support this application.

Many of the strategies of this proposal also reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

The proposal builds on North Carolina's long term investment in a coordinated early learning and development system and is an opportunity to leverage those resources to build on our success. Smart Start's vision is that every child reaches his or her potential and is prepared for success in a global community, and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal.

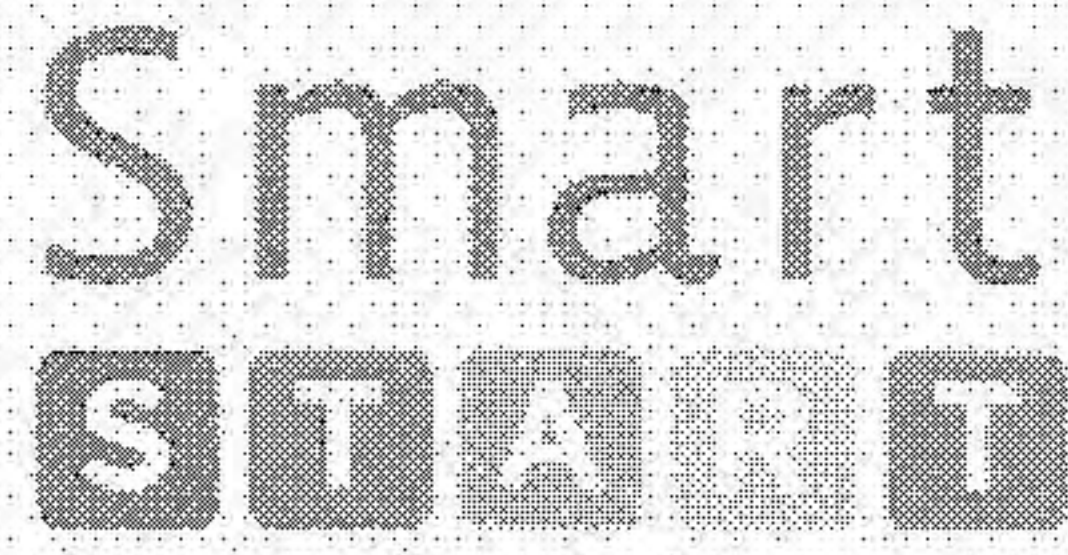
Sincerely,

(b)(6)

W.G. "Dub" Potts
Board Chair

(b)(6)

Mary Beth M. Scebold
Executive Director



of FORSYTH COUNTY

*Building a Foundation
for School Readiness*

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

September 22, 2011

Dear Secretaries Duncan and Sebelius,

As the executive director of Smart Start of Forsyth County, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal with input from key stakeholders in North Carolina, including representatives from Smart Start local partnerships and our state organization, The North Carolina Partnership for Children, Inc.

The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system and is an opportunity to leverage those resources to build on our success. Smart Start's vision is that every child reaches his or her potential and is prepared for success in a global community, and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal.

Sincerely,

(b)(6)

Charles W. Kraft



Smart Start of Henderson County

851 Case St., P.O. Box 542

Hendersonville, NC 28793

Telephone: (828) 693-1580 Fax: (828) 693-9659

www.smartstarthc.org

September 26, 2011

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

Dear Secretaries Duncan and Sebelius,

As the Executive Director of Smart Start of Henderson County, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal with input from key stakeholders in North Carolina, including representatives from Smart Start local partnerships and our state organization, The North Carolina Partnership for Children, Inc.

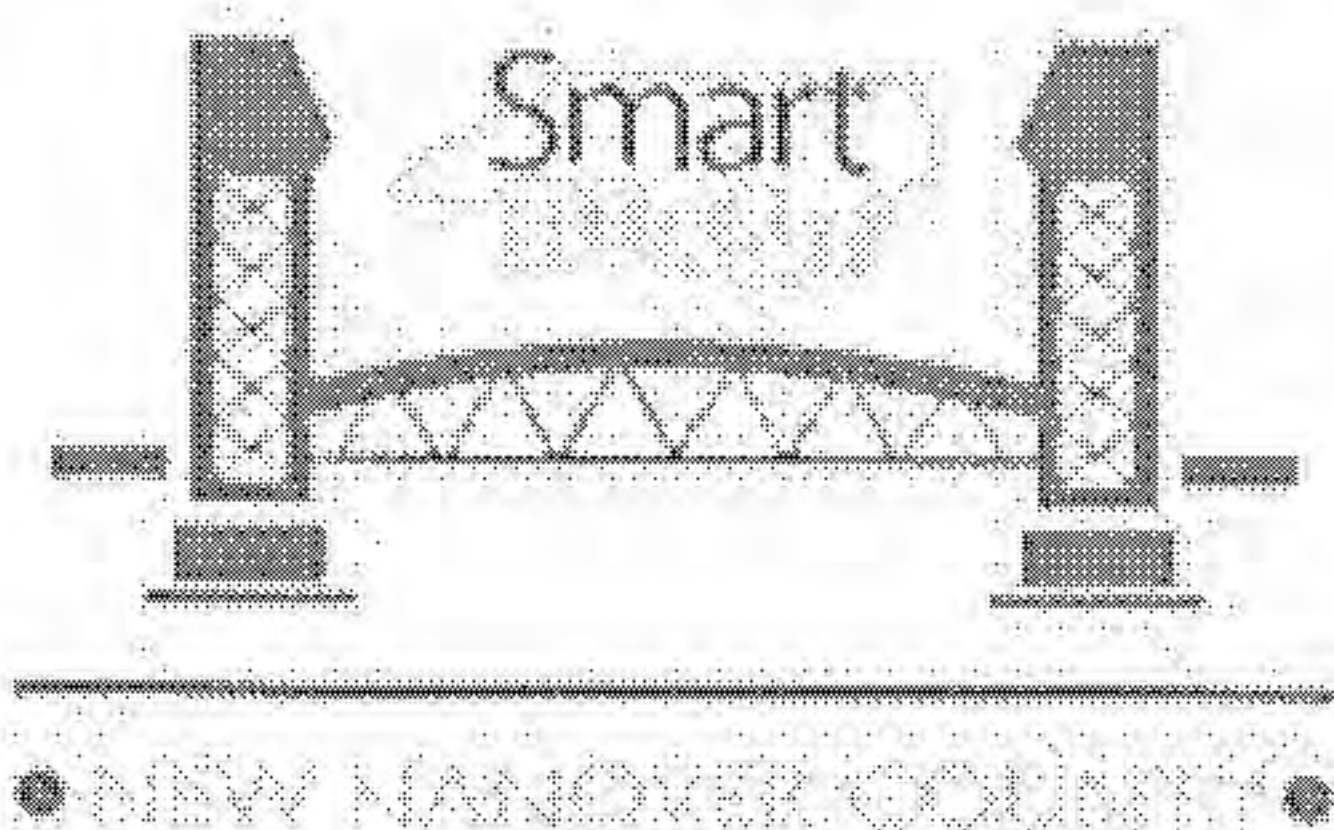
The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system and is an opportunity to leverage those resources to build on our success. Smart Start's vision is that every child reaches his or her potential and is prepared for success in a global community, and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal.

Sincerely,

(b)(6)

Sonia R. Gironda,
Executive Director



Smart Start of New Hanover County
3001 B Wrightsville Avenue · Wilmington North Carolina 28403

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

September 27, 2011

Dear Secretaries Duncan and Sebelius,

As the Executive Director of the Smart Start of New Hanover County, I am writing to support North Carolina's application for the Race to the Top—Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal with input from key stakeholders in North Carolina, including representatives from Smart Start local partnerships and our state organization, The North Carolina Partnership for Children, Inc.

The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact—and be accountable - as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system and is an opportunity to leverage those resources to build on our success. Smart Start's vision is that every child reaches his or her potential and is prepared for success in a global community, and we are committed to supporting the work outlined in the Race to the Top—Early Learning Challenge grant proposal.

Sincerely,

(b)(6)

Executive Director

Smart Start of Pender County, Inc.

A Partnership for Children

600 N. Timberly Lane, P. O. Box 429, Burgaw, NC

910-259-9978 Fax: 910-259-9728

Toll Free: 866-606-0909

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

October 3, 2011

Dear Secretaries Duncan and Sebelius,

As the Executive Director of Smart Start of Pender County, a Smart Start affiliate in North Carolina, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. North Carolina has a commitment to early childhood education consistent with Smart Start's vision that every child reaches his or her potential and is prepared for success in a global community.

Governor Perdue's Early Childhood Advisory Council has prepared a proposal with input from key stakeholders in North Carolina, including representatives from Smart Start local partnerships and our state organization, The North Carolina Partnership for Children, Inc. The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state, which includes working collaboratively with state partners to focus on improving outcomes for vulnerable children, specifically children in communities with low wealth and limited resources.

Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Other strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well. The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system and is an opportunity to leverage those resources to build on our success.

In conclusion, on behalf of Smart Start of Pender County, we are committed to Smart Start's vision and fully support North Carolina's Race to the Top – Early Learning Challenge grant proposal.

Sincerely,

(b)(6)

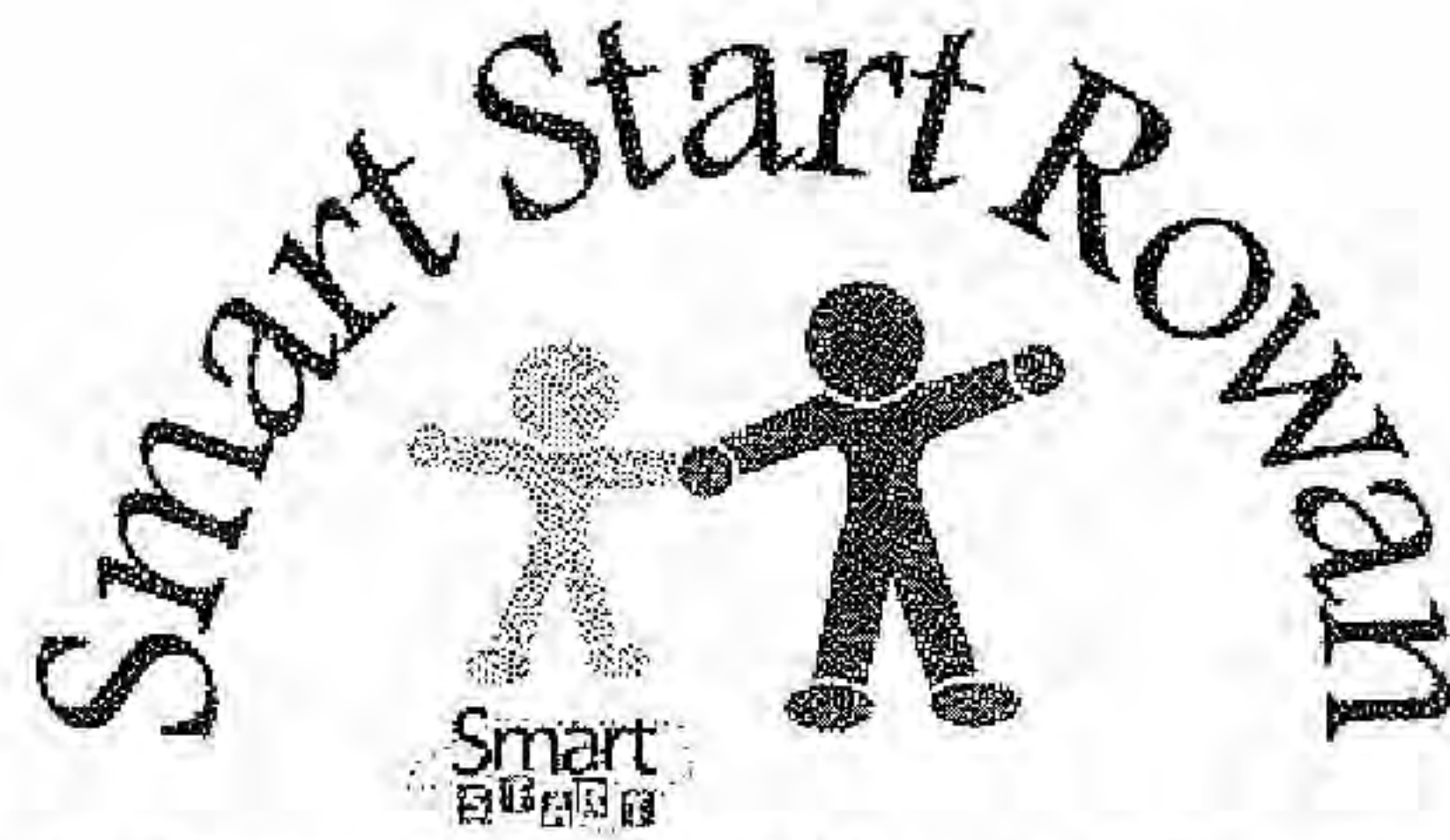
Executive Director

Smart Start of Pender County, Inc.

A Partnership for Children



We build brighter futures for children, because children are our greatest resource.



"A Partnership for Children and Families"

1839 W. Jake Alexander Blvd., Salisbury, NC 28147 704-630-9085

U.S. Department of Education
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Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

September 27, 2011

Dear Secretaries Duncan and Sebelius,

As the Board Chair and Executive Director of the Smart Start Rowan, we are writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal with input from key stakeholders across North Carolina, including representatives from Smart Start local partnerships and our state organization, The North Carolina Partnership for Children, Inc.

The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

The proposal will also build on North Carolina's long term investment in a coordinated early learning and development system and is an opportunity to leverage these resources to build on our success. Smart Start's vision is that every child reaches his or her potential and is prepared for success in the global community, and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal.

Sincerely,

(b)(6)

Mr. Jimmy Greene
Board Chair

(b)(6)

Rev. John D. Gerstenmier
Executive Director



of Transylvania County



September 23, 2011

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

Dear Secretaries Duncan and Sebelius,

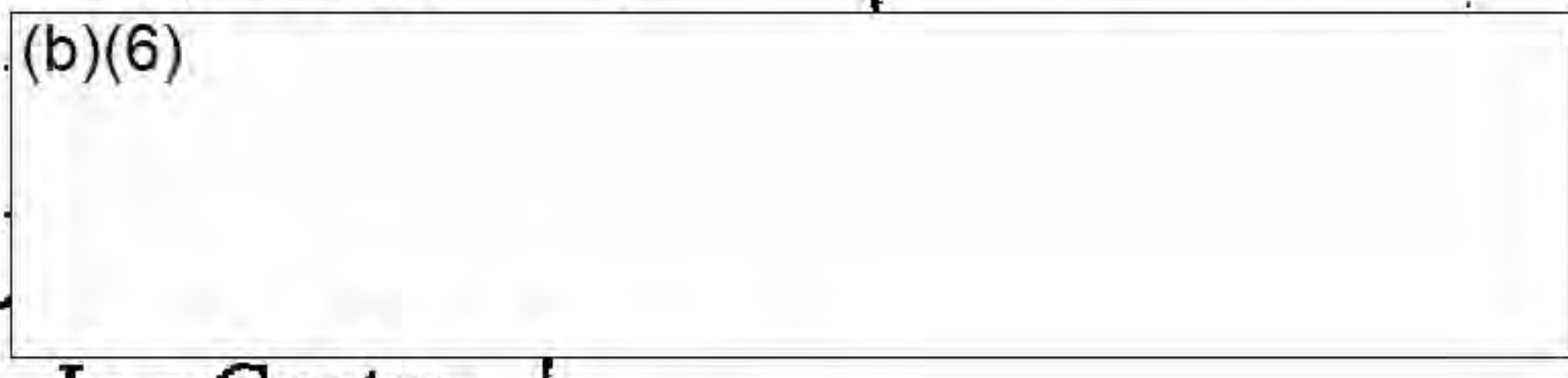
As the Executive Director of Smart Start of Transylvania County, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal with input from key stakeholders in North Carolina, including representatives from Smart Start local partnerships and our state organization, The North Carolina Partnership for Children, Inc.

The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Other strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system and is an opportunity to leverage those resources to build on our success. Smart Start's vision is that every child reaches his or her potential and is prepared for success in a global community, and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal.

Sincerely,

(b)(6)



Joe Castro
Executive Director

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Treasurer
Bill Morton

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- Beth Hyatt
- Dawn McCrary
- Donna Raspa
- Carolyn Steele

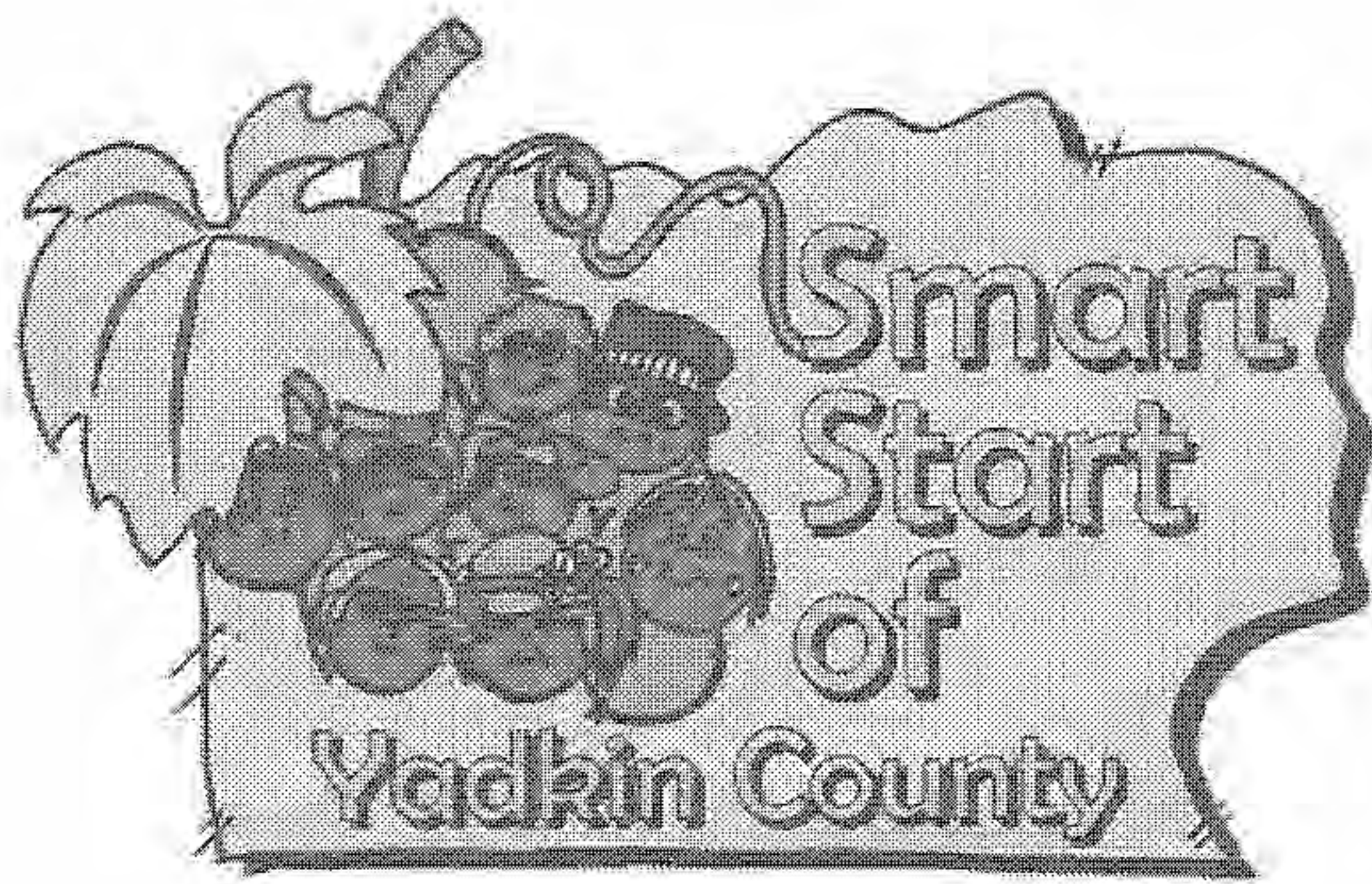
Staff

Executive Director
Joe Castro

Program Director
September
Ferguson-Fisher

Project Coordinator

Sharon Bentley



U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

September 28, 2011

Dear Secretaries Duncan and Sebelius,

As the Executive Director of Smart Start of Yadkin County, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal with input from key stakeholders in North Carolina, including representatives from Smart Start local partnerships and our state organization, The North Carolina Partnership for Children, Inc.

The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system and is an opportunity to leverage those resources to build on our success. Smart Start's vision is that every child reaches his or her potential and is prepared for success in a global community, and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal.

Sincerely,

(b)(6)

Carolyn Choplin

September 26, 2011

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

Dear Secretaries Duncan and Sebelius:

As the Executive Director of the Stanly County Partnership For Children-Smart Start, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal with input from key stakeholders in North Carolina, including representatives from Smart Start local partnerships and our state organization, The North Carolina Partnership for Children, Inc.

The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Other strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact and be accountable.

The proposal also builds on North Carolina's long term and lengthy investment in a coordinated early learning and development system and is an opportunity to leverage those resources to build on our success. Smart Start's vision is that every child reaches his or her potential and is prepared for success in a global community, and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal.

Thank you.

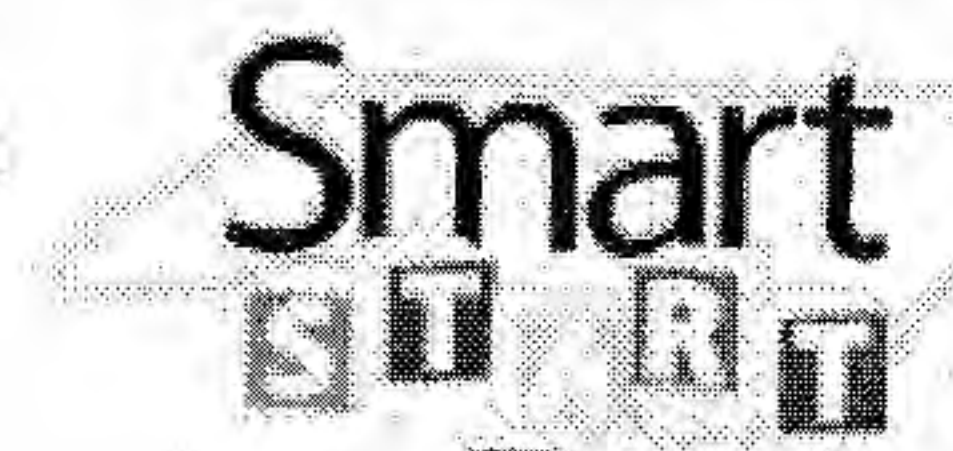
Sincerely,

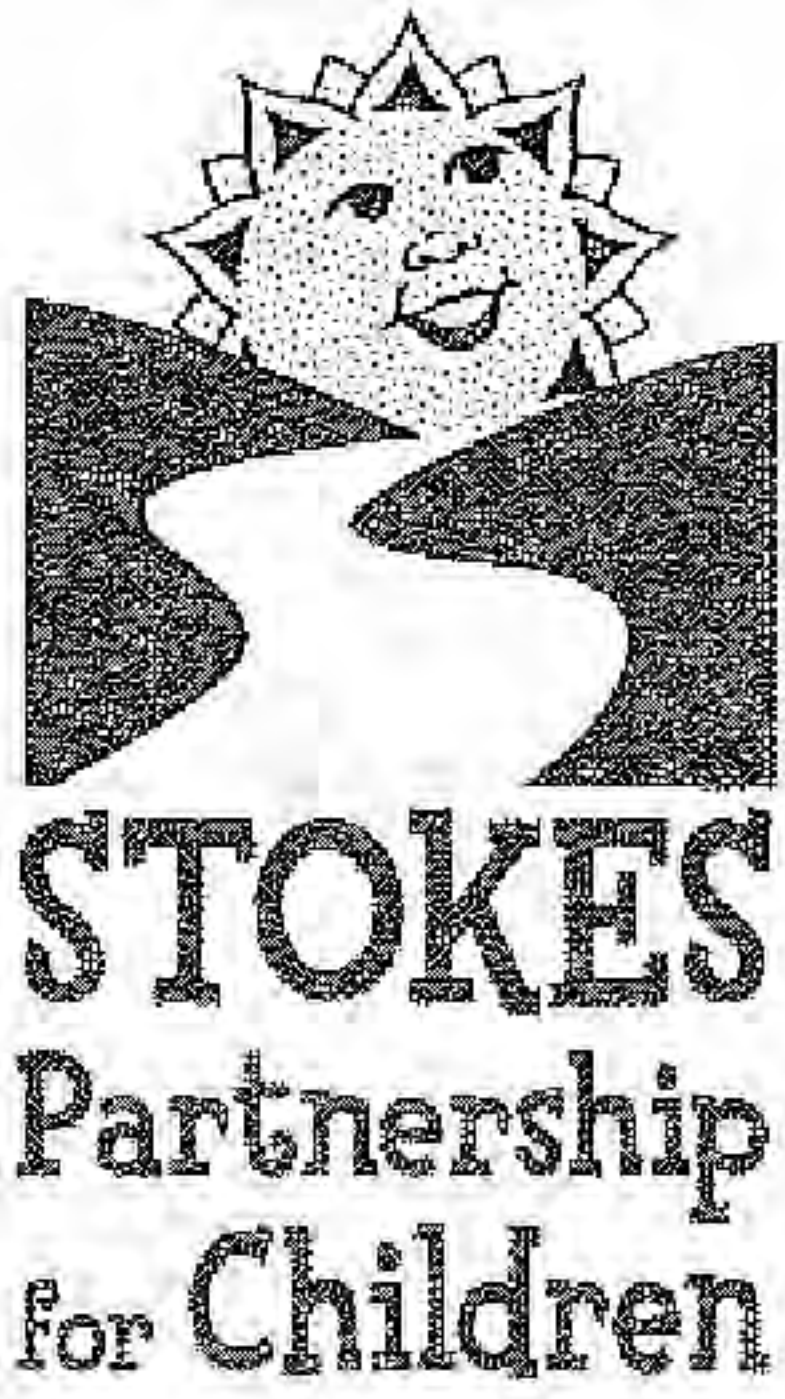
(b)(6)

Barbara D. Whitley, MSW
Executive Director

Post Office Box 2165, Albemarle, North Carolina 28002
704/982-2038 Fax 704/983-8981

www.stanlypartnership.org





151 Jefferson Church Road, Suite 105 / PO Box 2319 King, NC 27021

tel 336/985-2676 fax 336/985-3302 www.stokespfc.com

September 22, 2011

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

Dear Secretaries Duncan and Sebelius:

As the Executive Director of the Stokes Partnership for Children, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal with input from key stakeholders in North Carolina, including representatives from Smart Start local partnerships and our state organization, The North Carolina Partnership for Children, Inc.

The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system and is an opportunity to leverage those resources to build on our success. Smart Start's vision is that every child reaches his or her potential and is prepared for success in a global community, and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal.

Sincerely,

(b)(6)

Cindy S. Tuttle
Executive Director





Childhood Partnership, Inc.
"A Smart Start Agency"

817 West Pine Street • P.O. Box 7050 • Mt. Airy, NC 27030 • Phone (336) 786-1880 • Fax (336) 786-1879

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

September 22, 2011

Dear Secretaries Duncan and Sebelius,

As the Executive Director of the Surry County Early Childhood Partnership, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal with input from key stakeholders in North Carolina, including representatives from Smart Start local partnerships and our state organization, The North Carolina Partnership for Children, Inc.

The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system and is an opportunity to leverage those resources to build on our success. Smart Start's vision is that every child reaches his or her potential and is prepared for success in a global community, and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal.

Sincerely,

(b)(6)

Marty Westmoreland



Tyrrell-Washington Partnership for Children, Inc.

125-B West Water Street, Plymouth, NC 27962
Telephone (252) 793-5437 Fax (252) 793-1526

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

September 27, 2011

Dear Secretaries Duncan and Sebelius,

As the Executive Director of the Tyrrell-Washington Partnership for Children, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal designed to lead North Carolina toward transformational results as we seek to assure that every young child in our state is ready for success in school and in life. The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system designed to prepare children for success, and is an opportunity to leverage those resources to create a more advanced model. The Early Learning Challenge grant funds will allow North Carolina to take additional bold steps.

My organization works to serve families and children in Washington and Tyrrell County and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal toward our shared goals.

Sincerely,

Name

Kay Overton
Executive Director



U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

September 22nd, 2011

Dear Secretaries Duncan and Sebelius,

As the board chair of Union Smart Start, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal with input from key stakeholders in North Carolina, including representatives from Smart Start local partnerships and our state organization, The North Carolina Partnership for Children, Inc.

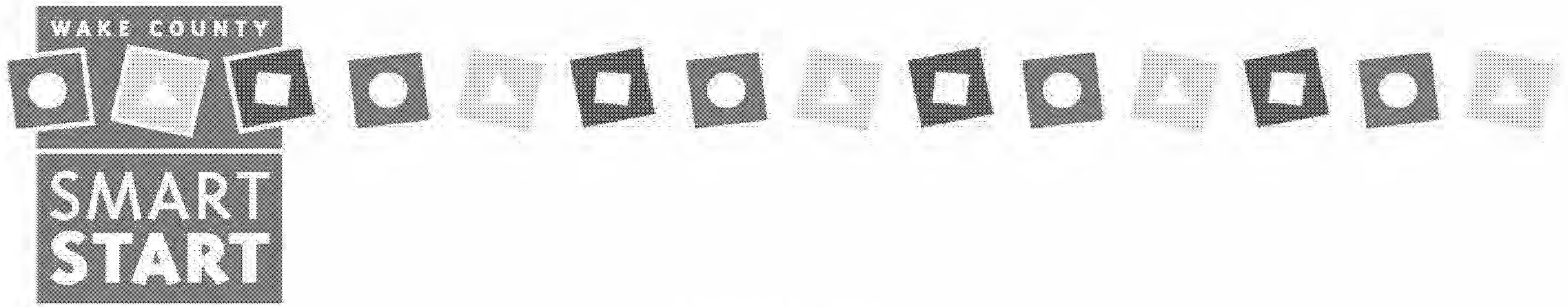
The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system and is an opportunity to leverage those resources to build on our success. Smart Start's vision is that every child reaches his or her potential and is prepared for success in a global community, and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal.

Sincerely,

(b)(6)

Jack Hargett
Union Smart Start Board Chair



October 4, 2011

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

Dear Secretaries Duncan and Sebelius,

As the Chair of the Wake County SmartStart Board of Directors, I enthusiastically support North Carolina's application for the "Race to the Top – Early Learning Challenge" grant. Wake County SmartStart is committed to consistently implementing strategies to close the educational achievement gap between children with high needs and their peers. Wake County SmartStart demonstrates its commitment by supporting state and nonprofit efforts to strengthen early learning and development systems that provide increased access to high-quality programs for the children who need it most. Wake County SmartStart is poised to continue supporting state initiatives to strengthen early learning and development systems in the hopes that the U.S. Department of Education invests in North Carolina by accepting North Carolina's "Race to the Top – Early Learning Challenge" grant proposal prepared by Governor Beverly Perdue's Early Childhood Advisory Council with input from key North Carolina stakeholders such as representatives from Smart Start local partnerships and our state organization, The North Carolina Partnership for Children, Inc.

The U.S. Department of Education is guaranteed to have a positive return on its investment in North Carolina because you will find that North Carolina is already heavily vested in increasing the number and percentage of low-income and "disadvantaged" children, birth to five, who are enrolled in high-quality learning programs. You will also find that North Carolina already has an integrated system of high-quality early learning programs and services. Given that North Carolina already has the foundation established to achieve the outcomes the U.S. Department of Education seeks to accomplish, awarding North Carolina the "Race to the Top – Early Learning Challenge" grant would markedly bolster the educational achievement of young children, buttress the phenomenal, collaborative work between state entities and local partnerships that is already being accomplished, and bolster economic development throughout North Carolina, thereby significantly improving the likelihood of successful outcomes from North Carolina's forward-thinking, achievable plan to implement comprehensive early learning reform.

Because North Carolina has the infrastructure to substantiate its commitment to ensuring that every child reaches his or her potential and is prepared for success in a global community, we respectfully request that you award North Carolina with the "Race to the Top – Early Learning Challenge" grant.

Sincerely,

(b)(6)

Q. Shanté Martin
Wake County SmartStart Board Chair

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

September 22, 2011

Dear Secretaries Duncan and Sebelius,

As the Interim Executive Director of the Children's Council of Watauga County, Inc. (Watauga County's Partnership for Children), I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal with input from key stakeholders in North Carolina, including representatives from Smart Start local partnerships and our state organization, The North Carolina Partnership for Children, Inc.

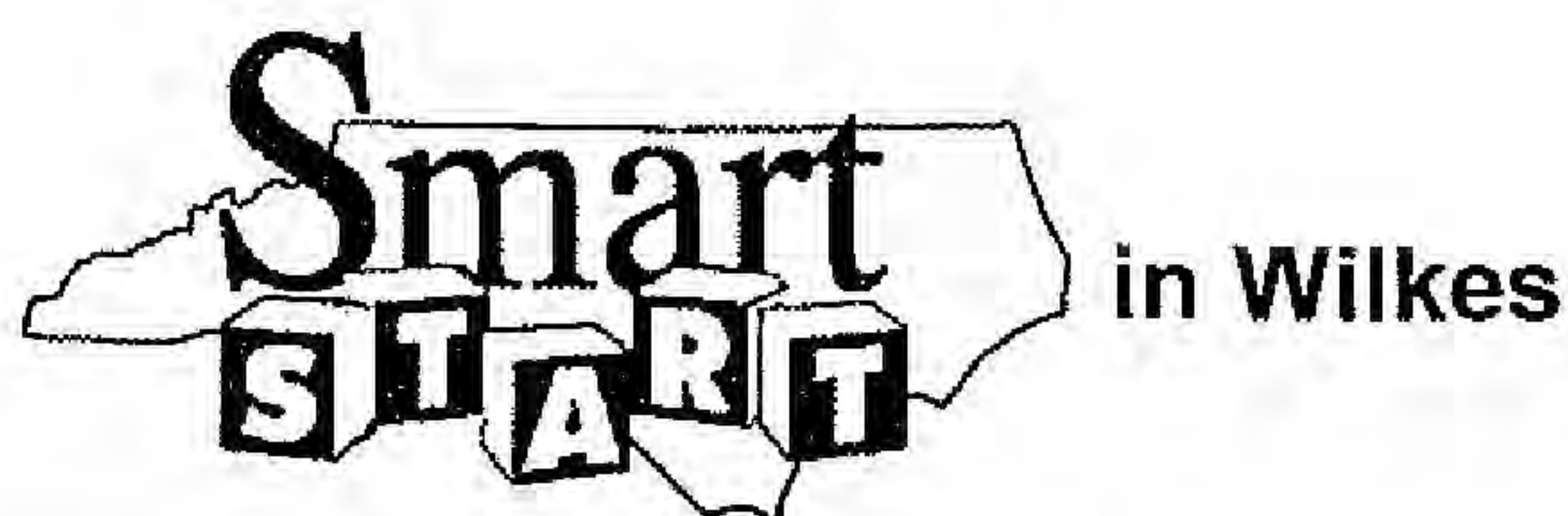
The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system and is an opportunity to leverage those resources to build on our success. Smart Start's vision is that every child reaches his or her potential and is prepared for success in a global community, and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal.

Sincerely,

(b)(6)

Lee Marshall
Interim Executive Director



Wilkes Community Partnership FOR CHILDREN

1006 F. Street • PO Box 788 • North Wilkesboro, NC 28659
336-838-0977 • (Fax) 336-838-0782 • wilkessmartstart.com
A United Way Agency

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

September 29, 2011

Dear Secretaries Duncan and Sebelius,

As the Executive Director of the Wilkes Community Partnership for Children, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal with input from key stakeholders in North Carolina, including representatives from Smart Start local partnerships and our state organization, The North Carolina Partnership for Children, Inc.

The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system and is an opportunity to leverage those resources to build on our success. Smart Start's vision is that every child reaches his or her potential and is prepared for success in a global community, and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal.

(b)(6)

Laura Welborn, Executive Director
Wilkes Community Partnership for Children
1006 F. Street
North Wilkesboro, N.C. 28659

**Wilkes Child Care
Resource & Referral**
336-838-0977
336-838-0782
wccrr@wilkessmartstart.com



**Wilkes Family
Resource Centers**
336-838-1929
336-838-0138 fax
wilkesfrc@charterinternet.com

Wilson County Partnership for Children
109 Park Avenue, West
Post Office Box 2661
Wilson, North Carolina 27894
Phone: 252-206-4235
Fax: 252-206-4245

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

September 29, 2011

Dear Secretaries Duncan and Sebelius,

As the Executive Director of the Wilson County Partnership for Children, I am writing to support North Carolina's application for the **Race to the Top – Early Learning Challenge** grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal with input from key stakeholders in North Carolina, including representatives from Smart Start local partnerships and our state organization, The North Carolina Partnership for Children, Inc.

The proposal outlines key goals and a range of well-thought-out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact—and be accountable—as well.

The proposal also builds on North Carolina's long-term investment in a coordinated early learning and development system, and is an opportunity to leverage those resources to build on our success. Smart Start's vision is that every child reaches his or her potential and is prepared for success in a global community, and we are committed to supporting the work outlined in the **Race to the Top – Early Learning Challenge** grant proposal.

Sincerely,

(b)(6)

Jim Hawley, Executive Director
Wilson County Partnership for Children



Together Building Brighter Futures

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

September 30, 2011

Dear Secretaries Duncan and Sebelius,

As the Executive Director of Academically Gifted Services of the Guilford County School System, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal designed to lead North Carolina toward transformational results as we seek to assure that every young child in our state is ready for success in school and in life. The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system designed to prepare children for success, and is an opportunity to leverage those resources to create a more advanced model. The Early Learning Challenge grant funds will allow North Carolina to take additional bold steps.

We are committed to equal access for the most challenging education for every child, and to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal toward our shared goals.

Sincerely,

(b)(6)

Lee Ann Segalla



*Working to make North Carolina
the best place to be and raise a child*

September 23, 2011

Board of
Directors

Tracy Stenberg,
Chair

Laura Aiken

Natalie Best

Kevin Cain

Kathleen Clarke-
Pearson, MD

Marian Earls,
AD

James R. Fryling

Clarence High

Mark S.
McDaniel

Peter Morris,
M.D., MPH

Christa M.
Ferreira

Shirley Poss

Jan D. Stiles,
MD

Paul Stock

David T. Tayloe,
M.D.

Jeffery L.
Thompson, Jr.

Barbara Bradley,
Executive Office
Member

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

Dear Secretaries Duncan and Sebelius:

As the President and CEO of Action for Children North Carolina, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal designed to lead North Carolina toward transformational results as we seek to assure that every young child in our state is ready for success in school and in life. The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system designed to prepare children for success, and is an opportunity to leverage those resources to create a more advanced model. The Early Learning Challenge grant funds will allow North Carolina to take additional bold steps.

The **mission** of Action for Children North Carolina is to advocate for child well-being by educating and engaging all people across the state to ensure that our children are healthy, safe, well-educated and have every opportunity for success, and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal toward our shared goals.

(b)(6)

Barbara Bradley
President and CEO
Action for Children North Carolina



*Working to make North Carolina
the best place to be and raise a child*

*Board of
Directors*

Tracy Sternberg,
Chair

Laura Aiken

Natalie Best

Kevin Cain

Kathleen Clarke-
Pearson, MD

Marian Earls,
MD

James R. Fryling

Clarence High

Mark S.
McDaniel

Peter Morris,
M.D., MPH

Krista M.
Perreira

Linda Poss

Alan D. Stiles,
MD

Paul Stock

David T. Tayloe,
Jr., M.D.

Stafford L.
Thompson, Jr.

Barbara Bradley,
Ex Officio
Member

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

October 13, 2011

Dear Secretaries Duncan and Sebelius:

As the Director of Research and Data at Action for Children North Carolina, I am pleased to support North Carolina's proposal for the Race to the Top- Early Learning Challenge (RTT-ELC) grant.

Action for Children pairs policy research—generating and testing new ideas, collecting and analyzing data through our North Carolina KIDS COUNT project and measuring the effectiveness of existing practices, programs and systems—with committed advocacy to engage lawmakers, public administrators, advocates, affected populations and other stakeholders in conversations about issues affecting the well-being of children in our state. At the core of this work is a commitment to the creation of data-driven solutions to improve outcomes for the 2.3 million children across the state.

One in eleven children in North Carolina is an infant or toddler living in a low-income household. Research shows experiences during the early years, ages birth to three, are critical in preparing children to enter school ready to learn. With targeted interventions these children can be connected to system supports that offer robust learning environments to prepare them for the classroom, stimulating language acquisition, cognitive reasoning and emotional and social functioning. Without these supports, many low-income families are forced to choose lower-quality child care alternatives that fail to provide comparable developmental benefits.

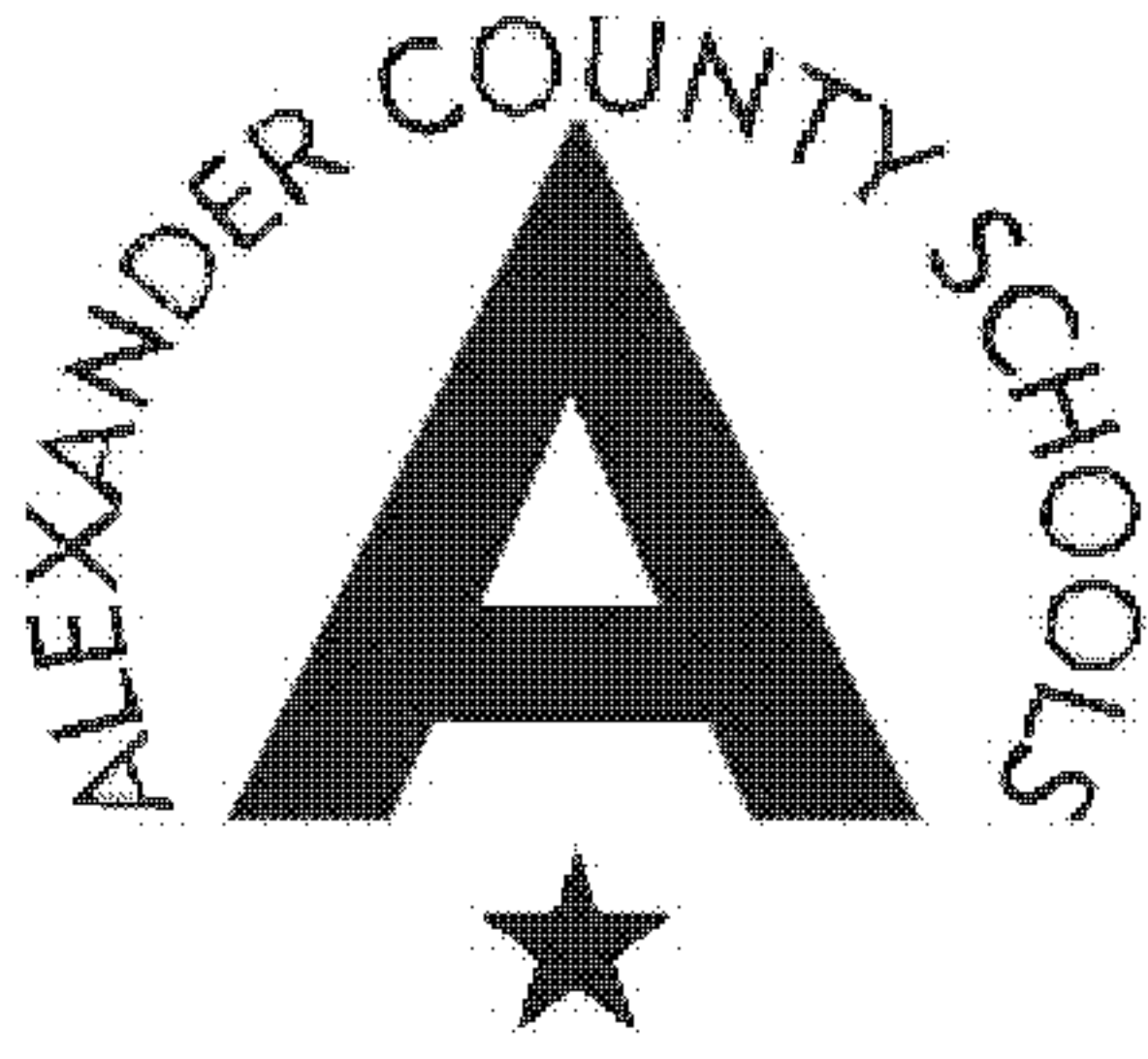
Action for Children believes all children need access to affordable, high-quality early care and education to prepare them for success in school and life. RTT-ELC funds will help North Carolina coordinate early learning programs with the existing statewide longitudinal education data system to establish a birth-to-diploma continuum of educational programming. The resulting information framework would allow decision-makers to better identify geographic, gender, socioeconomic or racial disparities; measure the effectiveness of existing interventions; improve system efficiency and answer key policy questions about how high needs children are faring during those critical early learning years.

Action for Children is dedicated to working to make North Carolina the best place to be and raise a child. We look forward to working with state, local and community partners to advance quality initiatives to improve the school readiness of all children in North Carolina.

Sincerely,

(b)(6)

Laila A. Bell, MPAff
Director of Research and Data



Alexander County Schools

700 Liledoun Road
Taylorsville, North Carolina 28681

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

September 29, 2011

Dear Secretaries Duncan and Sebelius:

As Associate Superintendent of Alexander County Schools, I wish to express our support for North Carolina's application for the Race to the Top-Early Learning Challenge grant. Public schools in North Carolina are also involved in the Race to the Top initiative which is already making an impact on the quality of education our students receive. This is a rigorous process and we are confident that Governor Perdue's Early Childhood Advisory Council has prepared a proposal designed to lead North Carolina toward transformational results aligned with those of our public schools.

The Alexander County Board of Education is also the grantee for our local Head Start Program; a relationship that allows us to see the impact of quality early learning programs that facilitates school readiness. Expanding that opportunity for all of the children in North Carolina with high needs can provide us with students who are ready to meet the challenges of the global economy in the 21st century.

Alexander County Schools puts Children First, and we are committed to supporting the work outlined in the Race to the Top –Early Learning Challenge grant proposal toward our shared goals.

Sincerely,

A handwritten signature in black ink that reads 'Jeffrey P. Peal'. The signature is written in a cursive style with a large, stylized 'J' and 'P'.

Dr. Jeff Peal, Associate Superintendent

3324 Chantilly Lane
Hope Mills, NC 28348

September 29, 2011

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

Dear Secretaries Duncan and Sebelius:

As the owner and operator of Angela's Home Daycare, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal designed to lead North Carolina toward transformational results as we seek to assure every young child in our state is ready for success in school and in life. The proposal outlines key goals and a range of strategies to promote school readiness for children across the state. Many of these strategies reflect a deep understanding of the link between the quality of early learning and these desired outcomes for children. North Carolina has a comprehensive plan that shows its understanding of the fact that many factors work together to affect the success of young children and our proposal includes these factors as well as a plan for accountability.

North Carolina already has a reputation of long term investments in a coordinated early learning and development system that has been designed and refined to prepare children for success and the proposal builds on this and provides an opportunity to use these resources to create a more advanced model. The Early Learning Challenge grant funds will allow North Carolina to take these bold steps.

Angela's Home Daycare has been a Five Star State Licensed as well as a Nationally Accredited Family Child Care Home for more than a decade. We have worked hard to provide a quality early care and learning environment for the families we serve and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal toward our shared goals.

Sincerely

Angela Cross

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
Washington DC 20202-4260

September 30, 2011

Dear Secretaries Duncan and Sebelius,

As the President of the Black Child Development Institute- Charlotte Affiliate, I am writing to support North Carolina's application for the Race to the Top - Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal designed to lead North Carolina toward transformational results as we seek to assure that every young child in our state is ready for success in school and in life. The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the facts that many factors interact to affect child outcomes and that our systems must interact - and be accountable as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system designed to prepare children for success, and is an opportunity to leverage those resources to create a more advance model. The Early Learning Challenge grant funds will allow North Carolina to take additional bold steps.

My organization exists to improve and advance the quality of life for Black children and their families through advocacy and education. We share in the development of our communities by serving as an advocate to put your voices at the table of social policy, and as resource to promote best practices that empower families from a cultural perspective. We are committee to supporting the work outlined in The Race to the Top- Early Learning Challenge grant proposal toward our shared goals.

Sincerely,

Eleanor Toliver
President BCDI - Charlotte



PO Box 1531
117 E. Salisbury St.
Pittsboro, NC 27312
(919) 542-6644
FAX (919) 542-0902

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

September 26, 2011

Dear Secretaries Duncan and Sebelius,

As the Executive Director of Child Care Networks, Inc., I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal designed to lead North Carolina toward transformational results as we seek to assure that every young child in our state is ready for success in school and in life. The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system designed to prepare children for success, and is an opportunity to leverage those resources to create a more advanced model. The Early Learning Challenge grant funds will allow North Carolina to take additional bold steps.

Child Care Networks is a Child Care Resource and Referral Agency (CCR&R) based in Chatham County and providing leadership in CCR&R services for a five county region. Our mission is to ensure that safe, nurturing child care is available to every child in our region. We are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal toward our shared goals.

Sincerely,

(b)(6)

Amy W. Rabb, Executive Director





...ensuring affordable, accessible, high quality child care for all young children and families.

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

October 11, 2011

Dear Secretaries Duncan and Sebelius,

As the Board Chair for Child Care Services Association (CCSA), I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal with input from key stakeholders in North Carolina, including Child Care Services Association. The proposal outlines key goals and a range of strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect our understanding of the link between the quality of early learning and development environments and outcomes for children.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system designed to prepare children for success, and is an opportunity to leverage those resources to create a more advanced model. North Carolina has made incredible progress, but we still have a long way to go. The Early Learning Challenge grant funds will allow North Carolina to take additional bold steps.

Since 1974, Child Care Services Association has been working to improve the quality of care in North Carolina. Our mission, and the driving force behind our work, is ensuring affordable, accessible, high quality child care for all young children and their families. Given the scope of our work, we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal.

Sincerely,

(b)(6)

(b)(6)

Daniel C. Hudgins
Board Chair

Mailing Address
PO Box 901
Chapel Hill, NC 27514

Headquarters
Orange County Office
p. 919-967-3272
f. 967-7683

Durham County Office
p. 919-403-6950
f. 403-6959

Wake County Office
p. 919-779-2220
f. 256-3489



United Way of Greater High Point

201 Church Avenue
High Point, NC 27262
Phone: 336.883.4127
Fax: 336.883.6928
www.unitedwayhp.org

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

October 3, 2011

Dear Secretaries Duncan and Sebelius;

As the Vice President of Children's Initiatives at the United Way of Greater High Point, I'm delighted to write to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal designed to lead North Carolina toward transformational results as we seek to assure that every young child in our state is ready for success in school and in life. The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system designed to prepare children for success, and is an opportunity to leverage those resources to create a more advanced model. The Early Learning Challenge grant funds will allow North Carolina to take additional bold steps.


United Way of Greater High Point's Children's Initiatives is committed to education, advocacy, and public policy that raises awareness about the critical importance of high quality early care and education, and to help ensure resources are available in the community to give ALL children the opportunities they need to be successful. So, we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal toward our shared goals.

Sincerely,

(b)(6)

Barbara T. Frye
Vice President Children's Initiatives

REACH OUT A HAND TO ONE. INFLUENCE THE CONDITION OF ALL.

LIVE UNITED 

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

September 29, 2011

Dear Secretaries Duncan and Sebelius,

As the director of the Cleveland County Head Start Program, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal designed to lead North Carolina toward transformational results as we seek to assure that every young child in our state is ready for success in school and in life. The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

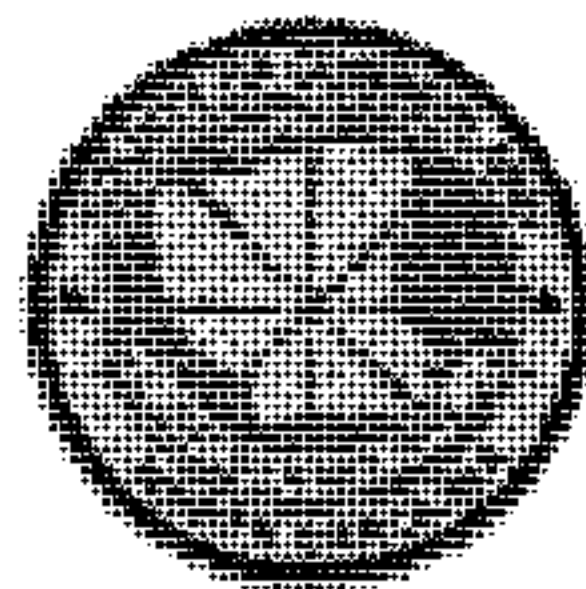
The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system designed to prepare children for success, and is an opportunity to leverage those resources to create a more advanced model. The Early Learning Challenge grant funds will allow North Carolina to take additional bold steps.

My organization believes that early education is the key to future success and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal toward our shared goals.

Sincerely,

(b)(6)

Bonnie Beam
Director of Head Start
Cleveland County Schools



COUNTY of CUMBERLAND

JODY RISACHER
DIRECTOR

BRIAN MANNING
DEPUTY DIRECTOR

Public Library & Information Center

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

RE: Letter of Support for Race to the Top-Early Learning Challenge Grant

Dear Secretaries Duncan and Sebelius:

Cumberland County Public Library & Information Center heartily endorses efforts to increase the funding for early learning and development systems in North Carolina.

Public Libraries are active partners and participants in early childhood programs and services. In this county, the library is a direct service provider for one of the Partnership for Children's primary literacy programs, **Raising a Reader**.

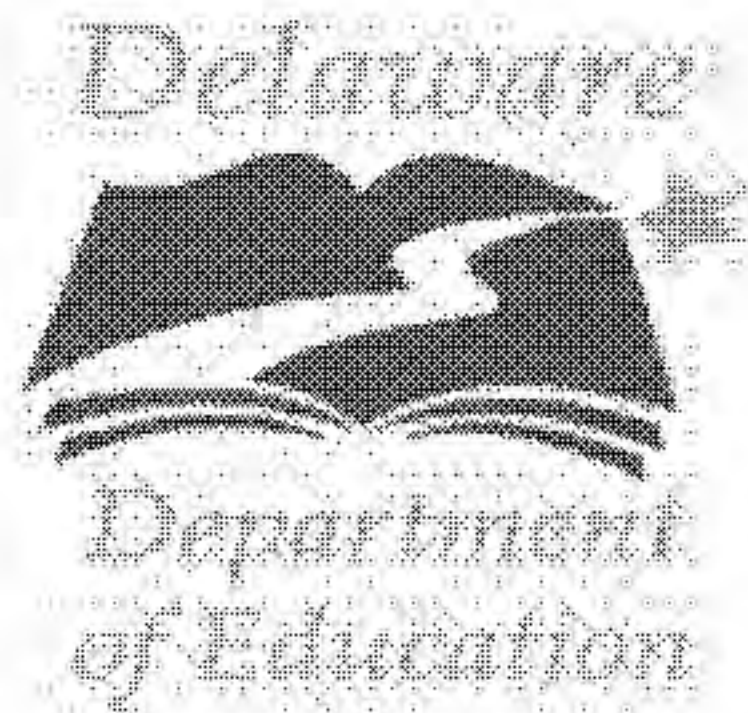
Additionally, the library provides large collections of materials, professional staff, and programs for children and their families at each of eight locations in the community.

Bringing additional funds into this community for the benefit of young children will serve to strengthen and build on an existing network of organizations and institutions. The Partnership for Children is an excellent vehicle for the management of funds. The library is a willing and dedicated partner.

Please don't hesitate to contact me for further information or support.

Sincerely,

Jody Risacher
Director



DEPARTMENT OF EDUCATION

The Townsend Building
401 Federal Street Suite 2
Dover, Delaware 19901-3639
DOE WEBSITE: <http://www.doe.k12.de.us>

Lillian M. Lowery, Ed.D.
Secretary of Education
Voice: (302) 735-4000
FAX: (302) 739-4654

October 18, 2011

Deborah Cassidy
Division of Child Development and Early Education
North Carolina Department of Health and Human Services
319 Chapanoke Road
Raleigh, NC 27603

Dear Dr. Cassidy,

We are pleased to enter into a collaborative effort with North Carolina through our combined Race to the Top Early Learning Challenge applications, to develop an assessment measure to support the alignment of quality rating and improvement and regulatory systems. This collaborative initiative will benefit both states as we continue to strive to ensure children and families have high quality options for early care and education.

As part of this commitment, the Delaware Department of Education and the Delaware Institute for Excellence in Early Childhood (DIEEC) would work collaboratively with administrators and researchers in North Carolina and Kentucky to develop, field test and pilot a scale that would meet the specific needs of both the QRIS and regulatory system. The ability of the State of Delaware to participate in this combined effort will be contingent on sufficient funds being available to support this valuable initiative.

As you know, Delaware Stars for Early Success has been implemented as a statewide QRIS for three years and is currently in the final stages of a system-wide redesign. Throughout these phases, the Delaware Department of Education and the DIEEC have worked collaboratively to engage the early education community in quality improvement efforts. These collaborative efforts serve as a strong foundation for the development and implementation of a new quality measure designed to meet the unique needs of QRIS.

We wish you the best of luck with your application and look forward to working with you on this important initiative.

Sincerely,

(b)(6)

Jim J. Lesko, Ed.D.
Director, Early Development and Learning Resources



Down East Partnership for Children

P.O. Box 1245 • 215 Lexington Street
Rocky Mount, NC 27802 • (252) 985-4300 • www.depc.org

September 26, 2011

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U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

Dear Secretaries Duncan and Sebelius,

As the Executive Director of the Down East Partnership for Children, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal with input from key stakeholders in North Carolina, including representatives from Smart Start local partnerships and our state organization, The North Carolina Partnership for Children, Inc.

The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system and is an opportunity to leverage those resources to build on our success. Smart Start's vision is that every child reaches his or her potential and is prepared for success in a global community, and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal.

Sincerely,

(b)(6)

Henrietta Zalkind
Executive Director

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

September 30, 2011

Dear Secretaries Duncan and Sebelius,

As the Special Needs Preschool Coordinator of Duplin County Schools, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal designed to lead North Carolina toward transformational results as we seek to assure that every young child in our state is ready for success in school and in life. The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system designed to prepare children for success, and is an opportunity to leverage those resources to create a more advanced model. The Early Learning Challenge grant funds will allow North Carolina to take additional bold steps.

Duplin County Schools strives to provide high quality early education for all children and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal toward our shared goals.

(b)(6)

Amanda Rich Bostic
Preschool Coordinator
Duplin County Schools

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

September 26, 2011

Dear Secretaries Duncan and Sebelius,

As the Program Director of the Early Childhood Education Associate Degree Program at Durham Technical Community College I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal designed to lead North Carolina toward transformational results as we seek to assure that every young child in our state is ready for success in school and in life. The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development, environments and outcomes for children. Other strategies reflect an appreciation for the fact that many factors interact to affect child outcomes, and that our systems must interact – and be accountable – as well.

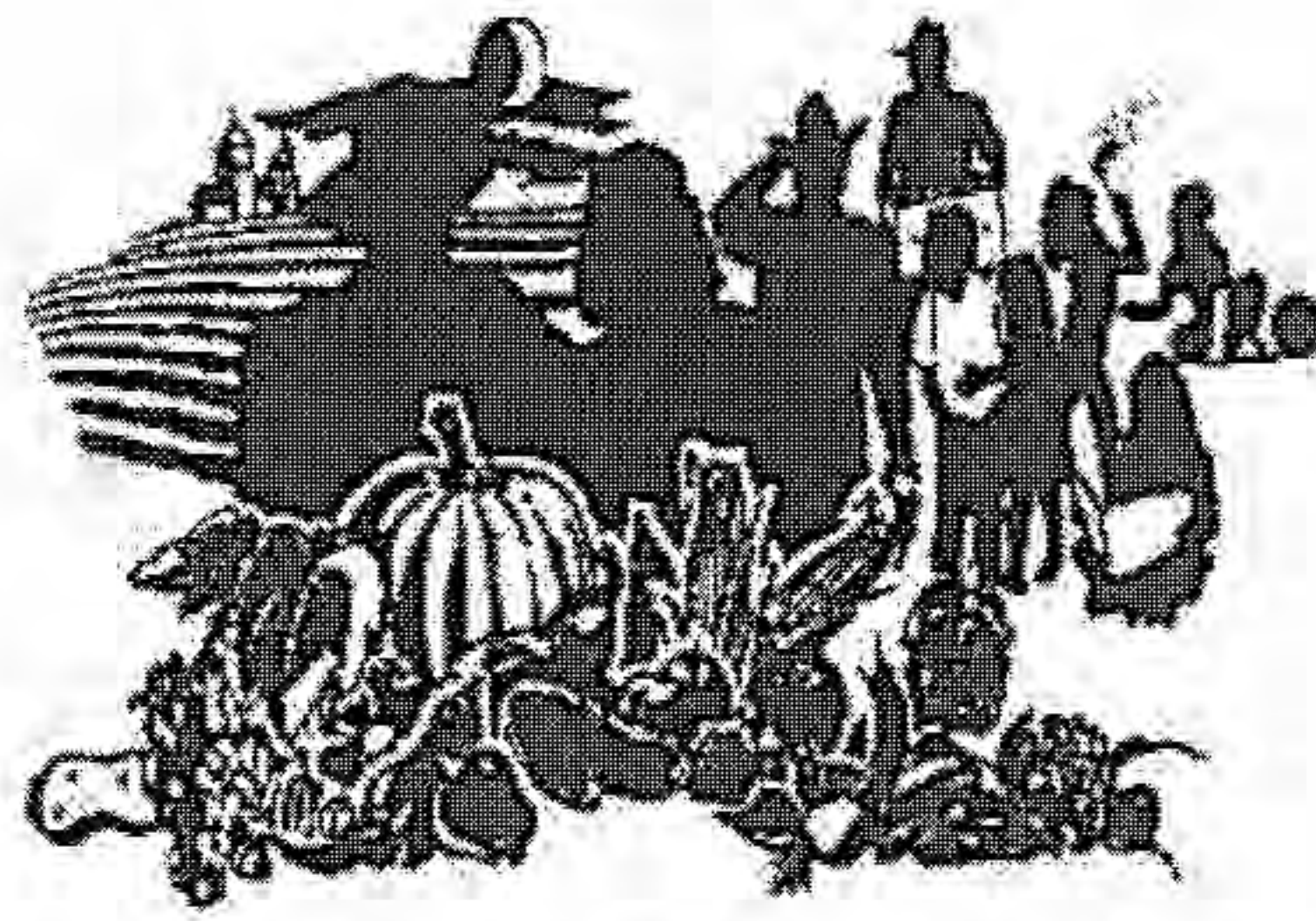
The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system designed to prepare children for success, and is an opportunity to leverage those resources to create a more advanced model. The Early Learning Challenge grant funds will allow North Carolina to take additional bold steps.

The faculty and students of the Early Childhood Education Program at Durham Technical Community College are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal toward our shared goals.

Sincerely,

(b)(6)

Ilene Britt



EAST COAST MIGRANT HEAD START PROJECT

2700 Wycliff Road, Suite 302 ▪ Raleigh, North Carolina 27607

Telephone: (919) 420-0334 ▪ Fax: (919) 783-8368

September 30, 2011

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

Dear Secretaries Duncan and Sebelius,

As the Interim Chief Executive Officer for East Coast Migrant Head Start Project (ECMHSP), I am writing to support North Carolina's application for the *Race to the Top – Early Learning Challenge* grant.

Governor Perdue's Early Childhood Advisory Council has prepared an excellent proposal designed to lead North Carolina toward transformational results as we seek to assure that every young child in our State is ready for success in school and throughout life. The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the State. Many of the strategies reflect a deep understanding of the link between the quality of early learning and positive developmental outcomes for children. North Carolina recognizes that in order for its children to be most successful, the multiple service delivery systems throughout the State must interact effectively. The proposal outlines specific strategies for how each system will contribute to and be held accountable for ensuring every child's success.

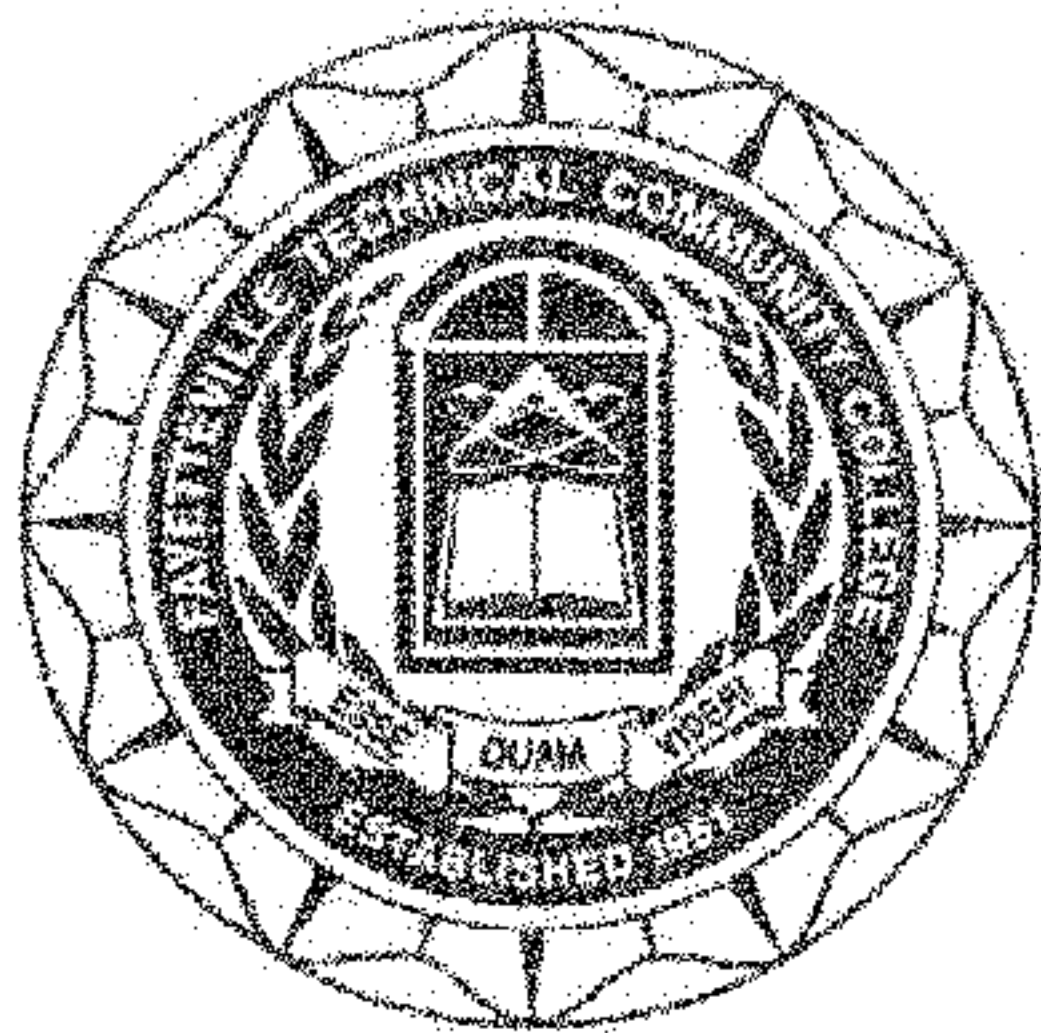
The *Early Learning Challenge* proposal builds on North Carolina's long term investment in a coordinated early learning and development system designed to prepare children for success. Receiving the *Early Learning Challenge* funds will create an opportunity for North Carolina to leverage existing resources to create a more advanced model of early care and education.

East Coast Migrant Head Start Project's mission is to "prepare children, especially the children of migrant & seasonal farmworkers, for success". ECMHSP recognizes that by providing holistic, high quality early education services, and by building a strong foundation for children's future academic and social success, the young children of North Carolina will grow to be strong leaders in our nation. ECMHSP is committed to supporting the work outlined in North Carolina's *Race to the Top – Early Learning Challenge* grant proposal.

Sincerely,

(b)(6)

John E. Menditto



FAYETTEVILLE TECHNICAL COMMUNITY COLLEGE
P.O. BOX 35236 • FAYETTEVILLE, NORTH CAROLINA 28303-0236

Dr. J. Larry Keen, President

September 29, 2011

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

Dear Secretaries Duncan and Sebelius:

As the President of the Fayetteville Technical Community College, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal designed to lead North Carolina toward transformational results as we seek to assure that every young child in our state is ready for success in school and in life. The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system designed to prepare children for success, and is an opportunity to leverage those resources to create a more advanced model. The Early Learning Challenge grant funds will allow North Carolina to take additional bold steps.

We are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal toward our shared goals.

Sincerely,

J. Larry Keen
President

cc: Eva Hansen

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SAMUEL L. ODOM, PH.D.
Director

T 919.966.4250
F 919.966.7532
slodom@unc.edu
www.fpg.unc.edu

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

October 11, 2011

Dear Secretaries Duncan and Sebelius,

As the Director of FPG Child Development Institute at the University of North Carolina at Chapel Hill, I am writing in strong support of North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared an application designed to lead North Carolina toward transformational results as we seek to assure that every young child in our state is ready for success in school and in life. The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system designed to prepare children for success, and is an opportunity to leverage those resources to create a more advanced model. The Early Learning Challenge grant funds will allow North Carolina to take additional bold steps.

FPG is committed to supporting the work outlined in the Race to the Top – Early Learning Challenge application. We welcome the opportunity to provide expertise and assistance with the major initiatives in the proposal. Our investigators have expertise and experience related to many of the themes in RTT-ELC, including TQRIS research, strengthening Early Learning and Development programs for Children with High Needs (e.g., cultural and linguistically diverse, children with disabilities), kindergarten entry assessment (including experts in assessing young Children with High Needs), integrated data systems, and implementation science.

North Carolina is a leader in building a strong, effective early childhood system. This application will continue collective effort to ensure that each child, particularly Children with High Needs, has the high-quality experiences needed to start kindergarten ready to succeed.

Sincerely,

(b)(6)

Samuel L. Odom, Ph.D.
Director, FPG Child Development Institute



—Goldsboro—
Pediatrics P.A.

2706 Medical Office Place • Goldsboro, NC 27534 • Phone: 919-734-4736 • Fax: 919-580-1017

—Mt. Olive—
Pediatrics P.A.

327 Hwy. 55 West
Mt. Olive, NC 28365
919-658-9123

—Princeton—
Pediatrics P.A.

104 Commercial Drive
Princeton, NC 27569
919-936-3164

—LaGrange—
Pediatrics P.A.

114 East Railroad Street
LaGrange, NC 28551
252-566-5999

October 1, 2011

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

Dear Secretaries Duncan and Sebelius,

As the President of Goldsboro Pediatrics, PA, and a member of North Carolina's Early Childhood Advisory Council, I am writing to support North Carolina's application for the Race to the Top - Early Learning Challenge grant. This proposal is designed to lead North Carolina toward transformational results as we seek to assure that every young child in our state is ready for success in school and in life. The proposal outlines key goals and a range of well thought-out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact - and be accountable - as well.

The proposal also builds on North Carolina's long-term investment in a coordinated early learning and development system designed to prepare children for success, and is an opportunity to leverage those resources to create a more advanced model. The Early Learning Challenge grant funds will allow North Carolina to take additional bold steps.

Goldsboro Pediatrics is the only pediatric practice in Wayne County, a large rural county in eastern NC (115,000 people). We are a very complex family-centered medical home that is committed to supporting the work outlined in the Race to the Top - Early Learning Challenge grant proposal toward our shared goals.

Sincerely,

(b)(6)

David T. Tayloe, Jr., MD, FAAP



Guilford Child Development

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

October 3, 2011

Dear Secretaries Duncan and Sebelius,

As the Board Chair of Guilford Child Development, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council (which our Executive Director, Robin Britt, chairs) has prepared a proposal designed to lead North Carolina toward transformational results as we seek to assure that every young child in our state is ready for success in school and in life. The proposal outlines key goals and a range of well-considered strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system designed to prepare children for success, and is an opportunity to leverage those resources to create a more advanced model. The Early Learning Challenge grant funds will allow North Carolina to take additional bold steps.

Guilford Child Development (GCD) is a private not-for-profit organization incorporated in 1967, whose mission is *to assist young children and families reach their full potential*. GCD is the Head Start/Early Head Start grantee for Guilford County and is the largest single county HS program in the state of NC, serving 1,180 children and families. GCD operates 13 HS/EHS centers in Guilford County, most of which are five-star. Eight GCD centers are accredited by the National Association for the Education of Young Children (eight of twelve in all of Guilford County). GCD also offers Regional Child Care Resources and Referral, Nurse-Family Partnership, Learning Together Family Literacy and Catering for Kids programs.

We are especially committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal toward our shared goals.

Sincerely Yours,

(b)(6)

Kathy Harrelson
Board Chair

1200 Arlington Street Greensboro, NC 27406-1421
Phone: 336.378.7700 Fax: 336.378.7708
www.guilfordchilddev.org

Empowering Children and Families

Ronald L. Wilson
3303 Madison Avenue
Greensboro, N.C. 2740

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

October 7, 2011

Dear Secretaries Duncan and Sebelius,

As a board member of Guilford Child Development in Greensboro, NC, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal designed to lead North Carolina toward transformational results as we seek to assure that every young child in our state is ready for success in school and in life. The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system designed to prepare children for success, and is an opportunity to leverage those resources to create a more advanced model. The Early Learning Challenge grant funds will allow North Carolina to take additional bold steps.

My organization has about 1000 children in the More at Four and Headstart programs and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal toward our shared goals.

Sincerely,

(b)(6)

Ronald L. Wilson

902 Bonner Drive
Jamestown, NC 27282
336-841-4332

www.guilfordeducationalliance.org



September 29, 2011

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

Dear Secretaries Duncan and Sebelius,

As the Executive Director of the Guilford Education Alliance, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant.

Guilford Education Alliance, our Local Education Fund (LEF), has School Readiness as one of our priority areas and last week released the *School Readiness Report Card on Guilford County*, a compilation of data and recommendations on ways we can better support our youngest children and their families. In our county we have excellent collaboration among early childhood providers but there is much more we can do to better support our children.

Governor Perdue's Early Childhood Advisory Council has prepared a proposal designed to lead North Carolina toward transformational results as we seek to assure that every young child in our state is ready for success in school and in life. The proposal outlines key goals and a range of well developed strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and developmental environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

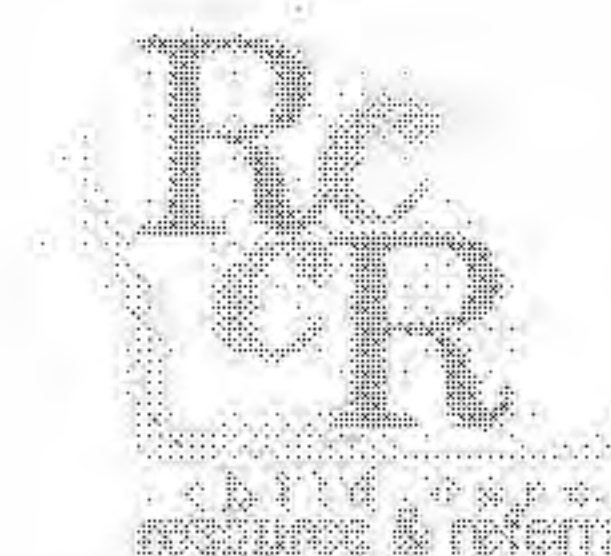
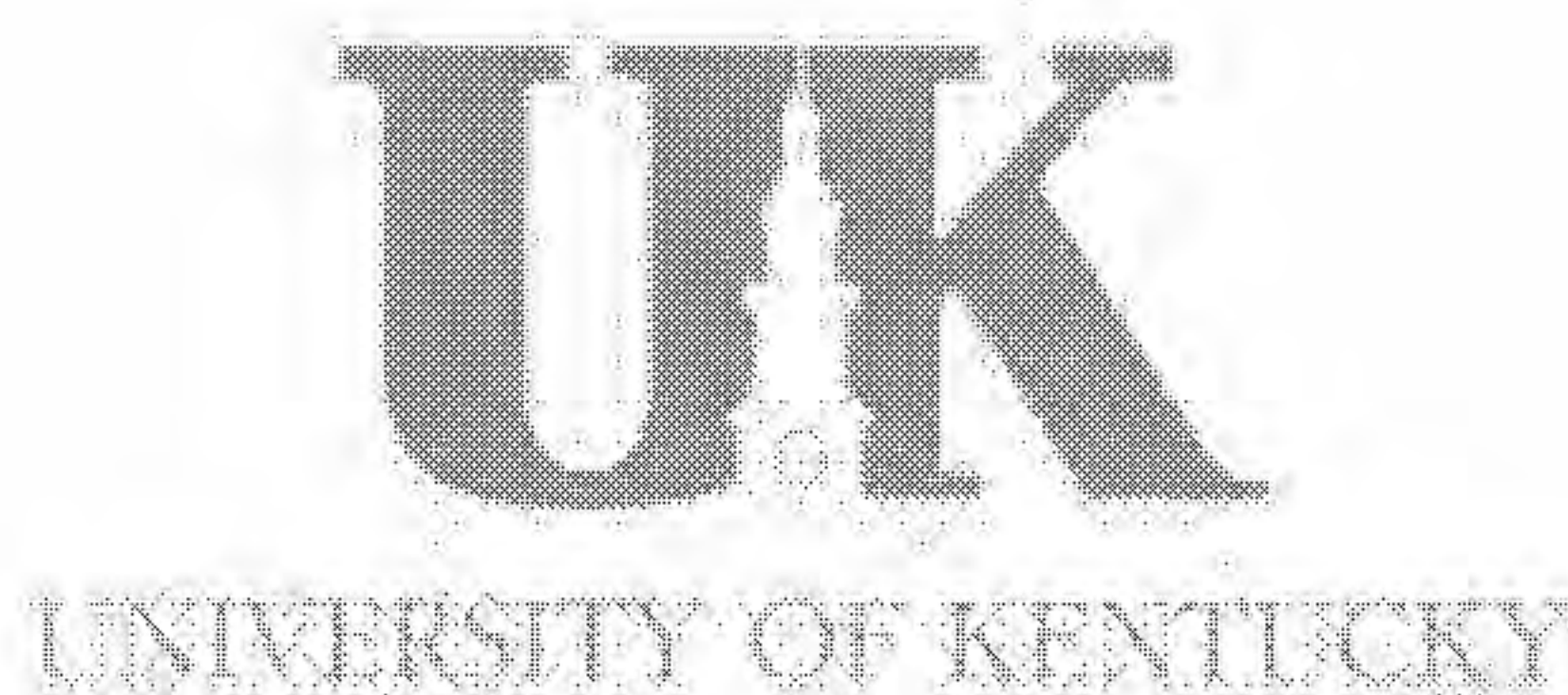
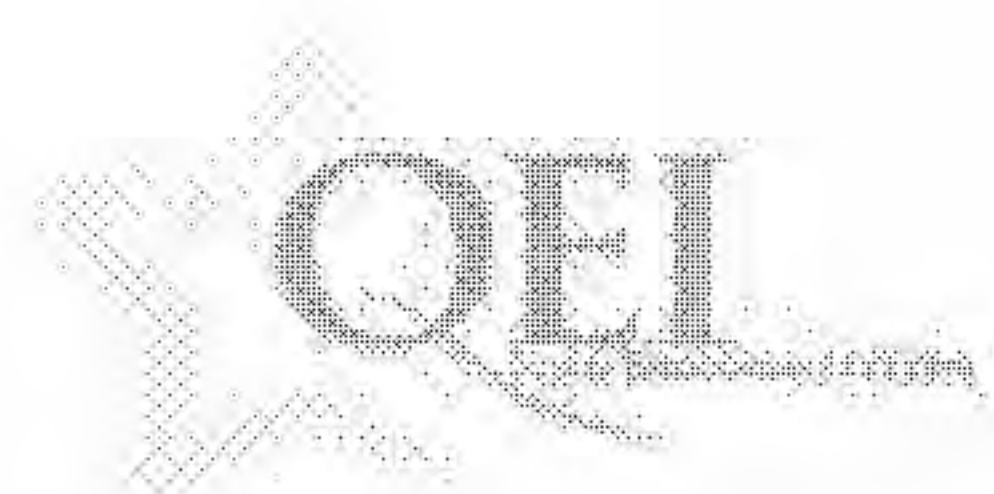
The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system designed to prepare children for success, and is an opportunity to leverage those resources to create a more advanced model. The Early Learning Challenge grant funds will allow North Carolina to take additional bold steps.

We are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal toward our shared goals.

Sincerely,

(b)(6)

Margaret Bourdeaux Arbuckle, Ph.D.
Executive Director



Dream • Challenge • Succeed

HUMAN DEVELOPMENT INSTITUTE

Deborah Cassidy, Ph.D.
North Carolina Division of Child Development
Department of Health and Human Services

Dear Dr. Cassidy:

We are pleased to support your efforts in North Carolina on the Race to the Top application to develop a measure to support the alignment of Quality Rating and Improvement and regulatory systems. This collaborative initiative will benefit both states as we continue to strive to ensure children and families have high quality options for early care and education.

As part of this commitment, the University of Kentucky, Kentucky Partnership for Early Childhood Services, would work collaboratively with administrators and researchers in North Carolina and Delaware to develop, field test and pilot a scale that would meet the specific needs of both the QRIS and regulatory systems.

As you know, the Division of Child Care and Kentucky Partnership for Early Childhood Services have worked collaboratively for many years on research and evaluation initiatives designed to improve the quality of care for infants, toddlers, preschoolers and school age populations across both center-based and home-based settings. We have had a long-standing relationship across personnel in these states which has led to numerous collaborative activities from which to build.

We wish you the best of luck with your application and look forward to working with you on this initiative.

(b)(6)

Beth Rous
Associate Professor, Educational Leadership Studies
Director, Kentucky Partnership for Early Childhood Services
University of Kentucky

Kentucky Partnership for Early Childhood Services
University of Kentucky
126 Mineral Industries Building
Lexington, Kentucky 40506-0051
(859) 257-4911 | fax (859) 323-4757
www.kentuckypartnership.org
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at CHAPEL HILL

DEPARTMENT OF MATERNAL AND CHILD HEALTH
CAMPUS BOX 7445 T 919.966.2017
CHAPEL HILL, NC 27599-7445 F 919.966.0458
www.sph.unc.edu/mch/

October 3, 2011

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

Dear Secretaries Duncan and Sebelius,

As the Project Coordinator of the North Carolina Child Care Health and Safety Resource Center, a project of UNC Gillings School of Global Public Health, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal designed to lead North Carolina toward transformational results as we seek to assure that every young child in our state is ready for success in school and in life. The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

This proposal builds on North Carolina's long term investment in a coordinated early learning and development system designed to prepare children for success. It is an opportunity to leverage those resources to create a more advanced model. The Early Learning Challenge grant funds will allow North Carolina to take additional bold steps.

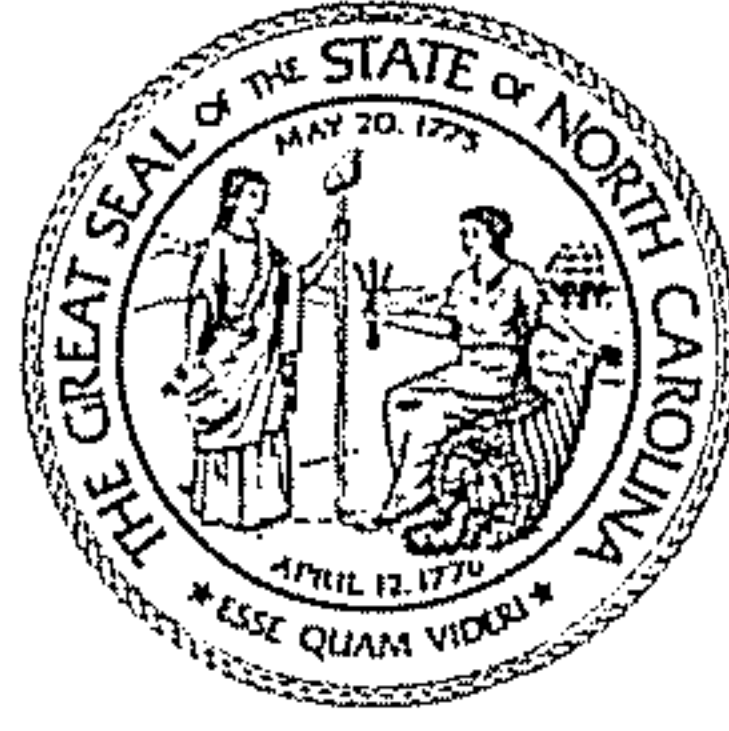
In the summary of the RTT-ELC competition, Section C.3. refers to "training and supporting providers..." and "increase the number of educators who are trained and supported in meeting health standards." Child Care Health Consultants (CCHCs), who are trained by our agency and supported by us and the state child care nurse consultant at the NC Division of Public Health, provide both the training and the support early educators in meeting health standards. CCHCs work closely with programs that serve children at risk such as those with special health care needs. We strongly support expanding the counties covered by CCHCs in NC and providing regional mentors for CCHCs, as they will help standardize CCHC services, increase quality assurance, and identify specific strategies for children at high risk.

The Resource Center's mission is to promote safe and healthy environments for children in early care and education. We are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal toward our shared goals.

Sincerely,

(b)(6)

Jacqueline Quirk RN, BSN, CCHC



North Carolina Department of Health and Human Services

2001 Mail Service Center • Raleigh, North Carolina 27699-2001

Tel 919-733-4534 • Fax 919-715-4645

Beverly Eaves Perdue, Governor

Lanier M. Cansler, Secretary

October 6, 2011

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

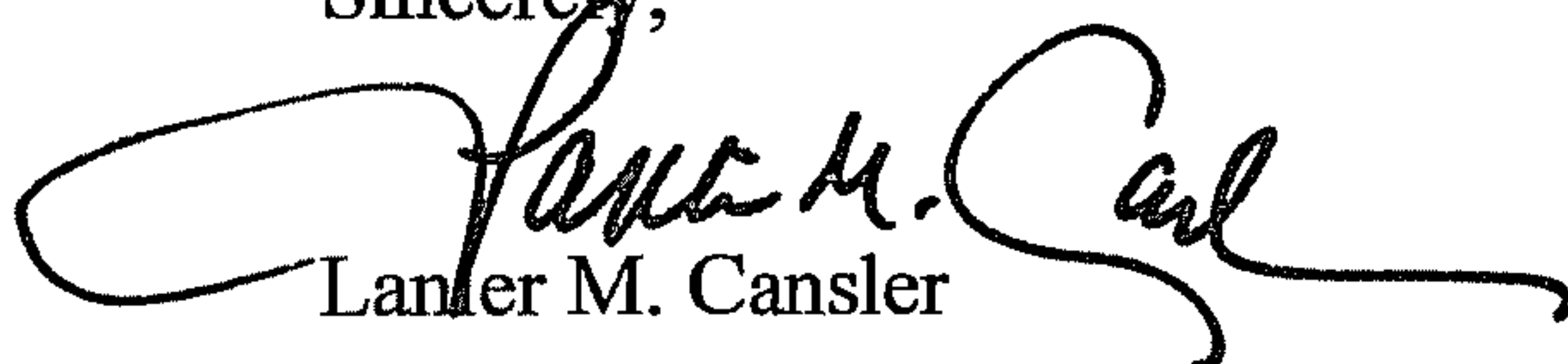
Dear Secretaries Duncan and Sebelius,

As the Secretary of the NC Department of Health & Human Services, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal designed to lead North Carolina toward transformational results as we seek to assure that every young child in our state is ready for success in school and in life. The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system designed to prepare children for success, and is an opportunity to leverage those resources to create a more advanced model. The Early Learning Challenge grant funds will allow North Carolina to take additional bold steps.

The Department as well as the Division of Child Development and Early Education is committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal toward our shared goals.

Sincerely,


Lanier M. Cansler



**NORTH CAROLINA EARLY CHILDHOOD ASSOCIATION***...formerly, the North Carolina Day Care Association***NCECA, P.O. BOX 4292, CHAPEL HILL, NC 27515, 919-442-2000**

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

October 5, 2011

Dear Secretaries Duncan and Sebelius,

As the President of the North Carolina Early Childhood Association (NCECA), I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal with input from key stakeholders in North Carolina. The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system designed to prepare children for success, and is an opportunity to leverage those resources to create a more advanced model. The Early Learning Challenge grant funds will allow North Carolina to take additional bold steps.

My organization has been working since 1960 to improve the quality of care in North Carolina. We are committed to making high quality child care available to all children in our state, and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal.

Sincerely,

(b)(6)

Janice Price



PO Box 959
Chapel Hill, NC 27514
919-942-7442
www.ncicdp.org

September 24, 2011

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

Dear Secretaries Duncan and Sebelius,

As the President of the North Carolina Institute for Child Development Professionals (Institute) I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal designed to lead North Carolina toward transformational results as we seek to assure that every young child in our state is ready for success in school and in life.

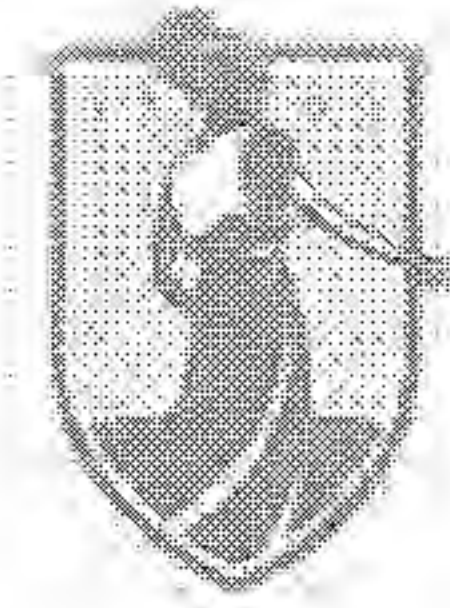
The mission of the Institute is to promote the implementation of a comprehensive professional development and recognition system that links education and compensation for child development professionals to ensure high quality care and education services for children and families.

The Institute is committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal toward our shared goals. The proposal outlines key goals and a range of well-developed, targeted strategies to promote school readiness for children with high needs across the state. The strategies reflect a deep understanding of the link between the quality of early learning, outcomes for children and the importance of supporting a great early childhood workforce. Each strategy reflects the ongoing commitment of the state to strive toward the goal of providing quality child care for all children through an data-driven, comprehensive systemic approach.

North Carolina leads the nation in the development and implementation of workforce recognition, reward and support models. The Early Learning Challenge grant will allow North Carolina to take additional bold steps to fully implement the first-in-the-nation, field-wide Early Educator Certification system. Early Educator Certification, a workforce recognition and reward system, will not only contribute to the creation of an aggregate data system inclusive of educator education but will supports the critical connection with and alignment of the early childhood and K-3 teacher education standards and rewards.

Sincerely,

Anna Mercer-McLean
Board President and Director of Community School for People under Six



THE UNIVERSITY OF NORTH CAROLINA
GREENSBORO

School of Health and Human Sciences
Department of Human Development and Family Studies

248 Stone Building
P.O. Box 26170, Greensboro, NC 27402-6170
336.334.5307 Phone 336.334.5076 Fax
<http://www.uncg.edu/hdf>

Dr. Deborah Cassidy
North Carolina Division of Child Development and Early Education
Department of Health and Human Services

October 13, 2011

Dear Dr. Cassidy:

As Co-Directors for the North Carolina Rated License Assessment Project we are pleased to support your efforts on the Race to the Top application to develop a measure to facilitate the alignment of Tiered Quality Rating and Improvement and regulatory systems. This collaborative initiative will benefit the state of North Carolina as we continue to strive to ensure children and families have high quality options for early care and education.

As part of this commitment the University of North Carolina at Greensboro and the NC Rated License Assessment Project will work collaboratively with administrators and researchers in Kentucky and Delaware to develop, field test, and pilot a scale that would meet the specific needs of both the TQRIS and regulatory systems.

As you know, NCRLAP has worked collaboratively with the Division of Child Development and Early Education for over 12 years to provide independent assessments to rate the quality of care for infants, toddlers, preschoolers and school age populations across both center-based and home-based settings. Our extensive experience with measuring quality as part of a TQRIS and regulatory system will be an asset to the development of a new measure and we welcome the opportunity to collaborate with other states in this process.

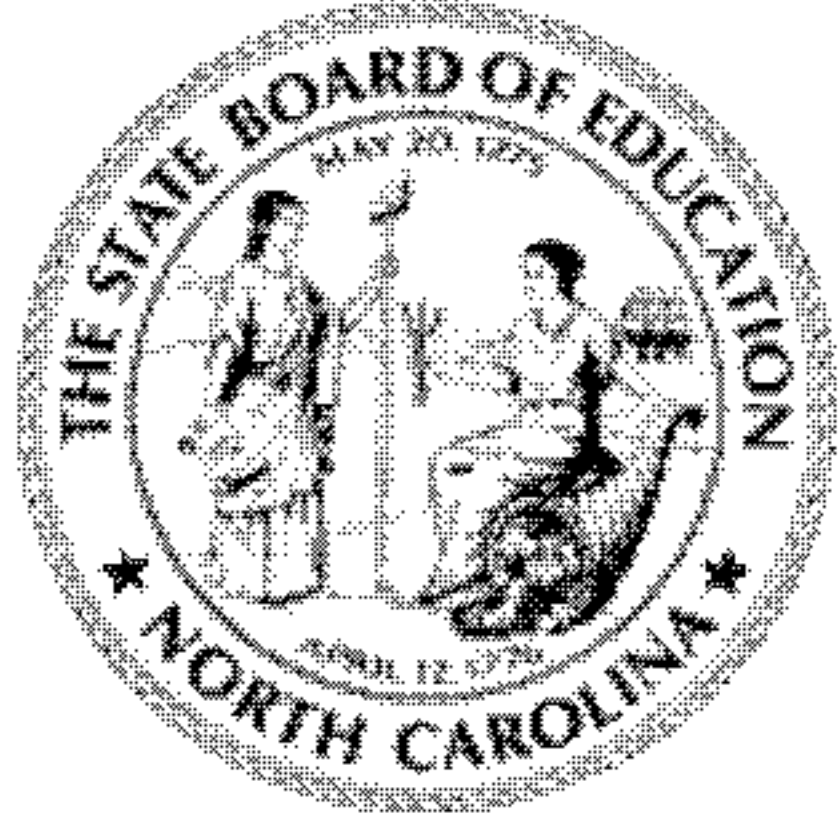
We wish you the best of luck with your application and look forward to working with you on this initiative.

Sincerely,

(b)(6)

Linda L. Hestenes, Ph.D.
Associate Professor
Co-Director NCRLAP
Department of Human Development & Family Studies

Sharon Mims, Ph.D.
AP Faculty
Co-Director NCRLAP
Department of Human Development & Family Studies



PUBLIC SCHOOLS OF NORTH CAROLINA
STATE BOARD OF EDUCATION | William C. Harrison, Ed.D., *Chairman*
WWW.NCPUBLICSCHOOLS.ORG

October 4, 2011

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

Dear Secretaries Duncan and Sebelius,

As the Chairman of the North Carolina State Board of Education and a member of North Carolina's Early Childhood Advisory Council, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. This proposal is designed to lead North Carolina toward transformational results as we seek to assure that every young child in our state is ready for success in school and in life. The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Other strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact, and be accountable, as well.

The proposal also builds on North Carolina's long-term investment in a coordinated early learning and development system designed to prepare children for success, and is an opportunity to leverage those resources to create a more advanced model. The Early Learning Challenge grant funds will allow North Carolina to take additional bold steps.

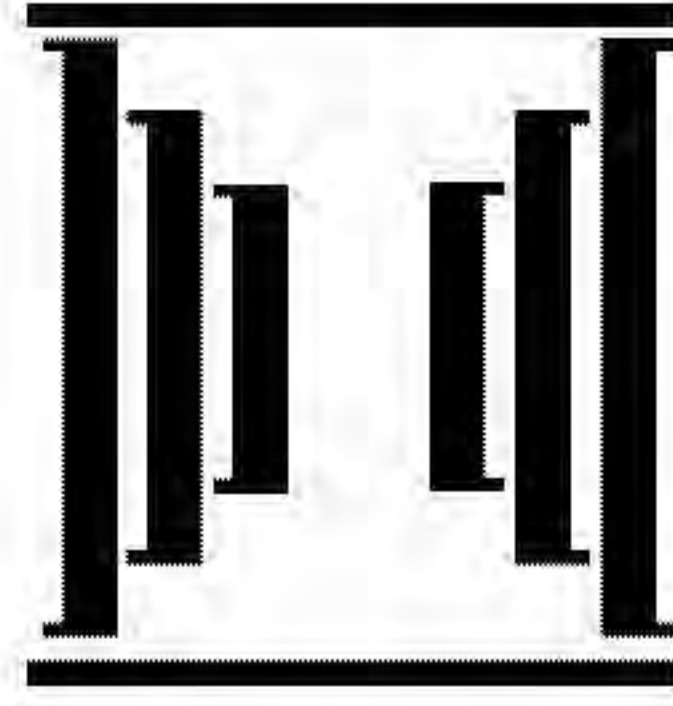
The State Board of Education is committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal toward our shared goal of promoting children's success in the early grades.

Sincerely,

William C. Harrison, Ed.D.

NORTH CAROLINA STATE BOARD OF EDUCATION

William C. Harrison, Ed.D., *Chairman* | wharrison@dpi.state.nc.us
6302 Mail Service Center, Raleigh, North Carolina 27699-6302 | (919) 807-3430 | Fax (919) 807-3445
AN EQUAL OPPORTUNITY/AFFIRMATIVE ACTION EMPLOYER



NORTH CAROLINA COMMUNITY COLLEGE SYSTEM
Dr. R. Scott Ralls, President

October 11, 2011

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

Dear Secretaries Duncan and Sebelius:

As the president of the North Carolina Community College System and a member of North Carolina's Early Childhood Advisory Council, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. This proposal is designed to lead North Carolina toward transformational results as we seek to assure that every young child in our state is ready for success in school and in life. The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system designed to prepare children for success, and is an opportunity to leverage those resources to create a more advanced model. The Early Learning Challenge grant funds will allow North Carolina to take additional bold steps.

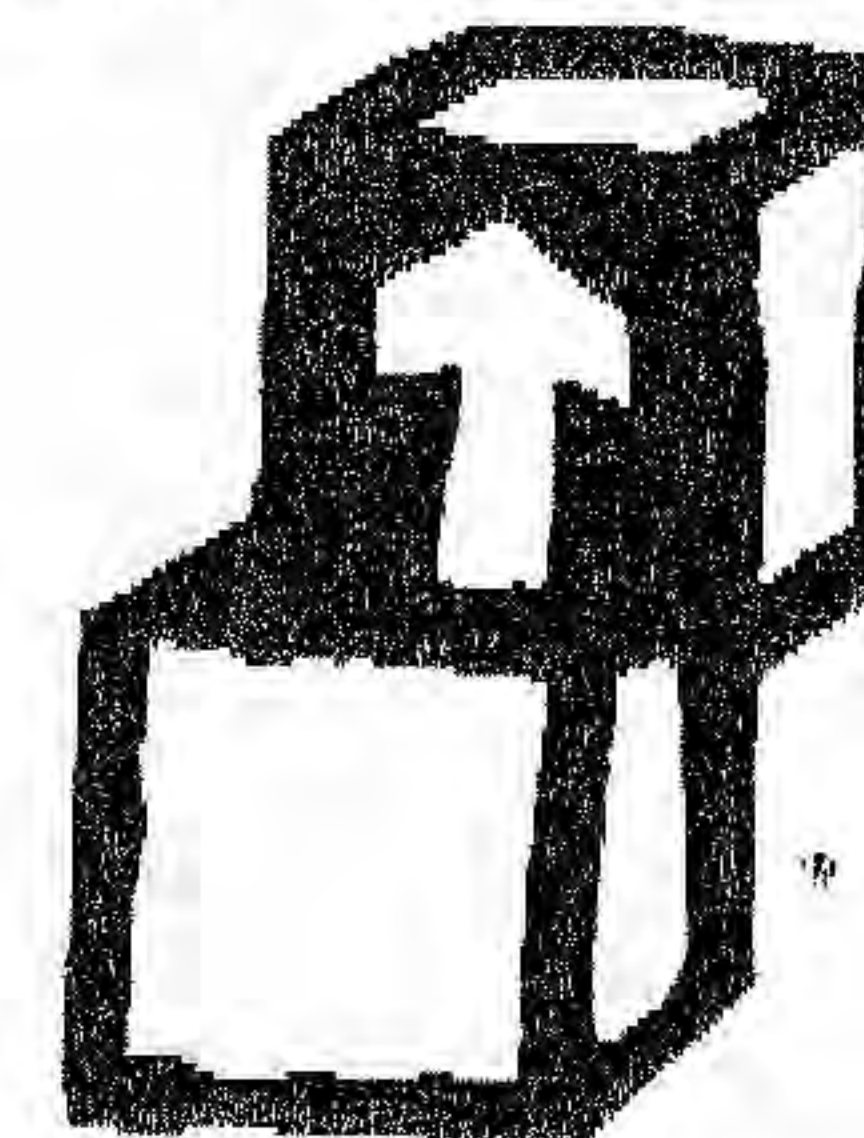
The mission of the North Carolina Community College System is to open the door to high-quality, accessible educational opportunities that minimize barriers to post-secondary education, maximize student success, develop a globally and multi-culturally competent workforce, and improve the lives and well-being of individuals by providing education, training and retraining for the workforce. This grant will focus our children towards achieving the necessary tools to take full advantage of our offerings and expedite their chances towards success in our occupational and pre-baccalaureate programs, and ultimately, success in the world around them. We are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal toward our shared goals.

Sincerely,

(b)(6)

R. Scott Ralls

ONslow COUNTY SCHOOLS
Head Start and Family Development Program
440 College St. Jacksonville, N.C. 28540/ Telephone 910-989-2021



U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level I
400 Maryland Avenue, SW
Washington, DC 20202-4260

September 29, 2011

Dear Secretaries Duncan and Sebelius,

As the Head Start Director of Onslow County Schools, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal designed to lead North Carolina toward transformational results as we seek to assure that every young child in our state is ready for success in school and in life. The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system designed to prepare children for success, and is an opportunity to leverage those resources to create a more advanced model. The Early Learning Challenge grant funds will allow North Carolina to take additional bold steps.

Our organization works diligently to ensure that preschool children are "school ready" in all areas of child development as they transition to kindergarten, thus enhancing their opportunity for a successful school career, and we are committed to supporting the work outlined in the Race to the Top-Early Learning Challenge grant proposal toward our shared goals.

Sincerely,

(b)(6)

Teresa Alphin

Susan Tysinger

(b)(6)

September 30, 2011

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

Dear Secretaries Duncan and Sebelius:

As a former teacher and as the President of the Page High School Alumni and Friends Association, I am writing to support any efforts possible to help prepare all preschoolers for formal learning. I understand that North Carolina has applied for the "Race to the Top – Early Learning Challenge Grant." The possibility of North Carolina receiving this grant gives me renewed hope for many of our undereducated young citizens.

There are too many North Carolina children entering kindergarten who are not really ready for kindergarten. They have not attended preschool and/or their home environment was not conducive to appropriate early childhood learning. Whether it is between races, between male and female, between high-income and low-income homes, any achievement gap when children enter kindergarten usually broadens as these children advance in school, unless there are extreme measures taken as they progress through school. And, the older the students are, these extreme measure are often less successful

Governor Perdue's Early Childhood Advisory Council's proposal for this grant outlines strategies for helping all young children be ready for success in school. It includes goals and plans of action for promoting school readiness for our children with high needs. It also includes plans of interaction that will hold those carrying out the program accountable.

Across the board, educators in North Carolina are dedicated to educating every child. This grant would help us identify and reach high-needs children earlier, when it is the most effective. Consequently, by reaching these children earlier, we can see achievement gaps disappear, dropout rates plummet, crime rates go down, and employment rates rise.

I totally support the work outlined in the "Race to the Top – Early Learning Challenge Grant" proposal.

Sincerely,

Susan Tysinger



U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

October 1, 2011

Dear Secretaries Duncan and Sebelius,

As an independent consultant and the former president of Smart Start and a member of North Carolina's Early Childhood Advisory Council, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. This proposal is designed to lead North Carolina toward transformational results as we seek to assure that every young child in our state is ready for success in school and in life. The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Other strategies reflect a recognition that many factors interact to affect child outcomes and that our systems must interact and be accountable for results.

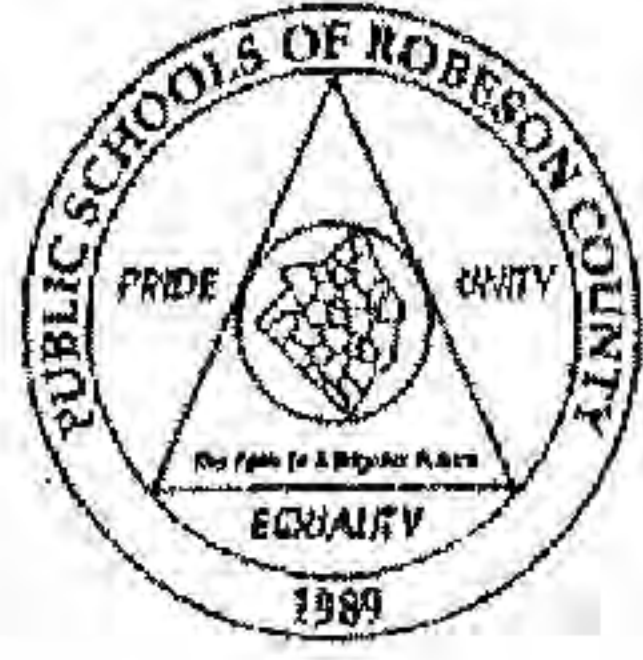
The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system designed to prepare children for success, and is an opportunity to leverage those resources to create a more advanced model. The work that has been done through Smart Start is an example of our state's forward thinking and hard work around young children and their families, and our belief that communities must be involved in order to achieve long lasting results. The Early Learning Challenge grant funds will allow North Carolina to take additional bold steps toward assuring the success of our state's most vulnerable children.

I am committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal and will continue to work with our state and local leaders and partnerships toward our shared goals.

Sincerely,

(b)(6)

Karen W. Ponder
Ponder Early Childhood, Inc.



Public Schools of Robeson County

Post Office Drawer 2909
Lumberton, North Carolina 28359
(910) 738-4841
Fax (910) 671-6024

Office of the Superintendent

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

October 3, 2011

Dear Secretaries Duncan and Sebelius,

As the Director of the Early Years' Programs of the Public Schools of Robeson County, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal designed to lead North Carolina toward transformational results as we seek to assure that every young child in our state is ready for success in school and in life. The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system designed to prepare children for success, and is an opportunity to leverage those resources to create a more advanced model. The Early Learning Challenge grant funds will allow North Carolina to take additional bold steps.

The Mission of the Public Schools of Robeson County is to educate all students by building a foundation for lifelong learning in an ever-changing global society, and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal toward our shared goals.

Sincerely,

(b)(6)

Name *Mary H. Schulte*



U.S. Department of Education
 Application Control Center
 Attention: CFDA Number 84.412
 LBJ Basement Level 1
 400 Maryland Avenue, SW
 Washington, DC 20202-4260

September 26, 2011

Dear Secretaries Duncan and Sebelius,

As the Regional Director and Medical Director of Reach Out and Read in North Carolina, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal designed to lead North Carolina toward transformational results as we seek to assure that every young child in our state is ready for success in school and in life. The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system designed to prepare children for success, and is an opportunity to leverage those resources to create a more advanced model. The Early Learning Challenge grant funds will allow North Carolina to take additional bold steps.

Reach Out and Read prepares our youngest children to succeed in school by partnering with doctors to prescribe books and encourage families to read to together. The Reach Out and Read program model has a strong evidence-based and is supported by the American Academy of Pediatrics in their Bright Futures guidelines as a standard of pediatric primary care. Reach Out and Read and our force of more than 750 doctors across North Carolina are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal toward our shared goals.

(b)(6)

Callee K. Boulware
 Regional Director
 Reach Out and Read North Carolina

David T. Tayloe, Jr., M.D., F.A.A.P.
 Medical Director
 Reach Out and Read North Carolina

Reach Out and Read Carolinas ■ 18 Plott Drive ■ Sylva, NC 28779
 TEL: 828-290-9049 ■ WEBSITE: www.reachoutandreadsc.org

A Regional Office of Reach Out and Read, Inc. ■ www.reachoutandread.org



2011-2012

Board of Directors

Margaret Rowlett, Board President
Smith, James, Rowlett & Cohen

Carol Andrews
*Carol Andrews Enterprises/
WFMY Weekend News*

Robert Goldstein,
LeBauer Health Care

Sheila Helms
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*Community Foundation of
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Mack Scott
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Board Member Emeritus

Barbara Steslow
Community Volunteer

Karen Stout
The Fresh Market

Nancy Vaughan
Community Volunteer

Kaye Ward
Lincoln Financial Group

September 27, 2011

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

Dear Secretaries Duncan and Sebelius,

As the Executive Director of Reading Connections, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. The North Carolina proposal prepared by Governor Perdue's Early Childhood Advisory Council will help this state ensure that every young child in North Carolina is ready for success.

The proposal builds on North Carolina's long history of investing in early learning and development and provides the opportunity to leverage resources to create a more advanced model. The Early Learning Challenge grant funds will allow North Carolina to take additional steps to promote school readiness for children with high needs across the state.

As one of the largest literacy agencies in the state, we see the interrelatedness of early childhood education, parental support and adult literacy. As the provider of individualized adult literacy services in Guilford County and surrounding communities, we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal toward our shared goals.

Sincerely,

(b)(6)

Jennifer Gore
Executive Director



Regional Consolidated Services-Head Start

Post Office Box 1889
Asheboro, North Carolina, 27204-1889
Phone: (336) 629-3714 or 629-6141
Fax: (336) 629-1290

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

September 29, 2011

Dear Secretaries Duncan and Sebelius,

As the director of Regional Consolidated Services Head Start, I am writing to support North Carolina's application for the Race to the Top - Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal designed to lead North Carolina toward transformational results as we seek to assure that every young child in our state is ready for success in school and in life. The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact - and be accountable - as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system designed to prepare children for success, and is an opportunity to leverage those resources to create a more advanced model. The Early Learning Challenge grant funds will allow North Carolina to take additional bold steps.

My organization is committed to providing quality, comprehensive preschool services to eligible children and their families which will promote self sufficiency, self worth, and productivity in the community, and we are committed to supporting the work outlined in the Race to the Top - Early Learning Challenge grant proposal toward our shared goals.

Sincerely,

(b)(6)

**School Readiness Collaborative
of Guilford County**

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

October 5, 2011

Dear Secretaries Duncan and Sebelius,

As members of the School Readiness Collaborative of Guilford County (SRC), we are writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal designed to lead North Carolina toward transformational results as we seek to assure that every young child in our state is ready for success in school and in life. The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system designed to prepare children for success, and is an opportunity to leverage those resources to create a more advanced model. The Early Learning Challenge grant funds will allow North Carolina to take additional bold steps.

The SRC mission: *In order to ensure the readiness of children who are vulnerable to school failure, we conceptualize, implement, evaluate, and institutionalize the community outreach efforts of higher education institutions and community partners to provide and encourage professional development for early childhood educators.*

Guiding Principles

- Create and maintain a meaningful partnership to promote school readiness so that children from low-income families who are preschool age (including those in Head Start/Early Head Start), may receive comprehensive services to prepare them for elementary school and to address any potential "achievement gap"
- Plan and implement strategies based on practice and research that have proven to support children's school success
- Respect the uniqueness of Guilford County's needs and resources
- Promote the involvement of members of the early care and education communities
- Share commitment, cooperation, and collaboration for a coordinated service delivery system

The SRC is composed of knowledgeable and dedicated advocates for young children and families.

We are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal toward our shared goals.

SIGNATURES

For UNCG Center for Youth, Family and Community Partnerships

P. O'Leary Director 10/7/11
Signature Title Date

For Guilford County Partnership for Children

Jean W. Goodman Executive Director 10/6/11
Signature Title Date

For Guilford County Schools

W. J. [unclear] Executive Director Federal and Special Programs 10-7-11
Signature Title Date

For Guilford Technical Community College

Mary M. [unclear] Dept Chair EC&E 10-7-11
Signature Title Date

For NC A&T State University

Paul [unclear] Professor Family & Community Science 10/5/11
Signature Title Date

For Greensboro College

R. [unclear] VPAA + DoF 10-07-2011
Signature Title Date

For UNCG Center for New North Carolinians

Raleigh [unclear] DIRECTOR 10-7-11
Signature Title Date

For Guilford Education Alliance

Margaret Bourdeau [unclear] Exec Dir 10/5/11
Signature Title Date

For United Ways of High Point and Greensboro

Barlow J. [unclear] VP Childrens initiatives 10-6-11
Signature Title Date

[unclear] President 10/6/11
Signature Title Date

For UNCG Department of Human Development and Family Studies

Cathie Scott-Little Associate Professor 10/7/11
Signature Title Date

For Guilford Child Development

C. Robin Britt, Sr. Executive Director 10/6/11
Executive Director Title Date

**SOUTHERN
REGIONAL AHEC**
AREA HEALTH EDUCATION CENTER

President – CEO
Phone: (910) 678-7230
Fax: (910) 678-7279

1601 OWEN DRIVE ♦ FAYETTEVILLE, NC 28304 ♦ PHONE: (910) 678-7305 ♦ FAX: (910) 678-0126

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

September 29, 2011

Dear Secretaries Duncan and Sebelius,

As the President and CEO of the Southern Regional Area Health Education Center, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal designed to lead North Carolina toward transformational results as we seek to assure that every young child in our state is ready for success in school and in life. The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

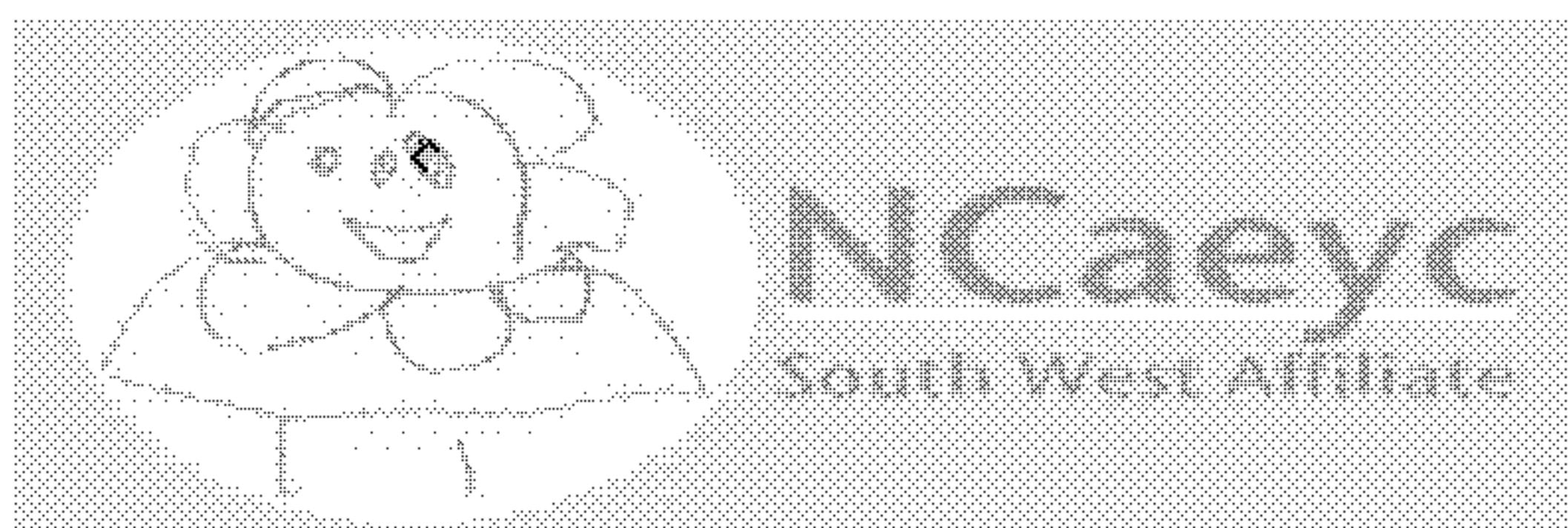
The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system designed to prepare children for success, and is an opportunity to leverage those resources to create a more advanced model. The Early Learning Challenge grant funds will allow North Carolina to take additional bold steps.

Thank you for this opportunity to comment on this important issue.

Sincerely,

(b)(6)

Deborah Teasley, PhD FACHE
President and CEO



PO Box 240344
Charlotte, North Carolina 28224-0344

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LDJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

October 4, 2011

Dear Secretaries Duncan and Sebelius,

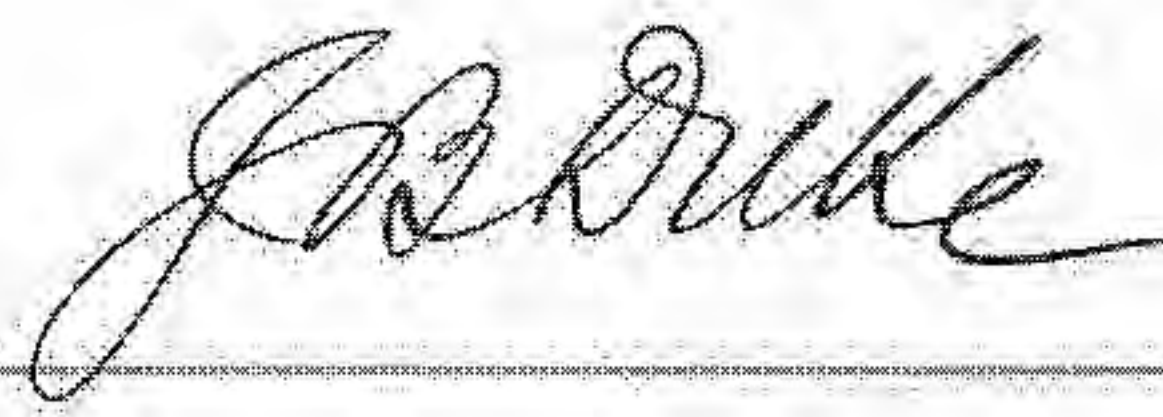
My name is Janie Truesdale, President of South West Association for the Education of Young Children (SWaeyc) Local Affiliate #128 of the North Carolina Association for the Education of Young Children. On behalf, of our governing board of officers, I am writing to support North Carolina in the pursuit of the Race to the Top – Early Learning Challenge Grant.

The commitment to quality early education for the children of our state has become a hallmark for our state! The dedicated stakeholders within Mecklenburg and Union Counties who are members of SWaeyc work diligently to help prepare young children for success in school and in life. Our dedication to excellence in early education would provide the support needed locally to ensure the success of the grant.

The Race to the Top Early Learning Challenge Grant would be significant and important to the live of young children across our state.

Sincerely,
Janie R. Truesdale

Janie R. Truesdale
SWaeyc, President



THE DUKE ENDOWMENT

September 29, 2011

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

Dear Secretaries Duncan and Sebelius,

As the Vice President and Director of Child Care of The Duke Endowment and a member of North Carolina's Early Childhood Advisory Council, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. This proposal is designed to lead North Carolina toward transformational results as we seek to assure that every young child in our state is ready for success in school and in life. The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

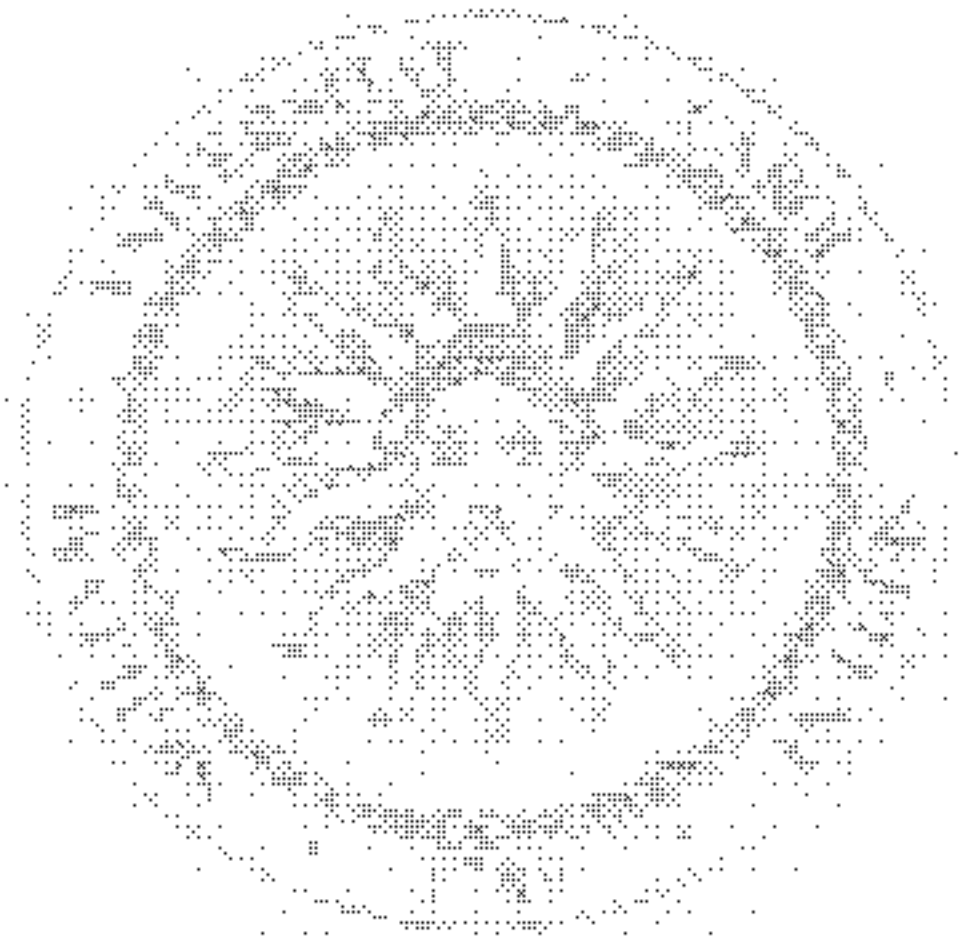
The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system designed to prepare children for success, and is an opportunity to leverage those resources to create a more advanced model. The Early Learning Challenge grant funds will allow North Carolina to take additional bold steps.

The Duke Endowment is committed to improving child well-being and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal toward our shared goals.

Sincerely,

(b)(6)

Rhett N. Mabry
Vice President



The University of North Carolina

Post Office Box 26888, Chapel Hill, NC 27515-2688

THOMAS W. ROSS, President

Telephone: (919) 962-1000 Fax: (919) 847-9087

E-mail: tomross@northcarolina.edu

University of North Carolina
Appalachian State
University

East Carolina
University

Elizabeth City
State University

Fayetteville State
University

North Carolina
Agricultural and
Technical State
University

North Carolina
Central University

North Carolina
State University
at Raleigh

University of
North Carolina
at Asheville

University of
North Carolina
at Chapel Hill

University of
North Carolina
at Charlotte

University of
North Carolina
at Greensboro

University of
North Carolina
at Pembroke

University of
North Carolina
at Wilmington

University of
North Carolina
School of the Arts

Western Carolina
University

Winston-Salem
State University

Curriculum, High School
North Carolina
School of Science
and Mathematics

Academic Opportunity
with Grants to All Our Communities

September 29, 2011

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

Dear Secretaries Duncan and Sebelius:

As the President of the University of North Carolina and a member of North Carolina's Early Childhood Advisory Council, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. This proposal is designed to lead North Carolina toward transformational results as we seek to assure that every young child in our state is ready for success in school and in life. The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable – as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system designed to prepare children for success, and is an opportunity to leverage those resources to create a more advanced model. The Early Learning Challenge grant funds will allow North Carolina to take additional bold steps.

We are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal toward our shared goals.

Sincerely,


Thomas W. Ross

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

September 30, 2011

Dear Secretaries Duncan and Sebelius,

As the President/CEO of the United Way of Greater Greensboro, I am writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal designed to lead North Carolina toward transformational results as we seek to assure that every young child in our state is ready for success in school and in life. The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable - as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system designed to prepare children for success, and is an opportunity to leverage those resources to create a more advanced model. The Early Learning Challenge grant funds will allow North Carolina to take additional bold steps.

My organization United Way of Greater Greensboro, and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal toward our shared goals.

Sincerely,

(b)(6)

Keith Barsuhn
President/CEO
United Way of Greater Greensboro

GIVE. ADVOCATE. VOLUNTEER.
LIVE UNITED 



Wake County Association for the Education of Young Children

Wakeaeyc
P.O. Box 931
Knightdale, NC 27545

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

October 5, 2011

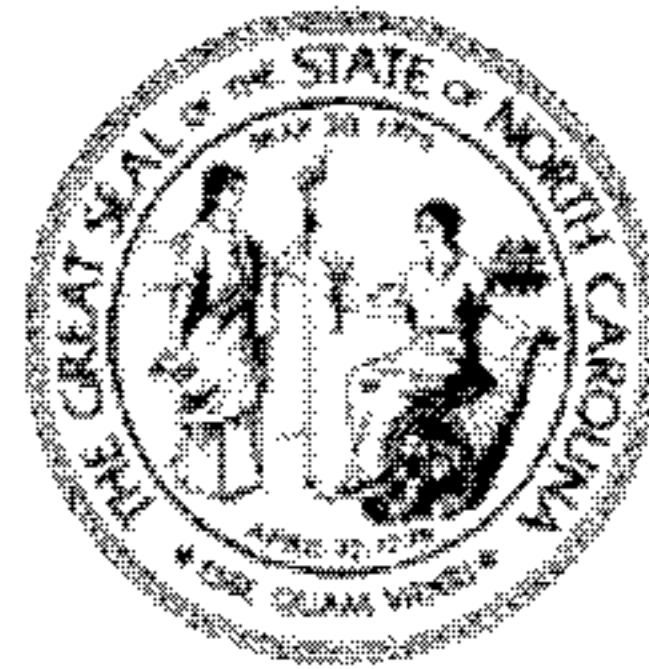
Dear Secretaries Duncan and Sebelius,

We, the Wake County Association for the Education of Young Children (Wakeaeyc), are writing to support North Carolina's application for the Race to the Top – Early Learning Challenge grant. Governor Perdue's Early Childhood Advisory Council has prepared a proposal designed to lead North Carolina toward transformational results as we seek to assure that every young child in our state is ready for success in school and in life. The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable – as well.

The proposal also builds on North Carolina's long term investment in a coordinated early learning and development system designed to prepare children for success, and is an opportunity to leverage those resources to create a more advanced model. The Early Learning Challenge grant funds will allow North Carolina to take additional bold steps.

My organization represents over 400 Early Childhood Professionals, and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal toward our shared goals. Attached are comments from our members addressing specific criteria of the grant.

(b)(6)



**North Carolina Department of Health and Human Services
Division of Public Health – Women’s & Children’s Health Section**

1928 Mail Service Center • Raleigh, North Carolina 27699-1917
Tel 919-707-5510 • Fax 919-870-4828

Beverly Eaves Perdue, Governor
Lanier M. Cansler, Secretary

Jeffrey P. Engel, M.D.
State Health Director

U.S. Department of Education
Application Control Center
Attention: CFDA Number 84.412
LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202-4260

October 3, 2011

Dear Secretaries Duncan and Sebelius,

As the Section Chief of the Women’s and Children’s Health Section and a member of North Carolina’s Early Childhood Advisory Council, I am writing to support North Carolina’s application for the Race to the Top – Early Learning Challenge grant. This proposal is designed to lead North Carolina toward transformational results as we seek to assure that every young child in our state is ready for success in school and in life. The proposal outlines key goals and a range of well thought out strategies to promote school readiness for children with high needs across the state. Many of the strategies reflect a deep understanding of the link between the quality of early learning and development environments and outcomes for children. Others strategies reflect an appreciation for the fact that many factors interact to affect child outcomes and that our systems must interact – and be accountable – as well.

The proposal also builds on North Carolina’s long-term investment in a coordinated early learning and development system designed to prepare children for success, and is an opportunity to leverage those resources to create a more advanced model. The Early Learning Challenge grant funds will allow North Carolina to take additional bold steps.

My organization, the Women’s and Children’s Health Section of the North Carolina Division of Public Health, aims to help every family achieve its highest goal, the success of its children, and we are committed to supporting the work outlined in the Race to the Top – Early Learning Challenge grant proposal toward our shared goals.

Sincerely,

Kevin Ryan, MD, MPH
Chief, Women’s and Children’s Health Section
NC Division of Public Health



North Carolina Public Health
Working for a healthier and safer North Carolina
Everywhere. Everyday. Everybody.



CCDF Quality Activities Funded by the NC Division of Child Development SFY 2011-12

1. North Carolina Child Care Resource & Referral activities include: The NC CCR&R System ensures equity of access and consistency of quality across the state in the delivery of child care resource & referral core services: parent education and referrals; technical assistance; professional development; data collection; and public awareness. Last year 87%, the majority of parents who received referrals and education responded to follow-up surveys from the CCR&R in 2010 chose high quality care (3, 4 or 5 stars) for their children. The NC CCR&R Council oversees three special initiatives funded by CCDF.

Statewide Infant-Toddler Quality Enhancement Project: This project provides technical assistance, training, and educational materials to early care and education providers regarding infant and toddler related topics. The project features a highly trained team of regional infant toddler specialists who work with child care programs and community agencies in all 100 North Carolina counties. During SFY 2009-10, twenty-five Infant-Toddler Specialists conducted 530 training sessions for 6,718 early childhood educators, and conducted 5,948 technical assistance consultations. During SFY 2009-10, 1,903 infant-toddler spaces showed measurable improvement in quality on ITERS-R/FCCERS scores on post-assessments following technical assistance and training resulting in 1,713 spaces increased scores by more than 1 point. In 2011-12, the Infant Toddler project is scheduled to deliver 4,500 on-site technical assistance consultations; provide 600 contact hours of training; development of a document that aligns the Infant-Toddler Foundations, ITERS-R and the Infant Toddler Inventory of Practices; develop CEU modules on infant toddler topics, including the science of infant and toddler development and the implications for teacher practices; develop a tool to measure/record classroom implementation of NC's Infant Toddler Foundations.

Promoting Healthy Social Behaviors Project: This project provides training to early care and education providers to effectively support the healthy social and emotional development of the children in their care and to address challenging behaviors in order to maintain the child care placement of young children exhibiting such challenging behaviors. The highly trained Healthy Social Behavior Specialists who work in all 100 counties across the state provide training and technical assistance to aid teachers in modifying their own behavior and early childhood environments to promote social and emotional competencies and prevent challenging behavior in the classroom. In 2011-12, Promoting Healthy Social Behaviors project is scheduled to deliver 4,500 on-site technical assistance consultations; provide 600 contact hours of training; develop a crosswalk aligning the CSEFEL Preschool Inventory of Practices and the Early Childhood Environment Rating Scale; and develop CEU modules on topics related to social and emotional health of young children.

School-Age Care Quality Improvement Project This project provides training and technical assistance to school age care providers who work with school-age children. School Age Specialists throughout the state work to increase the quality and availability of licensed slots dedicated to school-age children. The School Age Care Quality Improvement Project is designed to improve outcomes for the states school age children by improving the quality and availability of out-of-school time care for that population. A team of highly trained specialists work in all 100 counties in North Carolina to provide technical assistance to improve quality in licensed programs and to support successful licensure of unlicensed programs. During SFY 2009-2010 as a result of on-site technical assistance provided by the school age specialists, a total of 90 programs in 37 counties with 4039 slots achieved a minimum of a 3 star license. As of June 30,

CCDF Quality Activities Funded by the NC Division of Child Development SFY 2011-12

2010, technical assistance provided by project staff has resulted in licensure and increased quality in 93 of the 100 counties in North Carolina. In 2011-12, School Age Care Quality Improvement Project is scheduled to deliver 600 contact hours of training on school age care; provide 3,276 on-site technical assistance consultations; and develop CEU bearing modules on school age topics, including linking school age care environments through the use of the SACERS assessment tool with the Common Core and NC Essentials.

2. Improving salaries and other compensation for child care providers

T.E.A.C.H. Early Childhood® Scholarships assist early care and education providers in obtaining higher levels of education and compensation. From July 1, 2009-June 30, 2010 there were 4,776 T.E.A.C.H. Early Childhood® Scholarship recipients in 98 of North Carolina's counties. T.E.A.C.H. Scholarships in 2011-2012- estimate that 2,400 child care professionals will access higher education through the TEACH Scholarship project in 2011-12. Of those AA and BA scholarship programs, the average turnover rate will be less than 10%.

- T.E.A.C.H. Infant-Toddler Scholarships are targeted to early care and education providers who serve children age birth to 36 months. The goal of the T.E.A.C.H. Infant Toddler scholarships is to support increased participation in educational activities among teachers working with infants and toddlers. T.E.A.C.H. Early Childhood® Infant Toddler Scholarships offers enhanced release time support through associate and bachelor degree scholarships as a strategy to attract, educate, compensate and retain child care professionals caring for children ages 0-2. T.E.A.C.H. Infant Toddler Scholarships- estimated 2,000 child care professionals working directly with infants and toddlers will access higher education through the TEACH Infant Toddler Scholarship project.
- The Child Care WAGE\$® Project provides child care professionals with education-based salary supplements. To encourage consistency, installments based on half of the annual awards are issued after each six month period the participant completes in the same child care program. Because these supplements reward education and continuity of care, children benefit from more stable relationships with better educated teachers. As of June 2010, 5,979 child care professionals in 2,371 child care programs from 67 North Carolina counties were participating in the Child Care WAGE\$® Project. The consistent care of an educated provider is fundamental to quality, and quality child care leads to future success in school and life. An estimated 5,000 child care professionals will receive WAGE\$ salary supplements in 2011-12, and the turnover rate for WAGE\$ participants will be less than 25%.

3. The North Carolina Rated License Assessment Project

The North Carolina Rated License Assessment Project provides environment rating scale assessments for North Carolina's Star Rated License. Results from these assessments are used by providers to improve the quality of child care programs and to achieve higher license star ratings. Quality rating assessments are conducted by trained assessors and voluntarily requested by early care and education providers. The ITERS-R, the ECERS-R, the FCCERS, and the SACERS are used. Assessors are employed by the University of North Carolina-Greensboro and are located throughout the state. Assessors also conduct reliability studies to ensure that accurate

CCDF Quality Activities Funded by the NC Division of Child Development SFY 2011-12

and valid assessments are conducted. NC Rated License Assessment Project (NCRLAP) estimates from September 1, 2011 through August 31, 2012, that approximately 1,878 facilities will be eligible to receive rating scale reassessments. NC Rated License Assessment Project NCRLAP estimates that the 1,269 child care centers will require 2,031 assessments and the 617 homes will require FCCERS-R assessments over the next year. In total, we believe NCRLAP will be asked to complete a total of 2,648 assessments for the period of September 1, 2011 to August 31, 2012.

4. NC Child Care Health & Safety Resource Center

The Health and Safety Bulletin keeps early childhood educators abreast of changes to both the North Carolina Child Care Laws and Rules and the North Carolina Department of Environment and Natural Resources, Sanitation of Child Care Rules and covers up-to-date health and safety information as well as recommendations suggested in the most current edition of *Caring for Our Children: National Health and Safety Performance Standards: Guidelines for Out-of-Home Child Care Programs*. Healthy Safety Calendar/Bulletin for Child Care Providers Publish quarterly NC Child Care Health and Safety Bulletins in English and Spanish. Disseminate the English version to regulated childcare facilities and selected child care professionals in North Carolina. Four (4) ITS-SIDS Online Train-the-trainer Courses will be offered for child care health consultants, Two (2) Medication Administration in Child Care Train-the-trainer Courses will be offered for child care health consultants who are registered nurses or other early childhood professionals partnering with registered nurses. Two (2) Emergency Preparedness and Response in Child Care Train-the-trainer Courses will be offered for child care health consultants.

5. *Center on the Social and Emotional Foundations for Early Learning (CSEFEL) Project*

The Division of Child Development was awarded a technical assistance grant from the *Center on the Social and Emotional Foundations for Early Learning (CSEFEL)* in 2007. This grant is designed to target and improve the early childhood professional development system by training early childhood professionals in CSEFEL's Pyramid Model. Guided by an inter-agency planning team, the NC/CSEFEL Pyramid Model Partnership project has: certified 132 early childhood trainers, technical assistance providers and consultants as CSEFEL trainers; selected six demonstration sites across the state, which have each agreed to work with an NC/CSEFEL Pyramid Model Coach in order to achieve fidelity with the CSEFEL Pyramid Model; and trained six CSEFEL coaches to provide technical assistance, training and mentoring on the Pyramid Model to early care and education providers at each demonstration site.

Maternal and Child Health Services in North Carolina

Care Coordination for Children

Care Coordination for Children (CC4C) is an at-risk population management model provided in partnership with Community Care of North Carolina (CCNC). CC4C staff serve children from birth to 5 years of age, who meet the following priority risk factors: (1) children with special health care needs/CSHCN (Title V definition); (2) children exposed to toxic stress in early childhood including, but not limited to extreme poverty in conjunction with continuous family chaos, recurrent physical or emotional abuse, chronic neglect, severe and enduring maternal depression, persistent parental substance abuse or repeated exposure to violence in the community or within the family; (3) children in the foster care system; and (4) children who are high cost / high users of services. Referrals originate from the Medical Home, community organization, or family. The data system triggers referrals based on Medicaid claims showing high cost utilization.

CC4C services are being provided based on patient-need and according to risk stratification guidelines. A comprehensive assessment, including the evidence based Life Skills Progression, assists the care manager in identifying the child's needs, plan of care and frequency of contacts required to effectively meet desired outcomes. Contacts occur in multiple settings including the medical home, hospital, community, child's home, and by phone. Each Medical Home serving children birth to 5 years of age will have a specific CC4C Care Manager(s) assigned to work with their clients. This stable relationship supports effective and complete communication between the Medical Home and CC4C Care Manager.

The main goals of the program are to improve health outcomes and reduce costs for enrolled children. These goals will be monitored based on the following CC4C outcome measures: (1) increase in NICU graduates who have their first medical home visit within one month of discharge; (2-3) reduce rate of hospital admissions/ readmissions; (4) reduce rate of emergency department visits; (5) increase percent of comprehensive assessments completed; (6) increase number of infants less than one year of age referred to Early Intervention; (7) increase percent of CSHCN and foster children enrolled in a medical home; and (9) increase the Life Skills Progression assessments on children receiving CC4C care coordination (initial, every 6 months & upon deferral).

This early childhood intervention is grounded in prevention, a core public health value. It is one of the many services in our organizational effort to build an effective system that integrates this service with other early childhood initiatives supporting children from early prenatal care through early childhood.

Pregnancy Care Management

The North Carolina Division of Public Health, in partnership with the North Carolina Division of Medical Assistance and Community Care of North Carolina (CCNC), has implemented a Pregnancy Medical Home Initiative, which is inclusive of Pregnancy Care Management (OBCM) services. The goal of the Pregnancy Medical Home (PMH) model

is to improve the quality of maternity care, improve birth outcomes, and provide continuity of care. The model involves engaging obstetrical providers as Pregnancy Medical Homes and local health departments as providers of Pregnancy Care Management services.

All patients identified as having priority risk factors are referred for an assessment by a pregnancy care manager. Priority risk factors include: A history of preterm birth, a history of low birth weight, multiple gestation, fetal complications, chronic conditions which may complicate pregnancy, unsafe living environment (homelessness, inadequate housing, violence or abuse), substance use, tobacco use, missing two or more prenatal appointments without rescheduling, and inappropriate hospital utilization.

All PMH providers are required to complete a pregnancy risk screening, at the initial prenatal visit, to identify these and other risk factors. Non-PMH prenatal care providers can also refer their patients for OBCM services. Additionally, referrals for OBCM can be made by partner entities that provide services to pregnant Medicaid recipients. Some local health departments also allocate specific funding to provide OBCM services to women who are ineligible for Medicaid.

OBCM services are provided by a nurse, social worker, or human services professional, and are based on patient need and risk status. Contacts are determined by the patient's individual needs and plan of care, in order to effectively meet desired outcomes. Contacts may occur in multiple settings including the health care provider office, community, or patient's home, as well as by phone.

North Carolina Maternal, Infant, and Early Childhood Home Visiting Program

Based on findings from a comprehensive state-wide needs assessment, the North Carolina Maternal, Infant, and Early Childhood Home Visiting Program (NC MIECHV) supports a continuum of evidence-based home visitation services for families with children ages 0-8 that will support each child's physical, emotional, cognitive and behavioral wellbeing, and will provide children the resilience they need to enter school ready to achieve and on their way to success in life. The program supports four evidence-based home visiting (EBHV) programs: Nurse-Family Partnership, Healthy Families America, Parents as Teachers, and Early Head Start/Home Based Option. NC MIECHV will achieve the desired outcomes of school readiness and healthy children by implementing evidence-based home visitation programs, replicated with model fidelity, that fill gaps to meet the needs of these families living in high risk communities in the state. The North Carolina Division of Public Health (DPH) has been appointed by Governor Perdue as the lead state agency for this program. The proposed project builds on an existing public-private initiative to increase EBHV programs across the state. DPH will implement a two-pronged approach to sustain and expand EBHV programs in NC: it will both expand the state's existing EBHV infrastructure and implement new EBHV initiatives in communities where children are at greatest risk for poor outcomes.

Alliance for Evidence-based Family Strengthening Programs: Support for Evidence-based home visiting

The Alliance for Evidence-based Family Strengthening Programs (the Alliance) funds the infrastructure or “scaffolding” needed to support quality implementation of evidence-based programs. This scaffolding may include technical assistance with organizational and community readiness, model fidelity, quality service delivery, and program evaluation. The Alliance is a collaborative effort of state-level agencies, including the Division of Public Health, and private foundations, including the Duke Endowment, the Kate B. Reynolds Foundation, and the Blue Cross Blue Shield Foundation, that fund family support and child maltreatment prevention programs in NC with the goal of supporting the successful implementation of evidence-based prevention programs to strengthen families. At this time, the Alliance is collaboratively funding program implementation and scaffolding for the implementation of eight Nurse-Family Partnership sites in North Carolina with model fidelity in order to support children’s healthy development and school readiness.

Other federal, private and local funds to support home visiting

Additional federal, private and local funds support the implementation of evidence based home visiting in North Carolina. The Office of Head Start supports twenty-five Early Head Start/Home Based Option in 38 locations that serve 2,929 children of whom 43% are enrolled in the home based option.

Child Care Health Consultation

North Carolina has been a leader in developing systems for providing child care health consultation for many years. The NC Division of Public Health supports a State Child Care Nurse Consultant position to provide leadership in planning, developing and implementing the Healthy Child Care North Carolina State Plan for child care health consultation. In collaboration with the North Carolina Child Care Health and Safety Resource Center, the Child Care Nurse Consultant ensures that training provided for Child Care Health Consultants throughout the state is consistent with the NC Board of Nursing recommendations and the NC Nurse Practice Act and the Division of Child Development’s licensing requirements and sanitation rules required by the North Carolina Department of Environmental Health and Natural Resources. The State Consultant also provides technical assistance and support for local child care health consultants in all areas of health and safety.

The role of local county child care health consultants varies somewhat dependent upon the location of the program. However, most consultants are: (1) providing training in health, safety and nutrition for child care providers, parents and children; (2) providing resources and referrals for health services for children, parents and providers, and ensuring that children who attend child care have a medical home; (3) reviewing child care facility policies, procedures and health records; (4) assisting child care providers and parents with managing the care of children with special health care needs; (5) providing on site assessments of health and safety practices for child care programs; and (6) providing technical assistance, recommendations and resources for improving health and safety in out of home care.

Child Care Health and Resource Center

The Child Care Health and Resource Center is a collaborative project between the NC Division of Public Health, NC Division of Child Development and the Department of Maternal and Child Health at the Gillings School of Global Public Health at the University of North Carolina-Chapel Hill. The mission of the Resource Center is to promote safe and healthy environments for children in out-of-home child care. The Center provides a variety of high quality health and safety resources across the state: health education; training and technical assistance for child care health consultants and other early care and education professionals; telephone support for the greater child care community; an information rich website (www.healthychildcarenc.org); the NC Health and Safety Bulletins (in English and Spanish); and other publications, including a Directory of Child Care Health Consultants in the State. The Center continues to look for innovative approaches to keep the early care and education community abreast of the health and safety issues in child care and to improve the health outcomes for children in child care settings. The Resource Center is also responsible for qualifying child care health consultants in NC.

Children with Special Health Care Needs Help Line

This is a toll free number to assist families whose children have special needs. The line coordinates with other resource supports and has access to multi lingual assistance. The Line utilizes an extensive data base of services to help families navigate the health, social and community systems statewide and assists families in obtaining needed services for their children.

Innovative Approaches

The C&Y Branch of DPH has funded a number of counties to support the Innovative Approaches (IA) initiative in order to foster improvements for community-wide systems of care that will effectively meet the needs of families of children and youth with special health care needs (CYSHCN), resulting in increased family satisfaction with services received and improved outcomes for children. Innovative Approaches recognizes that North Carolina needs to (1) invest more resources in promoting child success; (2) invest new and existing resources in evidence-based programs; (3) build the infrastructure to help these programs be successful; and (4) support the creation of a population-based integrated system of activities that promotes child success. These counties are guiding their community improvements through a comprehensive needs assessment, logic model for change and action plan for implementation involving all agencies and individuals involved in service delivery for children and families. This work is being developed with a built in capacity for documenting a replication process.

Linking Actions for Unmet Needs in Children's Health (LAUNCH)

NC LAUNCH, funded by the Substance Abuse and Mental Health Services Administration, is a system building initiative that is designed to promote environments for children ages 0-8 that support physical, emotional, cognitive and behavioral health. The main goal is that all children reach physical, social, emotional, behavioral and cognitive milestones.

State and local partners are working together to: (1) increase integration and collaboration among child-serving systems and services by establishing local and state planning councils; (2) promote the use of culturally relevant, evidence-based programs and practices by child-serving organizations; (3) offer training and education to ensure that families, providers, and other adults caring for young children have the knowledge and skills to promote healthy child development; (4) engage families, the faith community, business leaders, cultural organizations, and other local leaders in planning, implementing, and evaluating Project LAUNCH activities; (5) collect data and evaluate the effectiveness of services; and (6) raise public awareness about the importance of healthy development of young children and the community's role in promoting it.

The project includes five prevention and promotion strategies: developmental assessments, integration of behavioral health care into primary care, home visiting programs, mental health consultation and family and parent strengthening. The services provided through NC LAUNCH require model fidelity and the development of an integrated local system for the care of young children. Best practices will be disseminated and sustainability strategies will be developed through a State Advisory Council.

Maltreatment Prevention and Family Strengthening

Child maltreatment is a preventable public health issue as it is biologically and epidemiologically associated with a broad range of health problems throughout the lifespan, and child maltreatment prevention is now a priority in the NC Division of Public Health. The Division is the lead state public agency for the prevention of child maltreatment and The Executive Director of the Child Maltreatment Prevention Leadership Team (CMPLT) has been building state-level leadership capacity to lead child maltreatment prevention efforts. The Alliance for Evidence-Based Family Strengthening Programs (The Alliance) is a key strategy in that effort.

The Alliance is a collaborative network of public and private funders who support the replication of specific evidence-based programs for children and families across NC. Alliance members are committed to funding programs that have strong track records of producing results for children, families, and communities, and to funding the needed infrastructure for quality implementation of those programs. While the members of the Alliance individually fund a range of diverse programs and services across NC, the Alliance is now collaboratively supporting three evidence-based programs (EBP) with the goal of statewide replication. These programs are: the Nurse Family Partnership (NFP), the Incredible Years (IY), and the Strengthening Families Program (SFP). The Division of Public Health also houses the Evidence-Based Family Strengthening Programs Program Coordinator.

Office on Disability and Health (ODH)

This is a grant funded program supported by CDC that focuses on prevention of secondary conditions for persons with disabilities. A large portion of the funding is contracted to UNC CH who works closely with the ODH Manager at the State level. The State position, located in the Children and Youth Branch, DPH, works to assure

integration of successful pilot initiatives for children and their families within the state infrastructure as appropriate. The focus is on improvement of policies and systems interactions that address persons with disabilities. The program interacts with a wide range of other state and local systems of care to assure consideration and inclusion of persons with disabilities in their planning and service interventions.

Early Hearing Detection and Intervention Services

Newborn hearing screening is provided for all newborns in NC. If they do not pass the screening we have a system in place for rescreening and referral for diagnostic and intervention. First time hearing aids, ear molds and enough batteries for one year are provided at no cost to babies identified with a hearing loss, because it is important to have infants fitted with corrective hearing aids as quickly as possible. There are twelve regional staff of audiologists and speech pathologists across the state, a web based data system to track information for the newborns and a state position to manage the program, materials development, and interventions.

Child Health Care

Health departments are funded by the state to provide well child care, primary care and newborn home visiting care to children who are in families with low incomes. The Children and Youth Branch, DPH, provides support to 100 sites through trained child health nurse consultants.

Primary Care Consultation

The child health program furnishes resources to local health departments to provide or assure preventive health care services for children in order to: reduce mortality and morbidity among children and youth resulting from communicable disease, injuries (intentional and unintentional), and other preventable conditions; promote healthy behaviors; and support optimal physical, social and emotional health of children and youth. Pediatric Primary Care funds are to be used to provide primary care or sick care services only.

Early Childhood Comprehensive Systems Grant

A systems building effort to improve collaboration among agencies serving young children. A set of indicators has been developed in conjunction with a wide range of providers and families to help quantify the progress that is made with this age group to have them ready to enter school. The manager is working with the Governor's Office to support development of a Governor's Council for Early Childhood. This is a very broad effort.

Prevent Blindness

A contractual agreement that directly provides vision screening for preschool children and trains volunteers in vision screening for the school aged population:

Behavioral Health

One position in the Branch whose job is to improve linkages among providers of service with behavioral health resources, encourage the identification and intervention related to

maternal depression, develop early childhood mental health resources and intervention to improve these services within the school system.

Kindergarten Health Assessment

An effort to improve the communication tools among providers, families and schools about the health status of young children entering kindergarten. The Pediatric Society received a recent grant to use this tool as a way to increase insurance coverage for the Health Choice program. They are working with school nurses to accomplish this goal.

Health Check and Health Choice Outreach

We have two staff who provide this service (one is the lead and works with a broad range of programs and providers to increase insurance coverage for children and provides minority outreach for hard to reach populations; and the second specializes in outreach for children with special health care needs.

5-Star Child Care Licensing System

proportion of centers that received the highest child care license rating, an AA license. Now that the state has changed the licensing system, evaluations can no longer use A to AA increases as a sign of progress. The state essentially has a new baseline—the distribution of license levels from 1-5 stars in 2001.

Progress can be charted from this point forward using license level but cannot be compared to years past. To document progress since the inception of Smart Start in 1993, the state must continue to collect periodic, independent observations of child care—using the same measures from year to year—on samples of NC child care. The data collected by the Smart Start evaluation team allows a long-term picture of quality improvement across the state throughout the entire existence of Smart Start.

Harms, T., & Clifford, R. M. (1980). *The Early Childhood Environment Rating Scale*. New York: Teachers College Press.

care center. Families meaningful program at have a 3-star,

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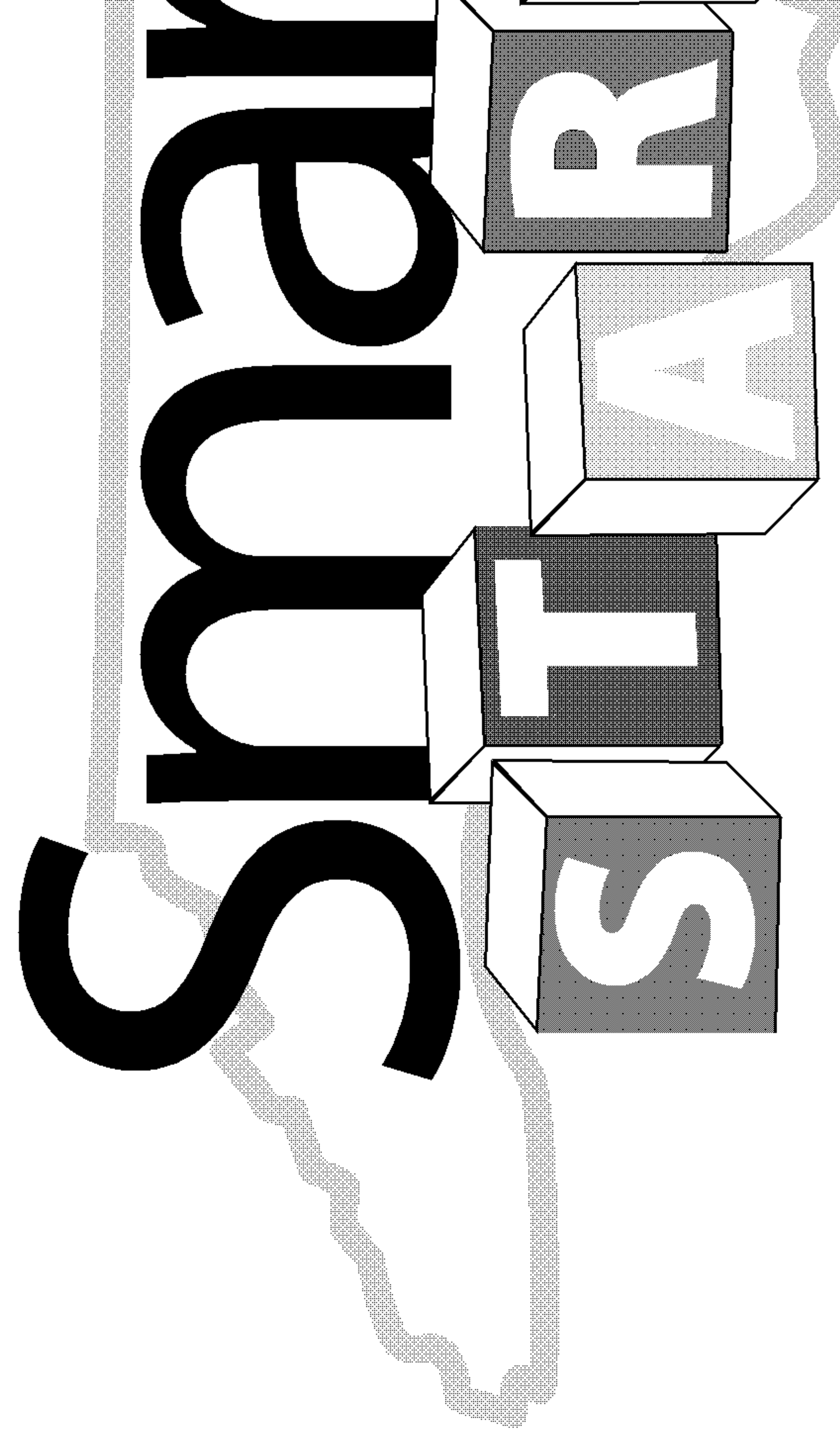
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nt, Kathleen Bernier, g and data assistance vin Yeager.

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at Evaluation visit the



data collected as a significant relationship of program quality. It should be assured that indeed providing children.

Child Care License
A 2-tiered child care license for centers and family child care homes. The program was designed to encourage higher quality care and to ensure that all children have access to quality care.

The program was designed to encourage higher quality care and to ensure that all children have access to quality care. The program was designed to encourage higher quality care and to ensure that all children have access to quality care.

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when measured by independent data collectors. The study included measures of observed quality of classroom practices as well as information on three characteristics of centers related to better quality—higher teacher education, higher teacher wages, and lower teacher turnover.

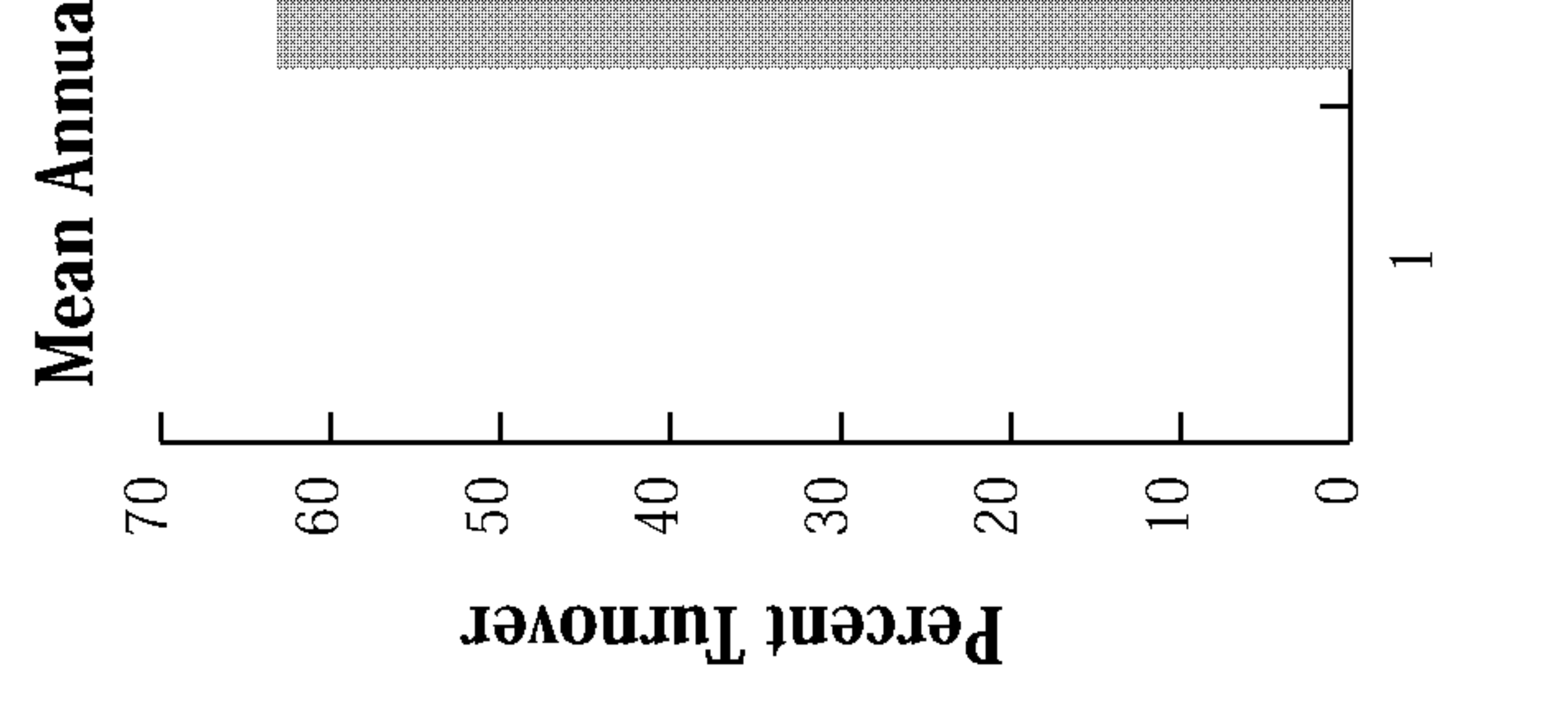
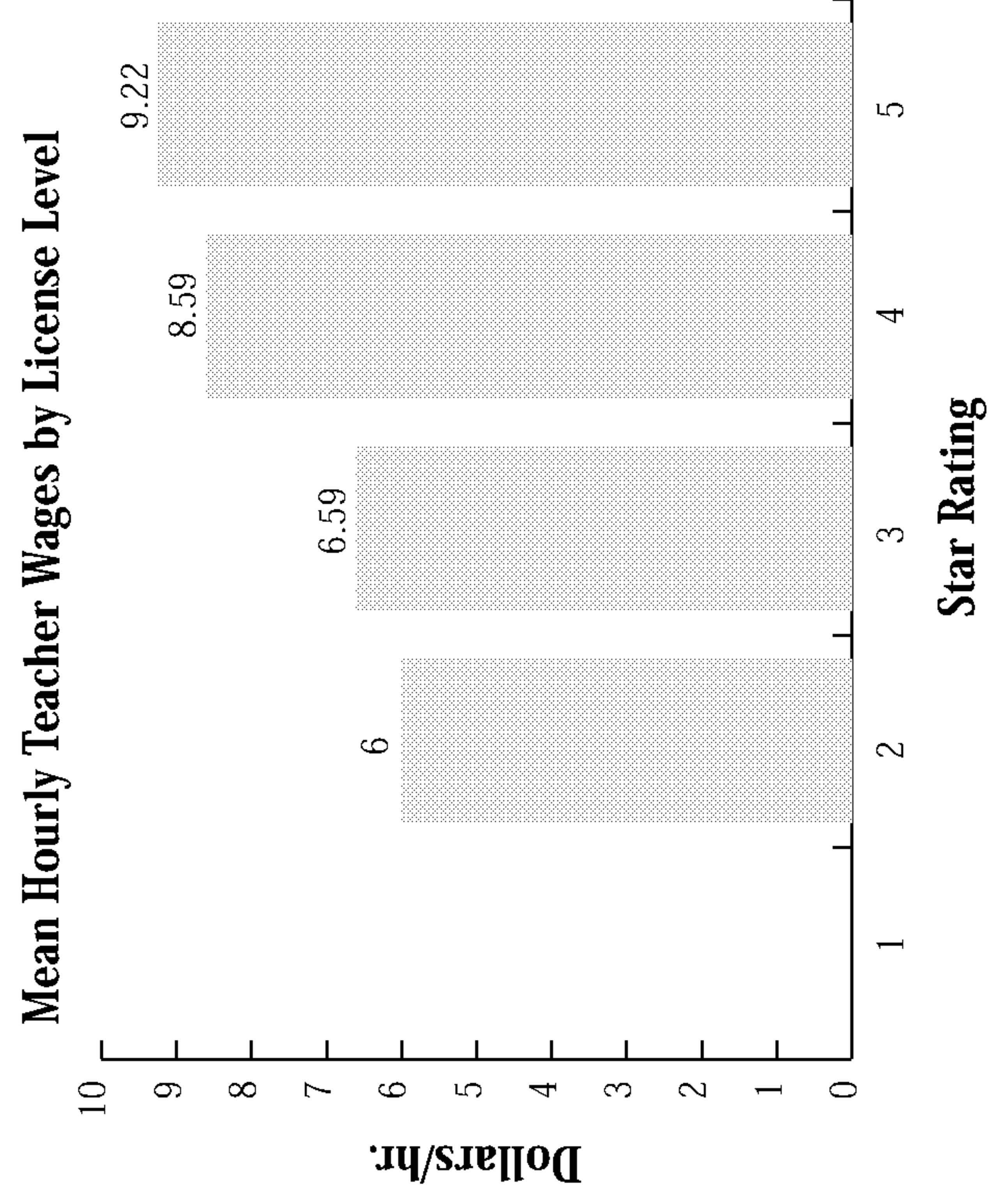
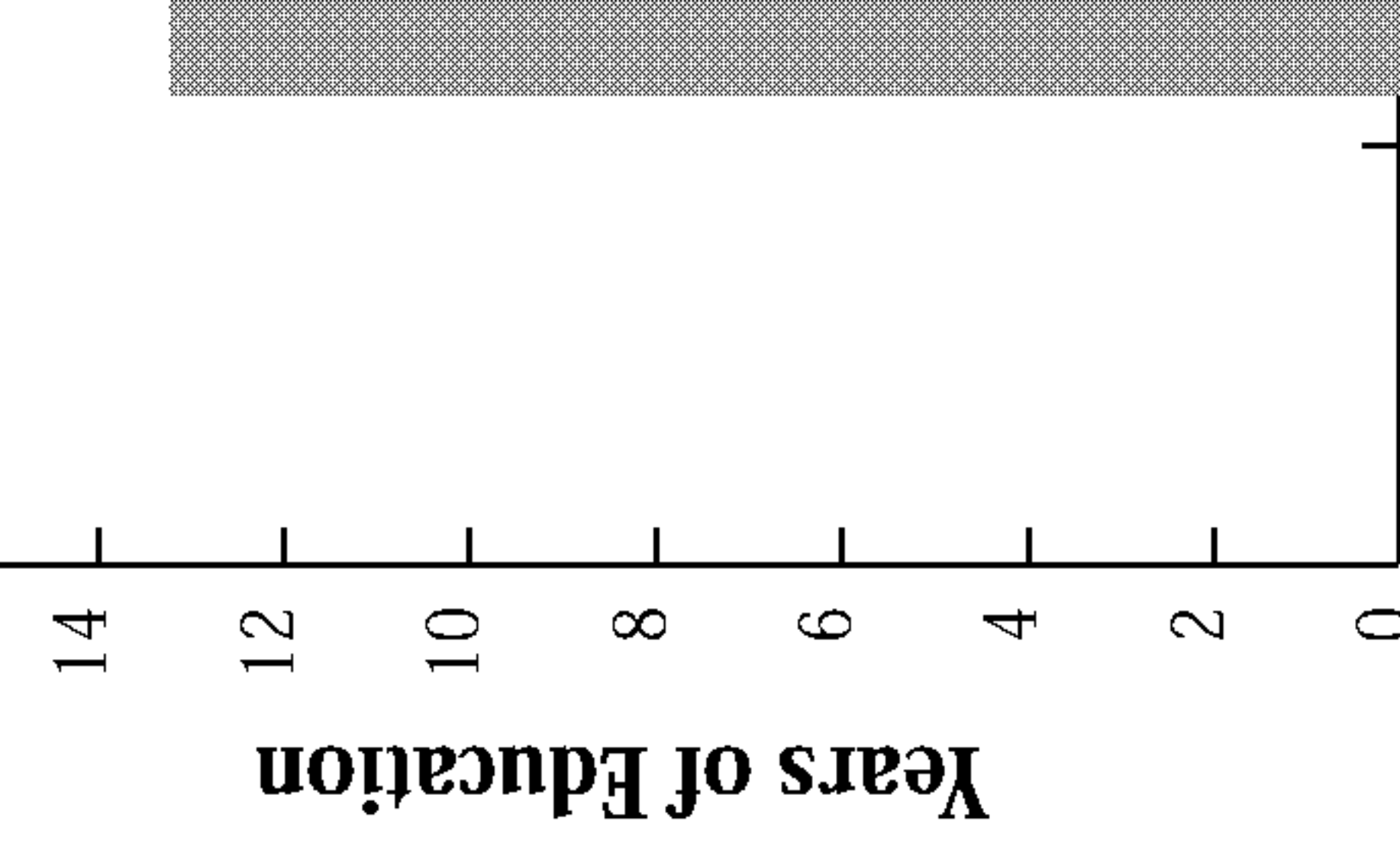
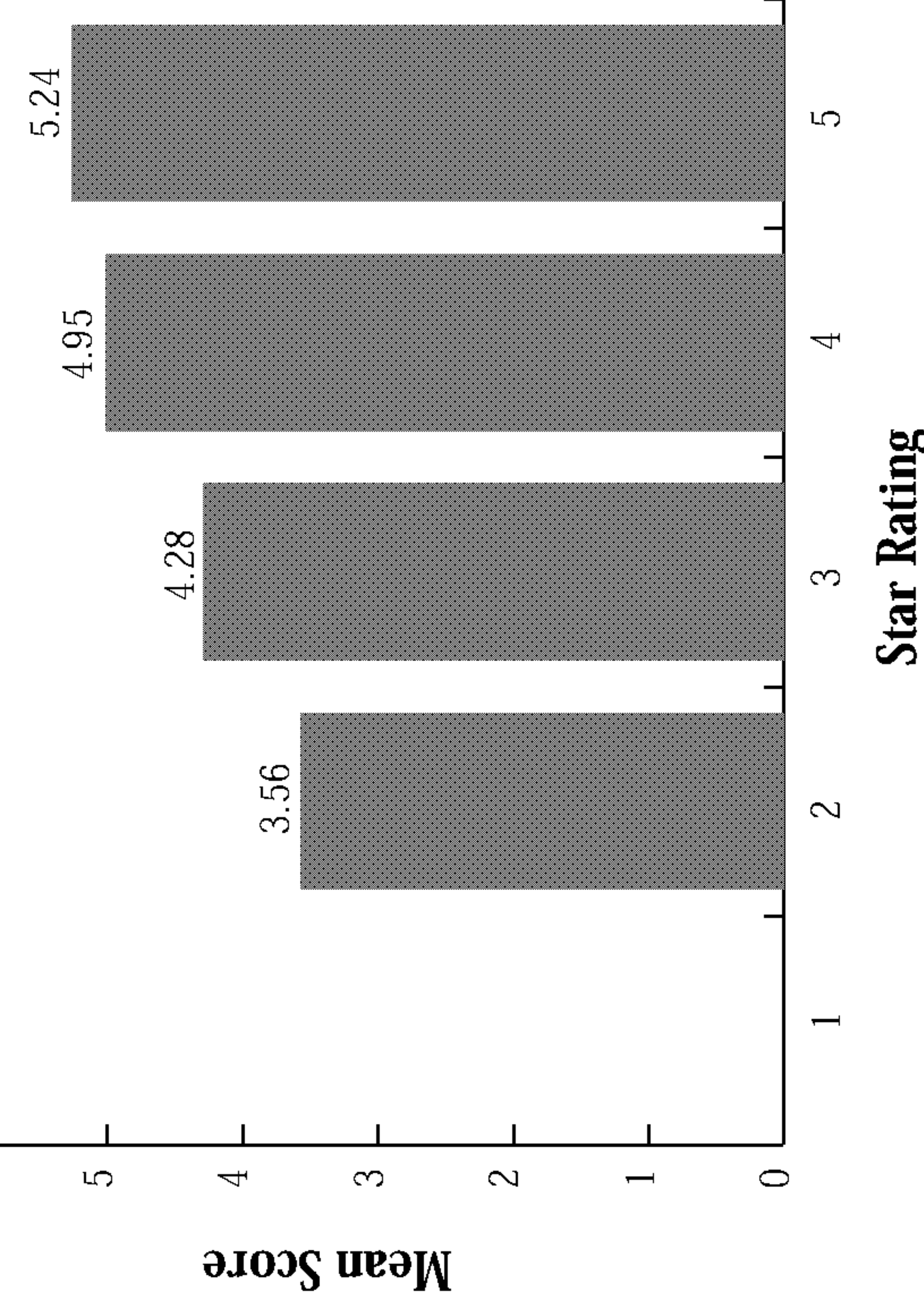
Procedures and Results

As part of the Smart Start evaluation, the FPG/UNC team collected extensive data on over 200 randomly selected child care centers in 1999, just before the 5-star license system went into effect. During these visits, observers used the *Early Childhood Environment Rating Scale* (Harms, & Clifford, 1990) to document the developmental appropriateness of classroom practices. They looked at daily routines, activities, materials in the classroom, and interactions between the teaching staff and the children. The observers also interviewed the director of the center about education and wages of the teachers in the center and teacher turnover in the past 12 months. These indicators are frequently mentioned in the early childhood literature as important precursors of a good quality program.

As of December, 2000, 84 child care centers in the evaluation sample had received their new star license rating. The distribution of star ratings among these 84 centers was as follows:

- 1-star 0 centers
- 2-stars 1 center (1.2%)
- 3-stars 44 centers (52.4%)
- 4-stars 28 centers (33.3%)
- 5-stars 11 centers (13.1%)

The pattern of results for each of the four quality measures was directly related to the star rating received by the center. The overall quality practices score (ECERS) was significantly related to license level, with higher scores (see graphs) for centers that were licensed at higher levels. A significant relationship to the star ratings was also found on the other



Comparisons among Quality Measures in Child Care Settings: Indicators of Quality in Relation to Child Outcomes

Overview Report

University of North Carolina at Greensboro

Spring 2011

- ❖ Due to the relationship between the quality of child care environments and children’s developmental outcomes, the assessment of classroom quality is a primary concern within Quality Rating and Improvement Systems (QRIS) across the United States (Child Trends & Mathematica Policy Research, 2010; NICHD 2002; Vandell et al., 2010).
- ❖ North Carolina’s QRIS has used the Environment Rating Scales (ERS) to rate the global quality of child care classrooms for over 10 years. Based on North Carolina’s Rated License system, centers can earn 1 to 5 stars based on program standards, education standards, and quality points.
- ❖ The use of the ERS have supported increases in global quality in infant, toddler, preschool, and school age classrooms. However, scholars have questioned the frequent use of the Environment Rating Scales in QRIS as the scales may not capture all components of quality in child care environments (Layzer & Goodson, 2006).
- ❖ Other aspects of quality need to be included in the assessment and rating of child care programs within states’ QRIS. Conceptual work describes components of quality that are not included or covered in depth in the ERS, but may be important for child outcomes. Specific aspects that need to be included in future research and accountability include: teacher-child interactions (i.e., process quality), outdoor environments, child engagement and motivation for learning, and children’s emotional experiences in the classroom (Ceglowski, 2004; Chakravarthi, 2009; La Paro et al., 2009; Raver et al., 2007; Stipek et al., 1995).
- ❖ As multiple components of classrooms may lead to quality environments and positive child outcomes, it is essential to investigate potential instruments for assessing quality to understand how these tools may contribute to states’ QRIS.
- ❖ The goals of this study were to examine the relationships: 1) among a variety of quality assessment tools, 2) between these tools and children’s cognitive, social, and emotional outcomes, and 3) between these tools and the star rated license system.

Method: Instruments:

Teachers and children were observed over two days on various instruments and completed questionnaires on toddler and preschool child outcomes. Preschool children participated in cognitive interview tasks.

Day 1

- ❖ Environment Rating Scales (ITERS-R, Harms, Cryer, & Clifford, 2006; ECERS-R, Harms, Clifford, & Cryer, 2005; SACERS, Harms, Jacobs, & White, 1996)
- ❖ Early Childhood Environment Rating Scale-Extended (Sylva, Siraj-Blatchford, & Taggart, 2006)

Day 2

- ❖ Classroom Assessment Scoring System (CLASS; Toddler and Pre-K Versions; Pianta, La Paro, & Hamre, 2008)
- ❖ Preschool Outdoor Environment Measurement Scale (DeBord, Hestenes, Moore, Cosco, & McGinnis, 2005)
- ❖ Out of School Time (OST; Pechman, Russell, & Birmingham, 2008)

Child Outcomes

- ❖ Comfort and Contentedness of Children in Child Care (C5; Cassidy, unpublished)
- ❖ Brief Infant Toddler Social Emotional Assessment (BITSEA; Briggs-Gown & Carter, 2006)
- ❖ Social Skills Improvement System (SSIS; Elliot & Gresham, 2008)
- ❖ Flexible Item Selection Task (FIST; Jacques & Zelazo, 2001)
- ❖ Conceptual Perspective Taking Task (CPT; Taylor, 1988)

Methods: Participants

101 child care centers across 40 counties participated in the study. Among these centers, 247 early childhood lead teachers participated (94 toddler, 98 preschool, and 55 school age). A total of 828 children participated in the study (406 toddlers, 422 preschoolers).

- ❖ Star-level breakdown of participating centers

- ❖ 17 one-star programs
- ❖ 13 two-star programs
- ❖ 25 three-star programs
- ❖ 22 four-star programs
- ❖ 24 five-star programs

Results

Quality Assessment Tools

The results indicated significant relationships among all of the quality assessment tools. Correlations among the different instruments ranged from small ($r = .22, p < .05$) to moderate ($r = .60, p < .01$), with the majority of the correlations above ($r = .45, p < .01$). The tools are all capturing unique aspects of child care quality.

Quality and Child Outcomes

Regression results indicated that various aspects of quality are significant predictors of children's cognitive, social, and emotional outcomes. All regressions controlled for child age, and all regressions on newer measures have controlled for star-rating and ERS scores.

Regressions predicting children's outcomes in toddler classrooms

| Quality Measure | BITSEA: Social Skills | BITSEA: Problem Behaviors | C5: Positive Emotions | C5: Negative Emotions |
|------------------------------|--------------------------|------------------------------|--------------------------|--------------------------|
| Star Rating | | | | -2.120** |
| ITERS-R | | -2.138** | 10.180*** | -7.368** |
| CLASS: Emotional Support | | -3.054** | | -1.976** |
| CLASS: Behavior Guidance | | -2.516** | 2.357** | -2.325** |
| CLASS: Instructional Support | | -1.728* | | -2.066** |

Note: For all regression tables, the coefficient provided is a t-value. All regressions are controlling for child age, and all regressions on newer measures have controlled for star-rating and ERS scores. * p <.1, **p <.05, *** p <.01.

Regressions predicting children's outcomes in preschool classrooms

| Quality Measure | FIST: Thinking Skills | CPT: Perspective Taking | SSIS: Social Skills | SSIS: Problem Behaviors | C5: Positive Emotions | C5: Negative Emotions |
|----------------------------------|--------------------------|-------------------------------|------------------------|-------------------------------|-----------------------------|-----------------------------|
| Star Rating | | | | -2.403*** | -3.121*** | |
| ECERS-R | | | | | 10.678*** | -5.022*** |
| ECERS-E | | 1.926* | -2.264** | | | |
| CLASS: Emotional Support | | | | | 1.935** | -2.100** |
| CLASS: Classroom Organization | | | | | 2.914*** | -2.882*** |
| CLASS: Instructional Support | | 2.924*** | | | 1.839* | |
| POEMS | 2.341** | | | | 3.786*** | -2.190** |

Note: For all regression tables, the coefficient provided is a t-value. All regressions are controlling for child age, and all regressions on newer measures have controlled for star-rating and ERS scores. * p <.1, ** p <.05, *** p <.01.

Regressions predicting children's outcomes in school age classrooms

| Quality Measure | C5: Positive Emotions | C5: Negative Emotions |
|-----------------------------------|--------------------------|--------------------------|
| Star Rating | | |
| SACERS | | |
| OST: Youth Relationship Building | 2.868*** | -1.935* |
| OST: Youth Participation | | |
| OST: Staff Relationship Building | | |
| OST: Instructional Strategies | | -1.850* |
| OST: Activity Content & Structure | 2.131** | |

Note: For all regression tables, the coefficient provided is a t-value. All regressions are controlling for child age, and all regressions on newer measures have controlled for star-rating and ERS scores. *p <.1, ** p <.05, ***p <.01.

Quality and Star-Rating

Correlation results demonstrate significant relationships between centers' star-rating and their scores on all of the quality measures. These coefficients ranged from ($r = .26, p <.05$) to ($r = .52, p <.01$).

Overall, toddler classrooms from centers with a rating of 5 stars had significantly higher ratings of quality on both the ITERS and the CLASS than 1, 2, and 3 star centers. Four-star centers were also significantly different from 1 or 2 star centers on ITERS total average, CLASS Behavior Guidance, and CLASS Instructional Support. Therefore, the rating of 4 stars (in some cases) and 5 star (in all cases) means that children are experiencing higher levels of quality than those children at 1, 2, and/or 3 stars. There is no difference in quality measures between 4 and 5 stars.

For preschool classrooms, ANOVA's indicated that centers with a rating of 5 stars had significantly higher ratings of quality on all of the measures (ECERS-R, CLASS domains, ECERS-E, and POEMS) than 1, 2, and 3 stars, except CLASS Emotional Support. On the ECERS-R, ECERS-E, and POEMS, 4 star centers also scored significantly higher from 1, 2, and 3 star centers. There was no significant difference in any of the quality measures between 4 and 5 star centers.

Overall, there are few differences among the quality of school age classrooms by star level. The only significant mean differences were found between 3 and 4 stars on OST Staff Relationship Building and between 1, 2, 3, and 4/5 stars on the SACERS. It seems children in 4 and 5 star centers are experiencing higher global quality than children in 1, 2, and/or 3 star centers. However, the OST is either not capturing the differences in process quality for school age children or there is no difference in interactions and processes among school age classrooms of different star levels.

Implications

The results show that instruments other than the Environment Rating Scales are capturing components of classroom quality that are currently unaccounted for in North Carolina's QRIS. These aspects of quality include process variables such as teachers' emotional and instructional support of children (CLASS), curricular elements as seen in the ECERS-E, and outdoor environments and materials measured by the POEMS.

Each of the instruments predicted at least one aspect of children's cognitive, social, or emotional development. It is important that QRIS begin to explore the use of such other measures that may capture elements of children's environments that are promoting positive development in young children.

Centers rated at 4 or 5 stars provide significantly higher quality than centers rated at 1, 2, or 3 stars. Quality enhancement efforts need to focus on improving the quality of 1, 2, and 3 star centers. Future research should investigate other program quality factors that may be able to distinguish between 4 and 5 star centers.

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Smart START

Smart Start and Preschool Child Care Quality in NC: Change Over Time and Relation to Children's Readiness

March 2003

A report by the FPG-UNC Smart Start Evaluation Team



FPG Child Development Institute
The University of North Carolina at Chapel Hill

Smart Start and Preschool Child Care Quality in NC: Change Over Time and Relation to Children's Readiness

Smart Start Evaluation Team
FPG Child Development Institute
The University of North Carolina at Chapel Hill
March 2003

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(b)(6). Finally, we are sincerely grateful for the help of the preschool directors, teachers, parents, and children whose cooperation made the study possible.

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This and other reports from the Smart Start Evaluation Team may be found on the web:
www.fpg.unc.edu/smartstart/.

Smart Start and Preschool Child Care Quality in NC: Change over Time and Relation to Children's Readiness

A Report by the FPG-UNC Smart Start Evaluation Team

Executive Summary

March, 2003

The primary goal of Smart Start is to ensure that all children enter school healthy and prepared to succeed. Based on extensive evidence that child care quality can positively affect children's learning, one of the main ways that Smart Start has tried to achieve the readiness goal is by improving the quality of children's experiences in early care and education programs. Smart Start has funded a variety of technical assistance (TA) activities to improve child care including on-site technical assistance, quality improvement and facility grants, teacher education scholarships, license upgrades, teacher salary supplements, and higher subsidies for higher child care quality or higher teacher education levels. These activities have been designed to improve child care quality and thereby expected to positively affect children's readiness for school.

This study included 110 preschool child care programs that were part of previous observational studies of NC child care quality between 1994 and 1999. The centers were located in 20 partnerships that entered Smart Start in the first, third, or fourth years of funding and were in a variety of geographic settings--urban and rural; Piedmont, East and West. We measured the quality of classroom practices and the center's level of participation in Smart Start-funded TA activities in the past year. From these classrooms we assessed 512 preschool children on their language, literacy, numeracy, and social-emotional skills.

Three main conclusions can be drawn: (1) Between 1993 and 2002, child care quality in this sample steadily and significantly increased, (2) Participation in Smart Start-funded activities was significantly positively related to child care quality, and (3) Children who attended higher quality centers score significantly higher on measures of skills and abilities deemed important for success in kindergarten than children from lower-quality centers.

While this study cannot identify which Smart Start TA activities have been most effective at improving quality, it does show that Smart Start-funded activities are significantly related to preschool classroom quality. In addition, this study replicated our earlier finding that a center's level of current participation in Smart Start-funded activities was related to classroom quality, but previous participation was not. A policy implication of this finding is that continuous quality enhancement efforts may be necessary to sustain higher levels of classroom quality. Although a significant increase in preschool classroom quality has been documented, a large proportion of preschool child care in NC is not yet at the high level of quality that is necessary to promote good outcomes for children.

Classroom quality was significantly, positively related to children's outcomes, over and above the effects of gender, income, and ethnicity. Children from poor and non-poor families were equally influenced by quality, providing support for quality improvement programs in all kinds of settings, serving all kinds of children, not just targeted to those who are poor. Children from poor families are more likely to have lower kindergarten readiness skills and thus be in greater need of positive early childhood experiences; however, all children benefit from improved programs.

Smart Start and Preschool Child Care Quality in NC: Change over Time and Relation to Children's Readiness

A Report by the FPG-UNC Smart Start Evaluation Team

North Carolina's Early Childhood Initiative, Smart Start, was established in 1993 as a partnership between state government and local leaders, service providers, and families to better serve children under six and their families. State funds are distributed to community partnerships, non-profit corporations established specifically for the purpose of supporting early care and education, family support, and health activities. The first round of twelve partnerships (18 counties) were awarded Smart Start funds in 1993 and have been called the "pioneer" partnerships. Subsequent rounds of partnerships were awarded funds each year from 1994 to 1997, until all NC counties were part of a Smart Start partnership. All 100 counties in North Carolina have received Smart Start funds since 1997, either as a single-county partnership or as part of a multiple-county partnership. Funding for Smart Start reached \$220 million in 2001, but has been reduced to \$190 million in fiscal year 2002-03.

The primary goal of Smart Start has been to ensure that all children enter school healthy and prepared to succeed. Smart Start's approach requires that local community partnerships plan how best to meet their own community's needs, improve and expand existing programs for children and families, and design and implement new programs. Although each partnership decides how best to meet the needs of its children and families, all work to improve the quality of early childhood education, including center-based care. By legislative mandate, partnerships spend at least 70% of their funds on child care. Statewide, about half of this amount is spent on child care subsidies for poor or working class families and about half is spent on child care quality improvement activities, both in centers and family child care homes. Activities to improve child care include on-site technical assistance (TA), quality improvement and facility grants, teacher education scholarships, teacher salary supplements, license upgrades, and higher subsidies for families to purchase higher child care quality.

This report focuses on the relation between Smart Start and center-based, preschool child care quality and children's readiness for kindergarten, addressing three main questions:

1. Has the quality of child care improved over time?
2. Does center participation in Smart Start-funded activities predict quality?
3. Do preschool children attending higher quality child care programs have better skills than children attending lower quality programs?

Previous Smart Start Evaluation studies have addressed the first two questions about quality. Preschool child care quality improved over the first six years of Smart Start and centers' level of participation in Smart Start-funded activities was significantly related to quality (Bryant, Maxwell, & Burchinal, 1999; Bryant, Bernier, Peisner-Feinberg, & Maxwell, 2002). In the new study described in this report, we collected child care observations and interviews from centers in 18 partnerships in 2002 to see if quality improvement as well as the relationship between Smart Start participation and quality continued.

Regarding the third question about the relation between classroom quality and children's outcomes, several studies have shown that overall classroom quality is related to cognitive, language, social, and emotional outcomes for children, both in the short-term and the long-term. For example, recent findings from the Cost, Quality, and Outcomes Study, a longitudinal study of child care center quality and children's long-term outcomes, found that children who attended higher quality preschool classrooms had fewer problem behaviors, better math skills, and better cognitive and attention skills through second grade (Peisner-Feinberg, Burchinal, Clifford, Culkin, Howes, Kagan, & Yazejian, 2001). In addition, the positive influences of better child care quality were even more pronounced for children at greater risk, particularly in their behavior problems and math skills. Other studies have shown that children in higher quality preschool classrooms exhibit greater competence with peers in preschool (Howes, Phillips, & Whitebook, 1992) and in kindergarten (Howes, 1990). Data from the North Carolina Head Start Quality Research Center showed that Head Start children in higher quality classrooms were rated by their teachers as having better social skills and fewer problem behaviors than children in lower quality classrooms (Bryant & Peisner-Feinberg, 2000; Peisner-Feinberg, 2000).

An earlier Smart Start Evaluation study partially addressed Question 3 by examining children's school readiness skills, but did not link school readiness to child care quality. Specifically, the 1999 study documented that children attending child care programs that participated intensively in Smart Start-funded improvement efforts were significantly more ready for kindergarten than their peers who attended non-participating child care programs (Maxwell, Bryant, & Miller-Johnson, 1999). Independent assessments and kindergarten teacher ratings showed that these children were half as likely to have language delays or behavior problems when they entered kindergarten. By including observations in classrooms, the current study fully addresses the third question of the relation between classroom quality and children's skills and knowledge.

Study Description

Sample - Centers

Data for this study were gathered from samples of child care centers in 12 pioneer partnerships (Round 1) and in 8 partnerships that entered Smart Start in 1996 or 1997 (Round 3 or 4). All centers in the current study had participated in at least one previous Smart Start Evaluation child care quality study and many had participated two or three times before. Table 1 summarizes the number of centers participating in the previous studies by year. We did not gather child care quality data from partnerships that began receiving Smart Start funding in Rounds 2 or 5. The evaluation team has conducted a wide range of studies using partnerships from all rounds, but never all rounds in the same study. We think a sample of 20 partnerships is sufficient to answer the questions posed in this study.

Child care in the pioneer partnerships (Round 1) has been most extensively studied because these counties were the first to participate in Smart Start. As Table 1 shows, in 1994 we

Table 1. Number of centers visited in each year of the quality studies

| Study Year | Round 1 | Rounds 3 & 4 |
|------------|---------|--------------|
| 1994 | 184 | n/a |
| 1996 | 188 | n/a |
| 1997 | n/a | 112 |
| 1999 | 135 | 85 |
| 2002 | 68 | 42 |

visited 184 child care centers in Round 1. Half were randomly selected from the county's list of licensed centers and half were selected specifically because they were participating in Smart Start-funded activities. Analyses of major center characteristics, including quality, showed no differences in results based on sampling strategy, so we did not use this sampling strategy again and collapsed these groups in our analyses. In 1996 we revisited all the 1994 centers that were still operating and added an additional random sample to achieve a total sample of 188 centers. In 1999, all centers visited in 1996 were asked to participate again. The results of these three previous studies of NC child care quality have been reported (Bryant, Maxwell, Burchinal, & Lowman, 1997; Bryant, Maxwell, & Burchinal, 1999; Bryant, Bernier, Peisner-Feinberg, & Maxwell, 2002).

The evaluation team first visited child care centers in Rounds 3 and 4 in 1997 as Smart Start was just beginning in these partnerships. We visited 112 centers in 1997 from 8 counties that started receiving Smart Start funds in Rounds 3 and 4. From 4 of these partnerships, we asked all child care centers to participate; in 4 larger partnerships we randomly sampled centers. The data collection procedures replicated those that had taken place in the Round 1 partnerships. In 1999, all centers in Rounds 3 and 4 that were visited in 1997 were asked to participate in another observation and interview.

The participation rate for these earlier studies was 75% in 1994, 64% in 1996, 75% in 1997, and 79% in 1999. These are satisfactory rates relative to other child care studies, and equal to or higher than participation rates in two often-cited child care observation studies with large samples (the Cost, Quality, and Outcomes Study, 1995; and the NICHD Early Child Care Research Network, 1996).

For the 2002 data collection phase, we did not have the resources to visit all previously visited centers. To assure a range of classroom quality in the sample, we divided all the centers observed in 1999 into quartiles based on their quality scores. We asked 100% of the centers in the top and bottom quartiles to participate and we randomly selected 50% of the centers in the middle two quartiles to participate. Because scores in the middle two quartiles were tightly clustered and because we randomly sampled among them, the sample included a range of quality scores. Of the 152 centers selected for participation, 13 did not serve 4-year-olds, so we did not include them. Of the remaining 139 centers, 110 agreed to participate (79%). The type of centers included 30% independent, 28% Head Start, 19% church-sponsored, 5% franchise, 2% developmental day, 1% public preschool and 15% other. The sample was not specifically drawn to be representative of the state distribution of types of centers, but the full range of child care center types did participate in the study.

To determine whether poor quality programs were more likely to drop out of the study, we compared the previous quality scores of centers in the sample in 1996, 1999, and 2002 with those not in the sample in those years. No differences were observed in the 1996 or 1999 data collection phase, however the 1999 mean quality score of the 2002 sample was significantly higher than the 1999 mean score of the centers not seen in 2002. This indicates that some of the lower quality centers in 1999 did not participate in the 2002 study. The data analysis methods were designed to take this into account so that our conclusions regarding change over time are valid.

Sample - Children

Child care directors from the 110 participating centers sent recruitment letters home to the parents of all children who were expected to attend kindergarten in the fall of 2002. Children whose parents consented were included in the study, up to 6 per classroom. If more than 6 children had consents, data collectors assessed those who had been at the center the longest time, randomly picking half boys and half girls. In total, they assessed 512 children. The average length of time children had attended their center was 23 months; 57% had attended their center for over a year. Boys made up 50.8% of the sample. Slightly more than half of the sample (54.7%) was White; 32.4% were Black, 2% Hispanic, 4.7% Native American, 2.2% Asian, and 4.1% Multiracial or Other. About half of the children (53.3%) were reported to be receiving a child care subsidy, the definition we used for poverty. Of the 274 children from poor families, 43.4% were White, 42.7% were Black, 2.6% Hispanic, 5.1% Native American, 1.5% Asian, and 4.7% were Multiracial or Other.

Procedures and Measures

One randomly selected preschool classroom was visited in each center between January and March 2002. Trained research assistants collected observational data and interviewed the classroom teacher and center director with measures described below. We provided participating directors and teachers with a \$30 gift certificate for their help. Between April and June of 2002, the data collectors revisited each classroom to assess the children in a one-on-one session that lasted about 30 minutes.

Child care quality measure. The *Early Childhood Environment Rating Scale* (ECERS, Harms & Clifford, 1980) is a well-established measure of child care quality that assesses seven general areas: personal care routines, furnishings and display for children, language-reasoning experiences, fine and gross motor activities, creative activities, social development, and adult needs. Scores on each of 37 items can range from 1 to 7, with the overall mean score used as a global measure of the developmental appropriateness or quality of the classroom. To be consistent with other research, the adult needs items were not included in the overall classroom quality scores. An overall score from 1 to 2.9 is considered poor quality; scores from 3 to 4.9 are considered medium quality; and scores of 5 or greater are considered good to excellent quality. Although a revised version of the ECERS was published in 1998, we continued to use the original ECERS so that results can be compared over time on the same measure. Before data collection, observers were trained to an inter-rater agreement standard of at least 85% within one point. Inter-rater reliability during data collection (based on 10% of the observations) was 82.3% within 1 point or exact.

Director interview. Data collectors interviewed center directors to obtain information about center characteristics and services. This interview included a list of 14 different Smart Start-funded TA activities, most of them related to quality improvement, that the director or teaching staff might have participated in during the past year. Table 2 lists the categories of activities. The director interview was conducted after the classroom observation, so the observers' classroom ratings were based only on what they saw in the classroom and not biased by knowledge of center activities related to quality improvement. For each study year, we created a Smart Start participation index for each center by summing the total number of quality improvement activities.

Child assessments. Children's knowledge and skills were assessed by a number of measures, including several that were used in the NC School Readiness Assessment in 2000 (Maxwell, Bryant, Ridley, & Keyes-Elstein, 2001). The child care teacher was asked to rate children's social skills and problem behaviors (Social Skills Rating System, Gresham & Elliott, 1990). Teachers of 89% of the children (455 of 512) returned these forms. Language and math skills were assessed during one-on-one activities with the children, including the Peabody Picture Vocabulary Test III (PPVT-III) (Dunn & Dunn, 1997), the Applied Problems subtest of the Woodcock-Johnson (1989), a literacy assessment (Concepts About Print, Zill & Resnick, 1998), and 4 tasks that asked children to count and to identify letters, numbers and colors. Appendix A describes the measures in more detail. Before assessing study children, data collectors were trained on the administration of the child measures, practiced the measures several times, and then were observed by an experienced trainer to assure that they followed correct administration procedures.

Table 2. Smart Start-funded activities

1. Increased subsidies for higher quality care
2. Funds for teachers to attend college
3. On-site technical assistance
4. Quality improvement grants to upgrade license level (materials, facilities)
5. Teacher salary supplements
6. Support to achieve national accreditation
7. Training workshops (CPR, classroom practices, outdoor play, etc.)
8. Developmental screenings
9. Transportation for children
10. Enrichment activities in the classroom (story teller, art teacher)
11. Teacher substitutes
12. Support to improve services for children with disabilities
13. Lending library of appropriate materials
14. Subsidies – not tied to higher quality

Results

Child Care Quality Over Time

The first question addressed by this study was whether child care quality in this sample of NC centers improved over time. With Smart Start focusing considerable attention and resources on child care quality, increases would be expected. Using the overall ECERS score as the measure of quality, a statistical technique (linear model for mixed effects) was used to examine whether ECERS scores changed over time. The ECERS classroom quality scores significantly increased over time ($p < 0.001$). This analysis indicated that both the overall quality of the centers sampled each year and the quality of the individual centers significantly increased over the observed time period. Table 3 presents the mean ECERS scores, standard deviations, and ranges for centers in Round 1 and Rounds 3 & 4 by year, showing this positive increase over time.

Table 3. Mean ECERS scores by study year

| Study Year | Round 1 | | | | Rounds 3 & 4 | | | |
|------------|---------|------|------|-----------|--------------|------|------|-----------|
| | N | Mean | SD | Range | N | Mean | SD | Range |
| 1994 | 180 | 4.25 | 0.64 | 2.5 - 6.3 | | | | |
| 1996 | 188 | 4.52 | 0.69 | 3.0 - 6.3 | | | | |
| 1997 | | | | | 112 | 4.37 | 0.81 | 2.6 - 6.4 |
| 1999 | 133 | 4.59 | 0.74 | 2.5 - 6.2 | 84 | 4.36 | 0.74 | 2.5 - 5.6 |
| 2002 | 68 | 4.73 | 0.93 | 2.6 - 6.8 | 42 | 4.76 | 0.96 | 2.8 - 6.6 |

For both samples of centers (Round 1 and Rounds 3 & 4), the first observation--made at the beginning of Smart Start in their respective counties--yielded mean ECERS scores between 4.25 - 4.37, while the most recent ECERS scores, after 4 to 7 years of Smart Start, yielded mean scores of about 4.75. This is an increase of over $\frac{1}{2}$ standard deviation, an effect size of 0.64 for Round 1 and 0.58 for Rounds 3 & 4. In educational research, interventions that can achieve this level of improvement are considered to be effective.

(For comparison, Cohen (1988) considered an effect size of 0.5 as a "medium" effect and 0.8 as a "large" effect.)

Figures 1 and 2 illustrate the increased quality over time in Round 1 partnerships and Rounds 3 & 4. Because of the higher attrition of low quality

Figure 1. Quality of NC preschool child care: Round 1 counties

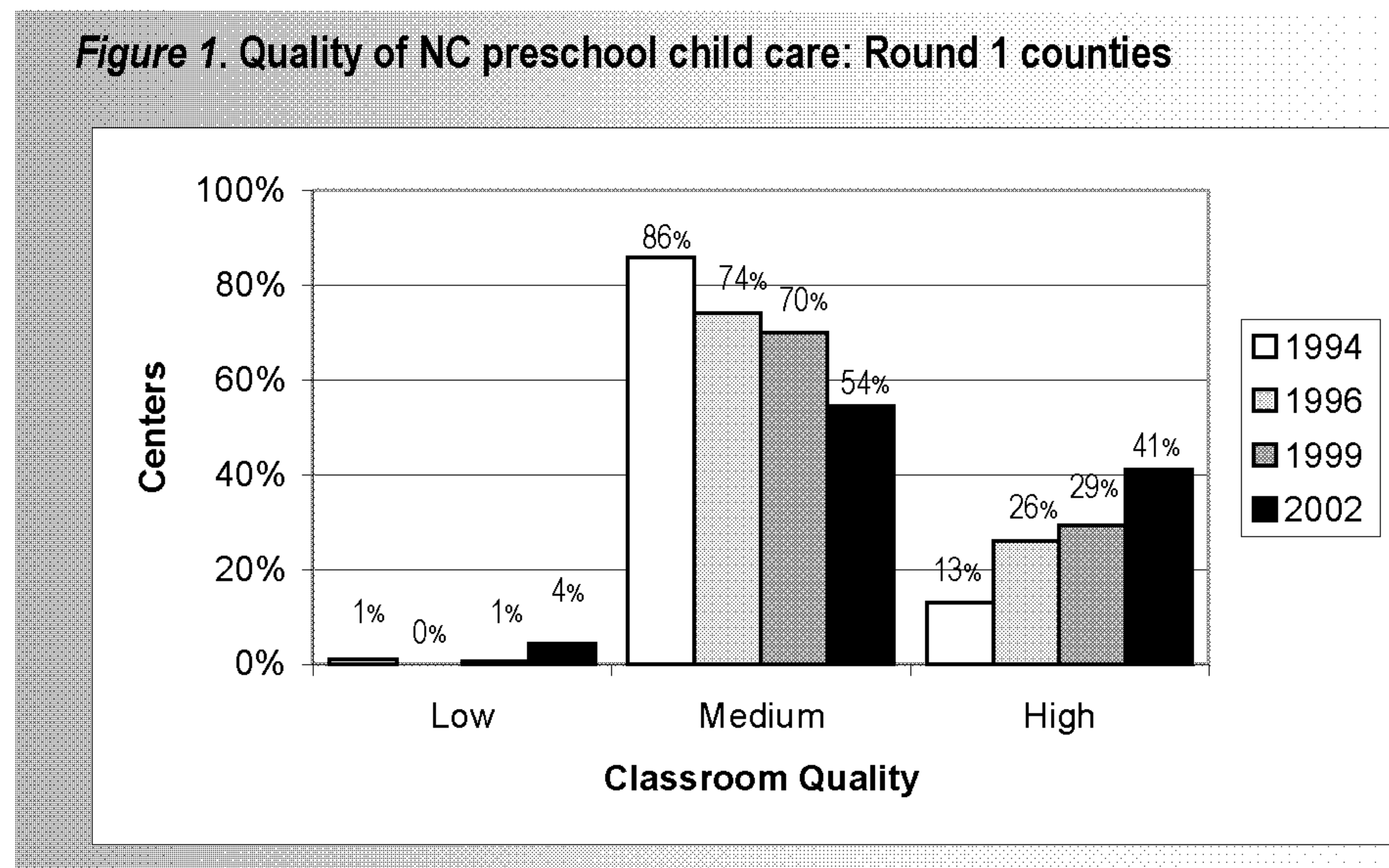
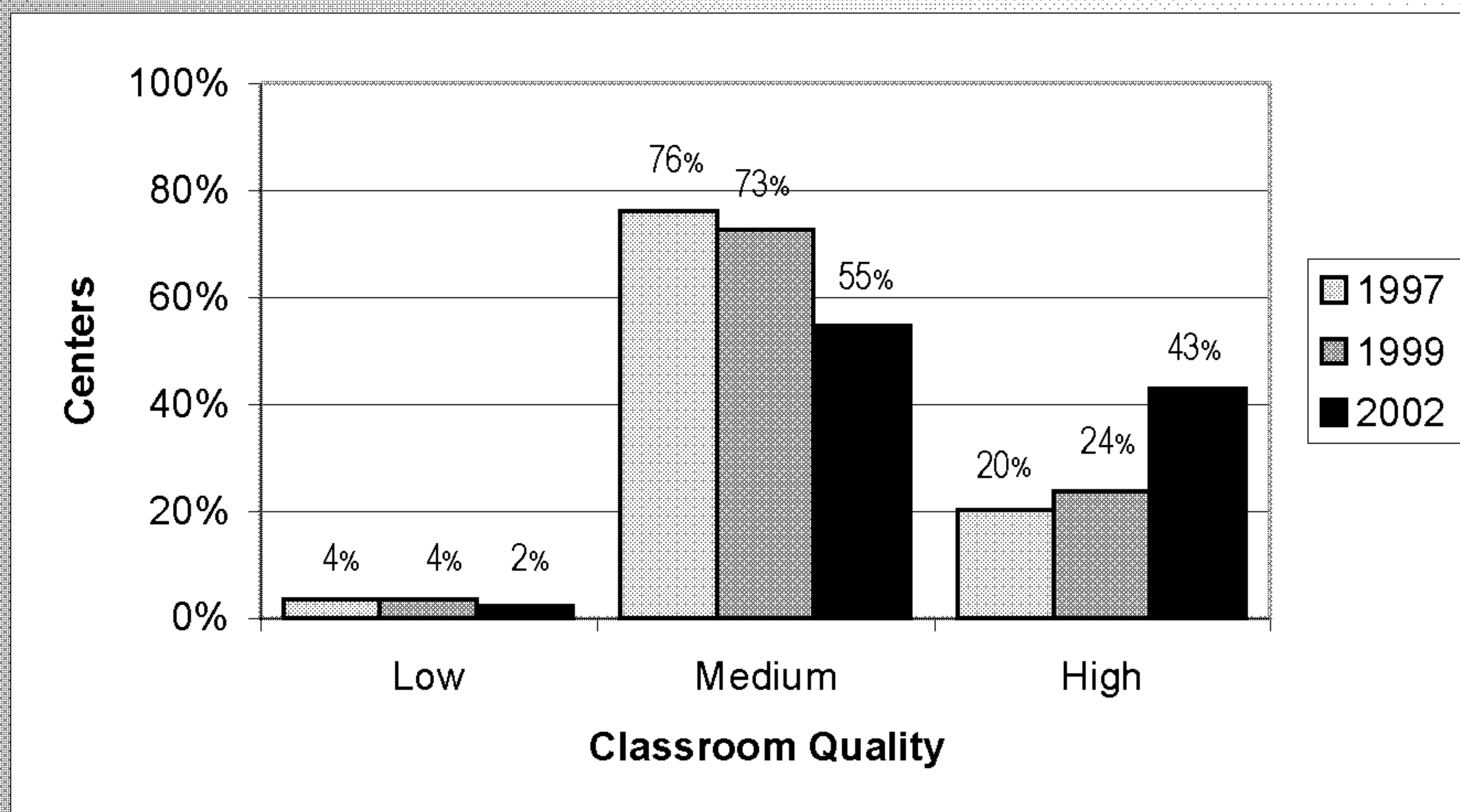


Figure 2. Quality of NC preschool child care: Round 3 & 4 counties



centers from 1999 to 2002, these figures include only centers seen at least twice. A score of 5 on the ECERS is considered “good” and a 7 is “excellent,” so evaluators often use 5 as a threshold for “high” quality. For Round 1, the percentage of centers scoring at 5 or above increased steadily from 1994 to 2002. For Rounds 3 & 4, the percentage of centers in the highest category in 1999 was about the same as in 1996, but a large

increase was present by 2002. In the first observation period (1994 for Round 1 centers and 1997 for Rounds 3 & 4), centers in the East had somewhat lower quality scores than centers in the Piedmont and West; however, at all later observation times, no regional differences were noted.

Relation Between Smart Start Participation and Child Care Quality

The second question was whether participation in Smart Start-funded activities was related to child care center quality. Table 4 presents the mean number of Smart Start-funded activities that centers participated in by study year and round. On average, centers participated in about 4 or 5 Smart Start-funded activities, with a range from 0 to 12. The exception is that in their baseline year of Smart Start, centers in Round 3 and 4 partnerships participated in a mean of 1 activity.

Table 4. Mean number of Smart Start activities by study year

| Study Year | N | Round 1 | | | N | Rounds 3 & 4 | | |
|------------|-----|---------|------|-------|-----|--------------|------|-------|
| | | Mean | SD | Range | | Mean | SD | Range |
| 1994 | 184 | 3.91 | 2.76 | 0-11 | | | | |
| 1996 | 188 | 4.93 | 2.87 | 0-12 | | | | |
| 1997 | | | | | 110 | 1.03 | 1.69 | 0-7 |
| 1999 | 135 | 5.94 | 2.89 | 0-12 | 84 | 4.42 | 2.69 | 0-12 |
| 2002 | 68 | 4.69 | 2.08 | 0-12 | 42 | 4.38 | 2.39 | 0-9 |

Table 5 presents the relationship between a center's participation in Smart Start-funded activities and classroom quality based on how long the partnerships had been participating in Smart Start. This analysis shows that the number of Smart Start activities was not significantly related to classroom quality in the first year of Smart Start (1994 for Round 1 and 1997 for Rounds 3 & 4), but participation was related to classroom quality at each later

observation time (2 years, 5 years, and 8 years later). In addition, the strength of the relationship between quality and Smart Start participation increased over time. The positive effect of participation was the same for both Round 1 and Round 3 & 4 samples.

We also tested whether previous Smart Start participation (in 1999) predicted child care quality in 2002 and it did not. This analysis

replicated our earlier finding that concurrent participation in quality improvement activities is important for supporting child care quality and that extensive previous participation does not guarantee that a center's *current* quality is high.

Table 5. Relationship between number of Smart Start activities and quality

| Length of time in Smart Start | Effect Strength | Standard Error | Significance Level |
|-------------------------------|-----------------|----------------|--------------------|
| During startup year | 0.003 | 0.016 | 0.8431 |
| After 2 years | 0.039 | 0.013 | 0.0038 |
| After 5 years | 0.055 | 0.016 | 0.0008 |
| After 8 years | 0.085 | 0.033 | 0.0116 |

The Relation Between Child Care Quality and Children's Outcomes

The final research question was whether preschool classroom quality is related to children's skills and abilities. Means and standard deviations for the 11 child outcomes are presented in Table 6. The PPVT and the Woodcock Johnson are standardized measures, thus the average child in the United States will score about 100. The means in Table 6 indicate that the average child in this sample scored lower than the national average on the main measures of vocabulary (PPVT) and numeracy (WJ Applied Math). However, the average child in this study knew the rote skills of counting and naming letters fairly well. In the social development domain (also standardized measures), children in this sample were at the national average on positive social behaviors and a little above the national average in their problem behavior scores (that is, they had somewhat more behavior problems).

Table 6. Child outcome measures

| Variable | Mean | SD | Range |
|---|-------|-------|----------|
| Language and Literacy | | | |
| PPVT Receptive Language | 94.9 | 14.85 | 51 - 136 |
| Number of colors named or found | 9.7 | 1.01 | 0 - 10 |
| Number of letters named | 13.5 | 9.93 | 0 - 26 |
| Print Awareness | 0.4 | 0.50 | 0 - 7 |
| Book Knowledge | 2.7 | 1.41 | 0 - 5 |
| Story Comprehension | 0.7 | 0.44 | 0 - 2 |
| Numeracy | | | |
| WJ Applied Math | 93.9 | 15.48 | 32 - 132 |
| Highest number counted | 22.2 | 21.16 | 1 - 40 |
| Highest number counted with one-to-one correspondence | 18.8 | 12.51 | 2 - 40 |
| Social and Emotional | | | |
| SSRS Social Skills | 101.7 | 13.46 | 56 - 131 |
| SSRS Problems Behaviors | 103.3 | 14.64 | 84 - 143 |

In our analyses, we dropped or modified some measures. The Naming Colors task had limited variability because most children knew all 10 colors so we did not use it. The two measures of counting were highly correlated; so we only used Counting with one-to-one Correspondence. Print Awareness and Story Comprehension had skewed distributions so we created binary scores for each measure (low/high).

We estimated the relation between children's scores and their classroom quality score by using a statistical technique (Hierarchical Linear Modeling or HLM) that allows us to take into account the clustering of children within classrooms. In addition to the ECERS score and Smart Start-funded activities score, we also included 3 child variables in the analysis that research suggests effect children's skills: gender, ethnicity/race, and poverty (defined as receiving a child care subsidy). For the continuous outcomes, we fit a general linear model. For the binary outcomes (Print Awareness, Story Comprehension), we fit a logistic model.

Appendix B includes the complete results from the HLM analyses. Table 7 summarizes these results showing the number of child outcomes for which each predictor was significant and the direction of the effect. Classroom quality was a significant positive predictor for 5 of the 9 child outcomes after accounting for the effects of gender, ethnicity, and poverty. Receptive Language, Print Awareness, Book Knowledge, Applied Math, and Counting One-to-One were all significantly positively related to quality. Children from higher quality centers had better skills. The effect sizes for Receptive Language and Applied Math were 0.20, which is considered a small effect in educational research.

Table 7: Significant predictors of children's outcomes and direction of effect

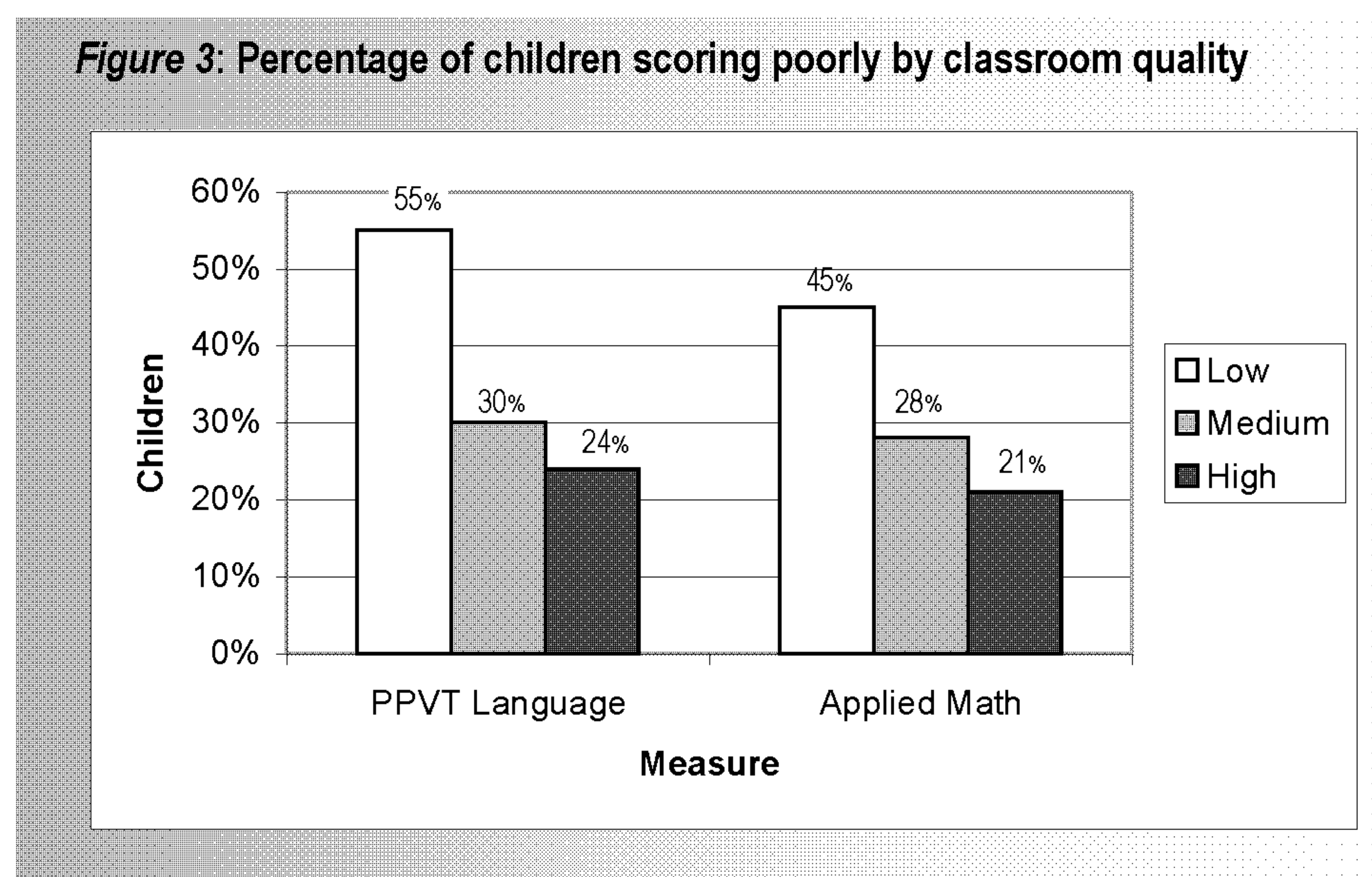
| Child Outcome | Predictor | | | |
|---------------------|------------------------|-------|-----------------|---------|
| | High Classroom Quality | Boy | Ethnic Minority | Poverty |
| Receptive Language | ↑ *** | | ↓ *** | ↓ *** |
| Letters | | | | ↓ ** |
| Print Awareness | ↑ *** | ↓ ** | ↓ * | ↓ ** |
| Book Knowledge | ↑ ** | ↓ ** | ↓ ** | |
| Story Comprehension | | | | ↓ *** |
| Applied Math | ↑ *** | ↓ * | ↓ *** | ↓ *** |
| Counting One-to-One | ↑ *** | ↓ ** | | |
| Social Skills | | ↑ *** | ↑ ** | ↓ *** |
| Problem Behaviors | | ↓ * | | ↑ ** |

Notes: * = $p < 0.05$; ** = $p < 0.01$; *** = $p < 0.001$.

Compared to girls, boys scored significantly lower on Print Awareness, Book Knowledge, Applied Math, and Counting, and were rated by their teachers as having fewer Problem Behaviors and higher Social Skills. Being a child of Black, Hispanic, or Other origin was related to lower Applied Math, Receptive Language, Print Awareness, and Book Knowledge scores, but higher ratings on Social Skills. Poverty was a very strong predictor of children's outcomes, related to lower scores on almost every cognitive and language measure and higher problem behavior scores.

The HLM analyses revealed only one significant interaction. For Print Awareness the effect of quality existed for boys ($\beta = 0.65$; $p = 0.006$) but not for girls. Neither subsidy nor ethnicity were found to affect the relationship between quality and any of the outcomes, indicating that the positive relation between good quality classrooms and children's outcomes was similar for poor and non-poor children and for children of various races.

Another way to describe the relation between quality and children's outcomes is to evaluate the percentage of children scoring at especially low levels on the outcome measures. Figure 3 illustrates that much higher percentages of children in the low- and medium-quality classrooms scored poorly (below 85 or, in other words, at least 1 standard deviation below the mean) in Receptive Language (PPVT) and Applied Math Problems than in the high-quality classes. The differences between low quality and medium quality seem greater than between medium quality and high quality.



Discussion

This study resulted in three main conclusions: (1) since 1994, child care quality in this sample of NC child care centers has steadily and significantly improved, (2) participation in Smart Start-funded activities was significantly positively related to child care quality, and (3) children who attended higher quality centers scored significantly higher on measures of skills and abilities that are important for school success compared to children from lower quality centers.

One of the main goals of Smart Start has been to improve the quality of children's early care and education. Smart Start leaders have focused considerable attention and funding on improving child care quality and positive effects are being seen. Local partnerships have funded a variety of strategies and activities over the years and most partnerships implement several activities in a given year. The research literature provides little guidance as to which types of technical assistance (TA) activities work best, but the overall effect of NC's Smart Start efforts has been positive.

The data from the current study do not allow us to determine whether certain types of technical assistance for quality improvement are more effective than other types. Nor can we tell whether a certain "dosage" of TA is minimally required before an effect on quality is seen. What we can conclude is that participation in more Smart Start-funded TA activities is significantly positively related to classroom quality. Given that the study used a very rough indicator of Smart Start participation (total number of activities, without regard to type or duration), we think the relationship between quality and Smart Start participation is a robust finding. Future research should undertake a more detailed and controlled study of the effectiveness of different types of Smart Start quality improvement TA activities.

The Smart Start Evaluation team recently wrote a detailed report about the strategies used by 12 partnerships that have been highly successful in increasing the proportion of high-quality programs in their communities (Taylor & Bryant, 2002). These strategies include strong leadership; strategic planning for a system of quality improvement programs; support for the education and professional development of the workforce; financial rewards for higher education and improved quality; on-site, customized technical assistance; and effective collaborations with multiple community agencies. No silver bullet or single strategy seems to have been effective, but successful partnerships have used several, coordinated approaches.

This study replicated our earlier finding that a center's level of current participation in Smart Start-funded activities was related to classroom quality, but that previous participation was not. In other words, extensive previous participation in Smart Start does not guarantee that a center's current quality is high. This finding has important policy implications. Continuous quality enhancement efforts may be needed to maintain and sustain the levels of classroom quality that will improve children's growth and development. Partially because of teacher turnover (31% in a recent statewide work force study, Russell, Lyons, Grigoriuc, & Lowman, 2002) and partially because a large proportion of NC preschool child care is still of low to average quality, continuous efforts are still needed. Perhaps someday the early care and education system will be adequate to ensure that every child in NC has access to high quality care, but that day is not here yet.

While it is encouraging that the number of high quality classrooms in this evaluation sample has doubled since Smart Start began, almost 50% were still below the level of quality that is widely recognized as desirable for all children. The majority of child care centers provide care that is below “good” on the ECERS rating scale (a score of 5) and the average child in these centers is performing at levels below the national average. If we want NC preschoolers’ skills to meet or exceed the national average, then their child care environments must improve.

Both the pioneer partnerships and the partnerships that entered into Smart Start later in the decade have seen improvements in quality and the positive effect of participating in Smart Start-funded activities. This indicates that different types of partnerships (large/small, urban/rural) have been able to achieve change. The fact that the Round 3 and 4 partnerships seem to be at about the same quality level as the Round 1 partnerships, in spite of having less time in which to achieve these gains, is possibly a sign that the pioneer partnerships were truly “pioneers.” They experimented with a variety of approaches and shared the best of the approaches--those that were most effective--with the later entering partnerships. This might also explain why the centers in Round 3 and 4 partnerships participated in a smaller number of activities in their first year than did centers in Round 1. Perhaps their initial offerings to centers were more intense or spread more broadly across the partnership. Within 2 years, though, the amount of Smart Start TA activities offered in Rounds 3 and 4 was similar to that offered in Round 1.

Turning to the child outcome results, this is not the first study to show a significant positive relationship between good child care quality and positive outcomes for preschoolers, but this study replicates such results within a large sample of North Carolina preschoolers. On most measures of young children's cognitive, language and social skills, we saw a significant positive relation with classroom quality. The association between quality and outcomes was similar for children from both poor and non-poor families and for White, Black, and Hispanic children. This provides support for quality improvement programs in all kinds of settings, serving all kinds of children. All children, including children from poor families who are more likely to have fewer kindergarten readiness skills, can benefit from the richer early childhood experiences in higher quality care.

Limitations of the study. This study included only one age range of early childhood programs--preschool classrooms of 3- and 4-year-old children. Had we evaluated infant-toddler child care or family child care homes, we would likely have seen an even lower overall quality of care, as other studies have shown (e.g., Cost, Quality, & Child Outcomes Study Team, 1995; Kontos, Howes, Shinn, & Galinsky, 1995; Peisner-Feinberg, Bernier, Bryant, & Maxwell, 2000). This study also included very few programs with low quality ECERS scores (below 3 on the rating scale), possibly because low-quality programs are more likely to refuse to participate in evaluations. However, the relations we found between Smart Start participation and child care quality applied to centers across the range of quality that was included in the study and would be expected to apply to centers at the lower end of the quality continuum. In fact, had the full range of quality been represented in the study, the relations could well have been stronger.

Another limitation concerns the larger attrition rate among lower quality centers from 1999 to 2002 than in the medium and high quality groups. Of the 54 low-quality centers in 1999, 6 had closed and thus could not be observed in 2002. Of the 39 middle-quality centers in 1999, 7 had closed. Of the 29 centers that refused to participate, 8 were of high quality, 11 medium, and 10 low. The analytic strategy took into account the fact that some centers were not represented at every time point, so the results regarding the relation between participation

and quality are valid regardless. Finally, the study does not establish causality between Smart Start participation, child care quality, and child outcomes. Random assignment of centers to Smart Start and of children to centers is required to establish causality, but is not feasible for a community initiative such as Smart Start.

We mention these cautions about interpreting the encouraging results of this study only to place them in context. We believe this study convincingly demonstrates the positive links between Smart Start participation and preschool child care quality and between quality and children's readiness for school. These results also point to the need for more research on technical assistance for quality improvement to help early childhood programs know where best to invest their resources. Finally, these NC results confirm what other national studies have shown--higher quality preschool classrooms are positively associated with children's knowledge and skills. Smart Start appears to be effective in improving child care quality and children's outcomes, yet much more progress can be made.



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Appendix A: Child Assessment Battery - Spring 2002

This appendix includes a complete list of the child measures used in the study. The language and literacy measures were administered to children in a one-on-one session and the social and behavioral measures were from teacher ratings of children.

Language and Literacy

Color Names (Zill & Resnick, 1998). This subtest was adapted and used with permission from the Head Start Family and Child Experiences Survey (FACES; Zill & Resnick, 1998). The Color Names subtest is a simple color naming and identification task. Children name up to 10 colors when shown a sheet of bears of different colors. This subtest yields a raw score ranging from 0 to 10 for the number of colors named and for the number of colors named or identified.

Peabody Picture Vocabulary Test - III, Form A (PPVT; Dunn & Dunn, 1997). The PPVT was used to measure children's receptive language skills. The PPVT can be administered to individuals as young as 2 years 6 months and as old as 90 years. It consists of 204 items arranged in order of increasing difficulty; most individuals complete 60 or fewer items. Test procedures involve showing the child a picture plate and asking the child to select the picture that best represents the stimulus word presented by the assessor. The PPVT was individually administered to children. Standard scores with a mean of 100 and a standard deviation of 15 were used in the analysis. National norms were set so that 16% of children in the standardization sample had scores less than 85 and an additional 16% had scores greater than 115.

Letter Identification. Children are shown 3 pages of letters randomly ordered and including all 26 letters of the alphabet. Children are asked to name any letters they know. Scores range from 0-26.

Story and Print Concepts (Zill & Resnick, 1998). This subtest was adapted and used with permission from the Head Start Family and Child Experiences Survey (FACES; Zill & Resnick, 1998). It measures children's book knowledge, comprehension, and print awareness. For this subtest, the research assistant read to each child a book entitled "Where's My Teddy?" (Alborough, 1992, 1995) and asked 12 questions about the book and its contents. Raw scores were generated for each of the conceptual areas (i.e., book knowledge, comprehension, and print awareness). Raw scores can range from 0-5 for book knowledge, 0-2 for comprehension, and 0-7 for print awareness.

Numeracy

Woodcock-Johnson Psycho-Educational Battery – Revised (Woodcock & Johnson, 1989, 1990). The Applied Problems subtest from the Woodcock-Johnson Tests of Achievement, Form A was individually administered to children. The Applied Problems subtest consists of items designed to assess children's skills in analyzing and solving practical math problems. The Woodcock-Johnson provides norms for children as young as 24 months to adults over the age of 90 years of age. Standard scores with a mean of 100 and a standard deviation of 15 were used in the analysis. National norms were set so that 16% of children in the standardization sample had scores less than 85 and an additional 16% had scores greater than 115.

Number Identification. Children are shown a page with the numbers 1-10 in random order and asked to name them. Scores range from 0-10.

Counting and Counting Bears (adapted from Head Start Family and Child Experiences Survey Spring 1998 Assessment; used with the permission of Nicholas Zill and Gary Resnick, Westat). In these two tasks, children are asked to count and then shown a sheet of little bears and asked to count them pointing one to one. Scores range from 0 to 40 on Counting, and from 0 to 40 on Counting Bears. Children who could count above 40 were given a score of 40 and redirected onto the next task.

Social Skills

Social Skills Rating System (SSRS; Gresham & Elliott, 1990). The teacher form of the Social Skills Questionnaire was used to gather information about children's social skills and problem behaviors. Teachers completed a 30-item rating scale that measures children's social skills on a scale of 0 to 2, with a higher score indicating greater skills. Teachers also completed an 18-item rating scale that measures children's problem behaviors on a scale of 0 to 2, with a higher score indicating more problems. Standard scores with a mean of 100 and a standard deviation of 15 were used in the analysis. National norms were set so that 16% of children in the standardization sample had scores less than 85 and an additional 16% had scores greater than 115.

Appendix B: Results from the HLM Analyses

| | Applied Math | | Receptive Language | | SSRS Social Skills | | SSRS Problem Behaviors | | Counting One-to-One | |
|--------------------------|--------------|------|--------------------|------|--------------------|------|------------------------|------|---------------------|------|
| | β | SE | β | SE | β | SE | β | SE | β | SE |
| Intercept | 100.05*** | 4.80 | 99.25*** | 4.22 | 98.94*** | 5.10 | 100.95*** | 4.26 | 2.69*** | 0.20 |
| ECERS | 3.30*** | 0.97 | 3.14*** | 0.81 | 1.40 | 1.10 | -1.94 | 1.00 | 0.14*** | 0.04 |
| Male | -2.48* | 1.18 | 0.35 | 1.03 | 4.65*** | 0.94 | -2.26* | 1.03 | -0.16** | 0.06 |
| Subsidy | -6.33*** | 1.66 | -6.30*** | 1.42 | -5.05*** | 1.46 | 4.51** | 1.52 | -0.09 | 0.07 |
| Non-white | -5.60*** | 1.65 | -9.75*** | 1.44 | 4.08** | 1.39 | -2.30 | 1.44 | -0.11 | 0.07 |
| ECERS x Male | -0.31 | 1.26 | 0.28 | 1.10 | -0.65 | 1.01 | 1.04 | 1.12 | 0.08 | 0.06 |
| ECERS x Subsidy | -1.82 | 1.63 | 0.70 | 1.38 | 0.49 | 1.38 | -1.35 | 1.45 | 0.04 | 0.07 |
| ECERS x Non-white | 3.09 | 1.56 | 0.02 | 1.35 | 1.48 | 1.41 | -0.94 | 1.40 | 0.07 | 0.07 |

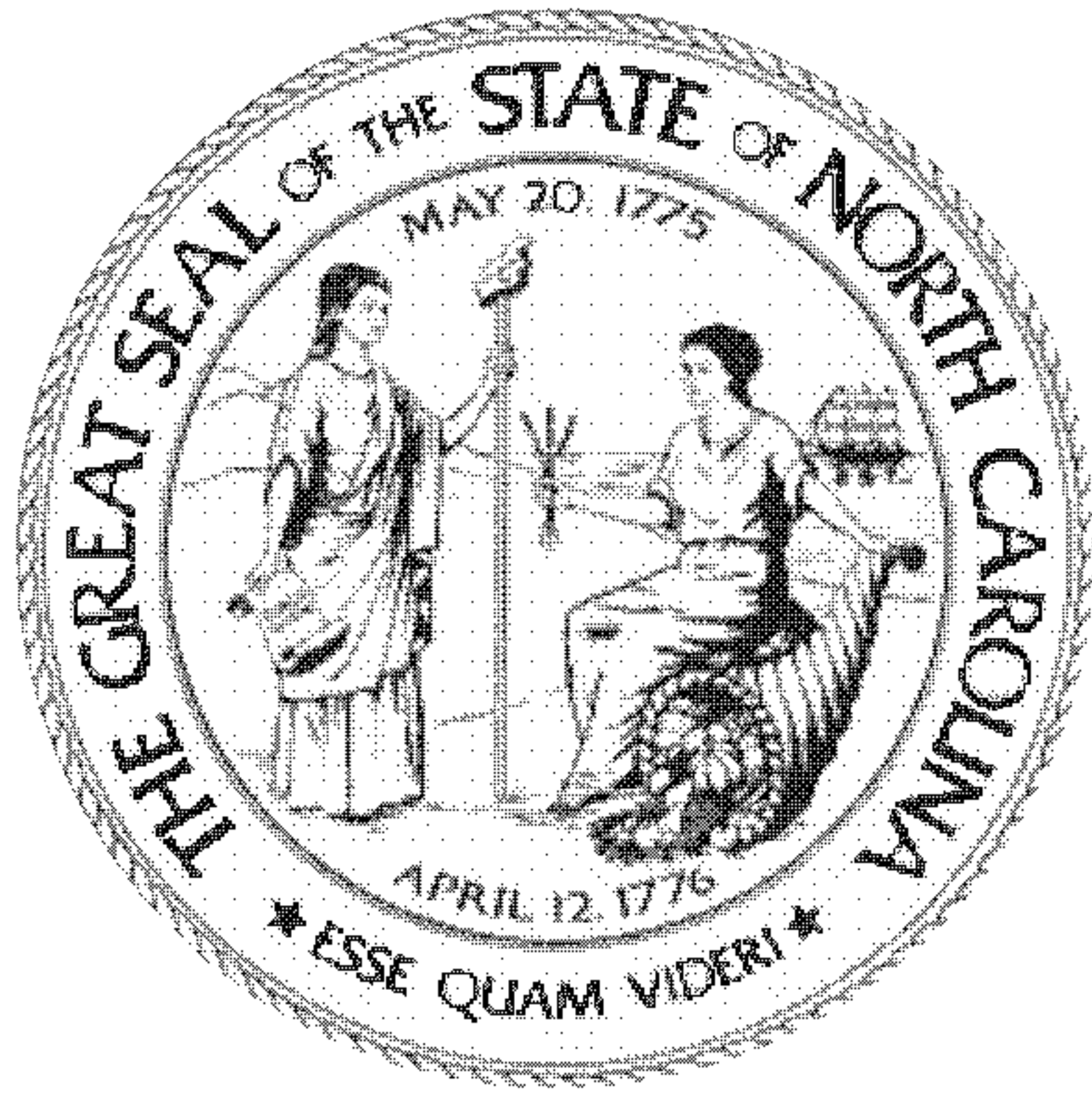
| | Letters Named | | Print Awareness | | Book Knowledge | | Story Comprehension | |
|-----------------------------------|---------------|------|-----------------|------|----------------|------|---------------------|------|
| | β | SE | β | SE | β | SE | β | SE |
| Intercept | 1.81*** | 0.38 | -0.30** | 0.10 | 2.75*** | 0.42 | 1.12*** | 0.11 |
| ECERS | 0.14 | 0.08 | 0.39*** | 0.12 | 0.25** | 0.09 | 0.20 | 0.11 |
| Male | -0.19 | 0.10 | -0.64** | 0.22 | -0.32** | 0.11 | -0.30 | 0.18 |
| Subsidy | -0.53*** | 0.14 | -0.85*** | 0.21 | -0.29 | 0.15 | -0.81*** | 0.24 |
| Non-white | -0.11 | 0.14 | -0.46* | 0.20 | -0.48** | 0.15 | -0.30 | 0.23 |
| ECERS x Male | 0.21 | 0.11 | 0.52* | 0.24 | 0.13 | 0.13 | 0.20 | 0.18 |
| ECERS Main Effect – Male | | | 0.65** | 0.18 | | | | |
| ECERS Main Effect – Female | | | 0.13 | 0.16 | | | | |
| ECERS x Subsidy | 0.03 | 0.13 | -0.27 | 0.23 | 0.18 | 0.15 | -0.17 | 0.20 |
| ECERS x Non-white | -0.16 | 0.13 | 0.15 | 0.22 | -0.03 | 0.15 | -0.29 | 0.22 |

Notes: * = $p < 0.05$; ** = $p < 0.01$; *** = $p < 0.001$.

Foundations

(b)(6)

**Early Learning Standards for North Carolina Preschoolers
and Strategies for Guiding Their Success**



Foundations

Early Learning Standards for North Carolina
Preschoolers and Strategies for Guiding
Their Success

Project Management

The Early Childhood Section and
Exceptional Children's Preschool Program
N.C. Department of Public Instruction

Editor

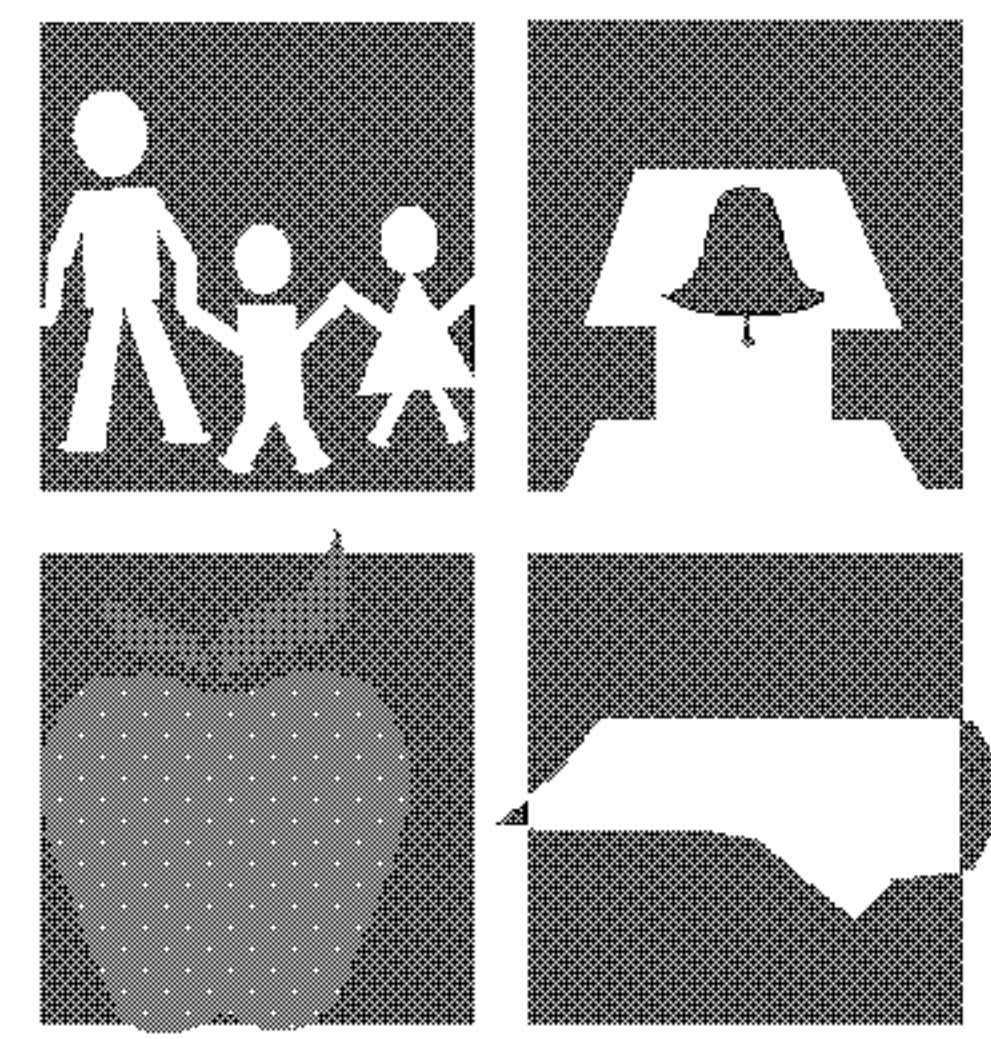
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Dear Early Childhood Professionals,

While early childhood has long been an exciting and dynamic field, only in recent years has it begun to receive the attention it deserves. The body of knowledge describing how young children learn has grown rapidly, along with an understanding of the benefits of high-quality early childhood programs. With this increased attention, teachers of young children are expected to know and to do more than ever before.

With all of this in mind, the Department of Public Instruction invited representatives from a variety of early childhood professions to participate in the development of North Carolina's first Early Learning Standards. After many months of thoughtful collaboration, the task force now proudly presents the fruit of its work: *Foundations: Early Learning Standards for North Carolina Preschoolers and Strategies for Guiding Their Success*.

The task force worked diligently to create standards that would provide a common vision for North Carolina's early childhood programs and reflect the diversity of the children we serve. It is our hope that this publication will strengthen the relationships among these programs and improve the care and education of North Carolina's preschoolers.

Foundations is dedicated to everyone who serves North Carolina's preschoolers. Through your work, you are building a foundation for the future. Let's do all in our power to ensure that it is a bright one!

Sincerely,

Patricia N. Willoughby

Acknowledgments

This publication was made possible through the collaboration of a great number of professionals involved in early childhood education in North Carolina.

For their leadership and ongoing efforts on behalf of this project, a special acknowledgment to Lucy Roberts, Cindy Bagwell, Eva Phillips, Kathy Baars, Don Carter, and Amy Smith of the Department of Public Instruction's Early Childhood Section in the Instructional Services Division and the Special Programs Section in the Exceptional Children's Division.

For their assistance with photography featured in this publication, we thank the children and teachers of Alexander Wilson Elementary School and the Alamance-Burlington School System, and also the Cabarrus County Schools Preschool Program.

Grateful thanks as well to the members of the Early Learning Standards Task Force, listed here, for the invaluable contribution of their knowledge, expertise, and support.

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About this publication

The North Carolina Department of Public Instruction convened an esteemed committee of early childhood educators and parents from across the state to work on this document. During their many months of work, members of the group studied research, looked at other state standards, and considered policy statements from national organizations to develop the initial draft of the Widely Held Expectations.

To ensure consistency, they examined the North Carolina Kindergarten Standard Course of Study and various curricula that are widely used in North Carolina. Additionally, they reviewed all appropriate research literature to make sure the expectations were inclusive of children from a variety of circumstances and with differing levels of ability.

The committee then invited feedback on the Widely Held Expectations in a variety of ways. Comments from the public were gathered during a series of eight focus groups held across the state. Participants included members of the SUCCESS Network and educators from public schools, Head Start, More at Four, Smart Start, private child-care programs, and colleges and universities.

The document was also posted on the Department of Public Instruction website. Expert reviewers within North Carolina and across the country were asked to provide their thoughts and guidance. The committee thanks the many friends of early education who so generously aided in the development of this book.

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Introduction

Children's experiences and the skills and characteristics they develop during the preschool years are critically important to their success later in school. What children learn between birth and the time they start kindergarten lays the foundation for their learning and development for years to come.¹

The National Research Council recently released a comprehensive review of child development and early education. In it, national experts concluded that we previously underestimated children's cognitive abilities and the concepts they can understand if they are exposed to age-appropriate and stimulating learning opportunities.²

For children to reach their full potential during these early years, adults around them must provide an environment and experiences that promote growth and learning. *Foundations* is designed to help early educators, parents, and others do just that by describing the particular skills and abilities that are important for children's success and providing ideas for fostering their development.

North Carolina has had a long and significant commitment to providing quality early education and intervention services for our youngest citizens. This is evident in Smart Start, More at Four, and numerous other early childhood initiatives. Public schools have also made a significant commitment to providing early care and education services. More than 40,000 preschool-age children were served in public schools in 2003-04. The Preschool Disabilities Program has been mandated in all public schools since 1987. Title I

preschool programs, Even Start, Head Start, and Developmental Day Programs are other examples of the many ways our public schools are helping prepare children for success in school.

With this investment in early care and education has come an increasing need to examine important dimensions of school readiness. In June 2000, the North Carolina Ready for School Goal Team defined it in terms of the characteristics of children and schools that facilitate school readiness. Adopted by the State Board of Education and endorsed by the North Carolina Partnership for Children, this definition laid the foundation for the state's efforts to promote children's readiness for school and schools' readiness to receive them.³

The Department of Public Instruction (DPI) has led several additional efforts to support quality early education. *The North Carolina Guide for the Early Years* outlines recommended practices. The Emergent Literacy Projects are designed to improve literacy experiences in early childhood classrooms. The Memorandum of Understanding, signed in May 2000 by DPI and the Department of Health and Human Services, outlines key elements in promoting safe and healthy environments in all early care and education settings. *Learning Through the Eyes of a Child*, a best teaching practices guide published in 2002, specifies how classroom environments can promote children's learning.

North Carolina has worked hard to improve the quality of early care and education programs, both within public schools and in other settings. And while these efforts are important, one area has not been addressed until now: articulation of the specific skills and characteristics of preschool children.

¹ See Bibliography, *Early Intervention*

² National Research Council, *Eager to Learn: Educating our Preschoolers* (Washington, D.C.: National Academy Press, 2001).

³ C. Scott-Little and K. Maxwell, *School Readiness in North Carolina: Strategies for Defining, Measuring, and Promoting Success for All Children* (Greensboro, N.C.: UNCG Regional Educational Laboratory at SERVE, 2000).

Guiding Principles

Early educators across the state often asked, “What should I be helping children to learn before they start kindergarten?” While the *North Carolina Kindergarten Standard Course of Study* describes expectations for children’s growth and learning during kindergarten, early educators had no resource to help them set priorities for their preschool programs. This document gives them that tool.

This book is a companion to our earlier publications that describe quality early childhood programming. Its purpose is to help educators plan their curriculum. It is not a mandate or a litmus test for whether children are “ready” for kindergarten. Instead, think of the Widely Held Expectations as a lens through which to view the curriculum, the learning environment, and the everyday activities children experience.

The Widely Held Expectations that make up the central focus of this publication were created to provide a common set of age-appropriate developmental standards for children three, four, and five years old who are not yet age-eligible for kindergarten. They were written to include all children in preschool environments, taking into account their individual differences and uniqueness.

Ensuring that children are ready for school does not happen automatically. It is the responsibility of the adults in their lives to provide the environment and experiences needed to develop the characteristics described in the Widely Held Expectations. Building on the quality programming that already exists in our state, the hope is that this new publication will serve as a common vision for early childhood programs, as well as a resource for educators, parents, and others who care deeply about our state’s young children.

After carefully studying child development theory and research⁴ in the course of developing the Widely Held Expectations and teaching strategies in this book, the committee developed these guiding principles regarding how children learn and grow. They serve as an excellent guide for using this document.

Each child is unique.

How a child develops results from a combination of factors, such as the characteristics they are born with, the culture they live in, and their experiences within their family and in other settings such as preschool. Even though the Widely Held Expectations describe “standards” for what children should be learning during preschool, the way each child’s development unfolds will vary greatly.

Development occurs in predictable patterns.

Even though each child is unique, development typically unfolds in progressive and predictable steps or stages. What varies tremendously from one child to another is when and how children achieve various developmental milestones. These differences are associated with individual temperament, learning characteristics, gender, race, ethnicity, socio-economic status, family culture, and genetic make-up. Children with disabilities may exhibit even greater variation in the achievement of developmental milestones. The Widely Held Expectations are based on our best knowledge of how children develop, with the understanding that these are broad descriptions and that children will vary.

⁴ See Bibliography, *Child Development*

Preschool-age children are active learners.

Children need hands-on learning experiences to develop the skills and knowledge described in the Widely Held Expectations. They learn by doing, and they need time to practice what they are learning, to ask questions, to investigate, and to use what they are learning in their everyday activities.

Many factors influence a child's development.

Children's growth and learning are greatly impacted by their physical environment, relationships with family members and others, and the community and culture in which they live. These factors are different for all children and will shape their view of the world and how they develop.

Children with disabilities learn best in inclusive settings.

Children with disabilities will make progress on the skills and characteristics described in the Widely Held Expectations, although with great variation in how. They will make the most progress developmentally, socially, and academically when appropriate special education services are provided in inclusive settings. Just as the Widely Held Expectations are inclusive of all young learners, so should early childhood programs be. Children with and without disabilities learn from one another in natural environments. A curriculum and classroom tailored to meet the needs of individual children meet the needs of all.⁵

⁵ See Bibliography, *Diversity and Inclusion*

Using the Widely Held Expectations

They Should Be Used To ...

- Promote development of the whole child, including physical, emotional-social, language, cognitive development, and learning characteristics
- Provide a common set of expectations for preschool children's development and, at the same time, validate the individual differences that should be expected in children
- Promote shared responsibility for children's early care and education
- Emphasize the importance of play as an instructional strategy that promotes learning in early childhood programs
- Support safe, clean, caring, and effective learning environments for young children
- Support appropriate teaching practices and provide a guide for gauging children's progress
- Encourage and value family and community involvement in promoting children's success
- Reflect and value the diversity that exists among children and families served in early care and education programs across the state

They Should NOT Be Used To ...

- Stand in isolation from what we know and believe about children's development and about quality early education programs
- Serve as an assessment checklist or evaluation tool to make high-stakes decisions about children's program placement or entry into kindergarten
- Limit a child's experiences in preschool or exclude children for any reason
- Set up conflicting expectations and requirements for programs
- Single out or blame anyone – children, educators, parents, or programs – for what may or may not have occurred during a child's preschool years
- Decide that any child has "failed" in any way
- Emphasize child outcomes over program requirements

Diversity in Languages and Cultures

The Widely Held Expectations are a foundation for the instruction of all preschool-age children in North Carolina. Our state is comprised of people representing a wide array of ethnic and cultural backgrounds, and the number of families – and preschool children – who do not speak English as their primary language is growing. This diversity is something to celebrate because families from different backgrounds bring a wealth of strengths, knowledge, and values to the preschool classroom.

In the development of this book, the committee carefully considered the types of support that could most benefit young English language learners. Classrooms that include children from diverse cultures and with different home languages should be guided by these six principles.⁶

- Having children from families with diverse cultural and language backgrounds is a valuable asset to preschool programs.
- Children’s learning is affected by their language and cultural background.
- Preschool classrooms should strive to promote understanding and respect for different cultures and languages.

- Children whose home language is not English learn best when early educators encourage them to continue to speak their home language while learning English.
- Families who speak a language other than English should be encouraged to continue to speak to their child in their native language, even while the child is learning English.
- As children learn English, they go through predictable stages, much like a baby learning to talk. Educators should expect wide variation in how they make progress on learning English and on the skills and characteristics described in the Widely Held Expectations.

It Takes Everyone Working Together

Early educators play a significant role in supporting children’s growth and development, and so do families, program administrators, policymakers, and community members. The involvement of parents, principals, directors, funders, and others interested in the welfare of young children is essential to support children’s development.

The Role of Families

Families are the first and most consistent teachers children experience in their lives. Early educators can use the Widely Held Expectations as a common starting point for working with families – to help them understand and support age-appropriate goals for their children that can be shared between home and school. Children will make the most progress when early educators and families work together. Therefore, each of the developmental domains in this book includes strategies specifically written for parents.

⁶ See Bibliography, *Diversity and Inclusion*

The Contribution of Administrators

Principals and program directors are the instructional leaders of their schools and early childhood programs. They influence the resources available for early childhood education and the attitudes and practices of the persons working directly with children. In their positions, these leaders can have great impact on the implementation and success of the Widely Held Expectations – primarily by clearly communicating their commitment to them and to early education programs; by ensuring that these expectations are understood by teachers and used consistently and appropriately; and by providing professional development relevant to early educators. Children who participate in quality preschool programs have less need for specialized interventions and are less likely to be retained in later grades.⁷ Therefore, making early preschool services a high priority makes sense.

The Support of Policymakers and the Community

Policymakers and community leaders can fill a vital role in supporting the development of young children by taking the lead in educating the public about high-quality early education and promoting the use of the Widely Held Expectations. This could take the form of soliciting input on early childhood policies and programs, advocating for funding, and promoting collaboration and cooperation among agencies and organizations that serve young children and their families.

⁷ See Bibliography, *Early Intervention*

Commonly Asked Questions

What ages are included in the Widely Held Expectations?

They apply to all children in North Carolina who are three, four, and five years old and are not yet age-eligible to enter kindergarten. Included are children with and without disabilities, children who speak English and those who are learning English, and children participating in any type of early care and education program. Throughout this book, we refer to these children as “preschool-age.”

Who will use the material in this book?

Educators in Title I, Head Start, Even Start, More at Four, Exceptional Children, and Developmental Day classrooms within public schools should use it as a guide for their planning. Copies will also be available to educators in all other early childhood programs across the state, regardless of their location or setting, in the hope that they, too, will find it a helpful resource for planning.

How is this different from standards we already have?

This document outlines expectations for children’s growth and development, rather than defining how programs should operate. While program standards establish expectations for program features such as adult:child ratio or group size, here the focus is on what we want children to learn or develop. These expectations are known as “early learning standards,” and they define the areas of child growth and development that should be the focus of daily activities.

Is this a curriculum for preschool programs?

No, it is not. The Widely Held Expectations and suggested teaching strategies are intended to provide a lens for looking at curricula and daily activities to see if they address important areas of child development. The expectations define what children should have the opportunity to learn.

| N.C. Standard Course of Study for Kindergarten | N.C. Early Learning Standards for Preschool | | | | |
|--|---|----------------------------------|---------------------------------|--|-----------------------|
| | Approaches to Learning | Emotional and Social Development | Health and Physical Development | Language Development and Communication | Cognitive Development |
| Arts Education | ★ | ★ | ★ | ★ | ★ |
| Computer/Tech. Skills | | ★ | | ★ | ★ |
| English Language Arts | | | | ★ | ★ |
| English Language Dev. | | ★ | ★ | ★ | ★ |
| Guidance | ★ | ★ | | | ★ |
| Healthful Living | | ★ | ★ | | |
| Information Skills | ★ | ★ | | ★ | ★ |
| Mathematics | ★ | | | ★ | ★ |
| Second Languages | | ★ | | ★ | ★ |
| Science | ★ | | ★ | ★ | ★ |
| Social Studies | ★ | ★ | | ★ | ★ |

The curriculum and daily activities are how we go about helping them learn in areas described in the Widely Held Expectations. Any number of curricula or types of activities can be used to help children gain the knowledge, skills, and characteristics outlined in these pages.

Is this an assessment tool?

The Widely Held Expectations are neither an assessment tool nor a checklist. They represent the combined thinking of many early childhood educators, researchers, parents, and community members about what children might reasonably be expected to know and be able to do during the preschool years.

Once again, they represent what we want children to progress toward. Early educators will use the expectations to plan their curricula and use assessments to gather information about how children are progressing in relation to the expectations. Assessments can shed light on areas in which individual children

need additional support, which in turn helps the educator plan appropriate activities or experiences.

What research base forms the foundation for the Widely Held Expectations?

They are based on what we know about children’s growth and development from theory and research. The work of James Hymes and theorists such as Piaget, Vygotsky, Erickson, Gardner, Bandura, and Gurian have provided the field of early education with an extraordinary understanding of how young children develop and learn.⁸

Dr. T. Berry Brazelton’s view of child development as a sequence of social and emotional “touchpoints”⁹ and the book *From Neurons to Neighborhoods*¹⁰ were particularly important in shaping our view of the importance of emotional-social development. Dr. Urie Bronfenbrenner’s ecological theory was the basis for the emphasis on children’s development being impacted by numerous

⁸ See Bibliography, *Child Development*

⁹ T.B. Brazelton and J.D. Sparrow, *Touchpoints: 3 to 6* (Cambridge, MA: Perseus, 2001).

¹⁰ National Research Council and Institute of Medicine, *From Neurons to Neighborhoods: The Science of Early Childhood Development* (Washington, D.C.: National Academy Press, 2000).

systems, including the classroom, the family, the community, and early childhood policies.¹¹

Why are they organized around domains of development?

The five domains identified in this book are included in North Carolina’s official definition of school readiness, developed by the Ready for School Goal Team. It is well established that children’s development is integrated, or holistic, with progress in one domain influencing development in all of the others. Every child, including those with disabilities, will demonstrate varying degrees of strengths in developmental domains. All five domains are equally important in children’s development and for children’s success later in school.

How can this material be used to help families of preschoolers?

A question parents often ask is “What should my child be learning?” Early educators can and should use the Widely Held Expectations as a tool to talk with families about what to expect as their children grow and develop and for helping families understand goals for each child. Each domain in this book features simple and effective family strategies that can be shared.

How does the classroom environment support the Widely Held Expectations?

The importance of providing age-appropriate and stimulating environments for children cannot be over-emphasized.¹² Classrooms should be nurturing, comfortable places, rich in materials and experiences that facilitate learning. Though beyond the scope of this book, the North Carolina Public Schools publications *Guide for the Early Years* and *Learning Through the Eyes of a Child* are good resources for creating an ideal learning environment that promotes children’s learning and development.

How do these Widely Held Expectations relate to what’s expected of children in kindergarten?

The expectations for preschool lay the foundation for what children will be able to learn and do in the next phase of their education. They are aligned with the *North Carolina Kindergarten Standard Course of Study* (as the chart below illustrates) and include abilities and characteristics that pave the way for children to be successful in school and later in life. When adults provide experiences that foster children’s development in the areas described in the Widely Held Expectations, they are helping children develop skills and characteristics that will be important in kindergarten and later grades.

¹¹ U. Bronfenbrenner, *The Ecology of Human Development: Experiments by Design* (Cambridge, MA: Harvard University Press, 1979).

¹² See Bibliography, *Learning Environments*

Active Learning: A day in the life of a preschool class

Children of preschool age are learning to learn – and they are capable of learning a great deal in an environment that helps them make meaningful connections across all the domains of development. As this story illustrates, growth in language and cognitive skills – not to mention the imprinting of a positive attitude toward learning – occurs quite naturally in the context of social, emotional, and physical growth. This is the story of teachers who know how to put it all together.

Sunlight streams into the windows of the preschool classroom as the children begin arriving on a Monday morning. Ms. Rodriguez, the teacher, greets each of them with a warm smile and asks how they spent their weekend. The children hang up their coats and move confidently into the room, and soon it is filled with a pleasant hum of activity.

Ernie, Jose, and Kortnie return to the block center to finish building the airport they started on Friday. Ernie leads the process with valuable information about the recent airplane trip he took with his family. In the dramatic play area, Maria, Tysheem, and Francesca have set the table and are using the new tortilla press to prepare a make-believe taco lunch for their dolls. Donte and Quincy are curled up in the large overstuffed armchair, “reading” a class photo album that documents their recent field trip to the local farmers’ market.

Marcus and Sam don smocks to get ready to paint a picture. Marcus has limited fine-motor skills, so Sam helps him put on a specially designed Velcro mitt that will allow him to successfully manipulate his paintbrush. Ling and Cassie are helping Mr. Smith, the assistant teacher, take care of the class gerbils – putting fresh cedar chips in the cage, filling the water bottle and food dish. When the girls notice that the food container is nearly empty, they rush to the writing center and create a note. It consists of several scribbled lines, which they say is a reminder for Mr. Smith to buy more gerbil food. They each print their initials at the bottom to sign the note.

A few children are working on puzzles and building Lego constructions at tables. Others have noticed the balls of soft clay arranged on a table in the art center, inviting them to roll, pinch, pound, and squeeze.

When someone mentions “wiggly,” the teacher suggests they demonstrate what that means. Some of the children flop on the floor and inch across the carpet; others bend their index fingers and inch them across their arms.

Ms. Rodriguez and Mr. Smith seem to be everywhere in the room, yet they never appear rushed. Ms. Rodriguez sits nearby and watches the block construction for a while, then casually asks a few questions that inspire the children to add a control tower to their airport so the planes won’t “bump into each other.” She comments on the tortillas the children are pretending to make and encourages them to ask Jose what his mother fixes with tortillas at home.

The teacher orders two pretend tacos “to go” and heads on over to the sand table. When the children at the sand table mention they are sifting “flour” for their cakes, she supports their idea, reminding them where the mixing bowls, measuring cups, and spoons are stored on nearby shelves.

Mr. Smith sits with Jeffrey and Salah as they struggle with fitting a puzzle piece into the right spot. Encouraging them not to give up, he models

how to turn a puzzle piece around to make it fit. All of the children constantly hear words of encouragement and praise as they work hard in the centers.

A Surprise Arrival

Just as the morning seems well underway, Katie rolls into the room in her wheelchair and calls out, “Come see what I found in my yard!” She’s holding a jar with holes poked in the lid. Inside, a fuzzy, black and brown striped caterpillar is munching leaves. Everyone gathers round. “It’s a woolly worm,” she informs them.

Ms. Rodriguez places the jar on the science table, with a *Field Guide to Moths and Butterflies* next to it. She tells the children, “Let’s talk some more about this at circle time. I’ll put out the magnifying glasses for those who want to get a better look.”

A little later, she notices several children leafing through the book and counting the little caterpillar’s stripes. Shonda brings over a clipboard and pen and begins to draw it; Marcus and Sam ask Mr. Smith to help them mix paints that match its colors. Katie finds a piece of furry fabric in the dramatic play area. She holds it for Randy, who has limited vision, to stroke. When she tells him it feels just like her caterpillar, he grins.

At group time, the teacher invites Katie to tell them more about her caterpillar, and she shares an interesting bit of information just learned from her grandfather. “My grandpa says you can tell what kind of winter weather we are going to have by the color of the woolly worm’s stripes.” The children who made drawings and paintings of the little creature describe the details they included. As they talk, Ms. Rodriguez makes a list of their observations in English and Spanish: brown (“marron”), black (“negro”), and furry (“peludo”).

When someone mentions “wiggly,” the teacher suggests they demonstrate what that means. Some of the children flop on the floor and inch across the carpet; others bend their index fingers and inch them across their arms. Cayley breaks into song. “The itsy-bitsy woolly worm went up the water spout...” and they all join in, giggling.

The teacher then asks what more they would like to know about woolly worms, and she gets a chorus of questions: “What do they like to eat? Do they need water? Do they need a house to sleep in? Does this one feel lonely with no mom or dad or friends around? What should we name her?”

Ms. Rodriguez lists them all on a chart and as the children get ready to go outdoors, she asks them to think about how they can find the answers.

After the children go home for the day, Ms. Rodriguez and Mr. Smith talk over what had happened that morning and they begin planning ways to build on the children's interest. Mr. Smith prints out an enlarged digital photograph of the woolly worm and displays it on a board in the art area alongside the children's drawings and paintings. Ms. Rodriguez types the children's comments and prints them out in large type to accompany the pictures.

Remembering Katie's observation about the furry fabric, they look through the classroom's collection of recycled material for scraps that might inspire tactile creations. On his way home, Mr. Smith stops at the library to borrow more reference books. Meanwhile, Ms. Rodriguez telephones Katie's grandfather to invite him to the classroom the next day.

Francesca, a quiet child who has not said much all year, arrives the next morning with two additional caterpillars in a jar. She whispers to Mr. Smith that she was worried about Katie's caterpillar being lonely. Several other children bring leaves and twigs collected from their yards, and soon a small group is hard at work assembling a comfortable home for the caterpillar family.

Katie's grandfather, suitably attired in his farmer's overalls, joins the group for circle time and regales them with tales he heard from his own grandfather. The children ask a lot of questions about "the olden days," and again Ms. Rodriguez records them on a chart to be revisited another day. She reminds the children that Mr. Smith will be in the writing center today to help them if they want to send thank-you notes to Katie's grandpa or to the families who helped provide the caterpillars and supplies for their habitat.

Teachable Moments

The two teachers have worked as a team to design a classroom appropriate for the young children who come here each weekday. It is an environment that is nurturing, inviting, and stimulating; one in which children feel welcome and important. The room is arranged so that the children know what to do, where to find the things they need, and how to interact with each other throughout the day.

Activities are planned based on the interests and needs of the children. Learning is fun, engaging, and meaningful, and the curriculum and daily plans are flexible enough to embrace those "teachable moments."

Ms. Rodriguez uses experiences the children have outside the classroom to teach concepts and skills that are necessary for success in school. Her strategy is in alignment with the National Association for the Education of Young Children, which noted in 1997: "If learning is relevant for children they are more likely to persist with a task and to be motivated to learn more." She also recognizes that children need to be active learners. As a result, they are encouraged to move more than sit still, and to talk and ask questions. They are actively engaged in the learning process and are encouraged to make meaningful choices. They have enough uninterrupted time to become involved, investigate, select, and persist at activities – and to work at their own pace.

Both of these teachers are intentional in their interactions with the children. They ask questions to stimulate thinking and learning in each child, and they provide numerous opportunities to develop social skills such as cooperating, helping, negotiating, and talking.

The children use writing for meaningful purposes and "read" books that are relevant to their lives. They are encouraged to express themselves through art and music. They use their knowledge of numbers as they interact with each other and their environment.

In this preschool environment, concepts and skills are integrated throughout the five domains: Approaches to Learning, Emotional and Social Development, Health and Physical Development, Cognitive Development, and Language Development and Communication. The children are actively and happily developing their own approaches to learning, self-concepts, motor skills, and cognitive and language abilities with the guidance and support of two caring and competent adults.

Approaches to Learning

- Pondering, Processing, and Applying Experiences
- Curiosity, Information-Seeking, and Eagerness
- Risk-Taking, Problem-Solving, and Flexibility
- Persistence, Attentiveness, and Responsibility
- Imagination, Creativity, and Invention
- Aesthetic Sensibility

If I can ask my own questions, try out my ideas, experience what's around me, share what I find;

If I have plenty of time for my special pace, a nourishing space, things to transform;

If you'll be my patient friend, trusted guide, fellow investigator, partner in learning;

Then I will explore the world, discover my voice, and tell you what I know in a hundred languages.

Pamela Houk

The Approaches to Learning domain includes children's attitudes toward, and interest in, learning. These are manifested in all domains and curriculum areas, including music, dramatic play, and art.

Children of preschool age are beginning to be curious and confident in their ability to learn and enjoy exploration and discovery through play. They enjoy learning and demonstrate some personal areas of interest as well as strategies for finding out more about those interests. They typically are starting to express creativity and imagination through a variety of avenues, and they take initiative when appropriate and show pride in their accomplishments. Moreover, they are demonstrating an increased ability to attend to and persist with tasks even after encountering obstacles.

Approaches to learning permeate every aspect of a child's educational experience. These characteristics and dispositions are the foundation of all future learning and are manifested differently from child to child. It is the responsibility of each teacher to nurture the uniqueness of every child.

Engagement: A Lesson from Life

The diamond ring on Ms. Johnson's finger fascinated her class and sparked a long conversation about weddings. Thinking about it later, the teacher realized the children had a wealth of information about weddings to share with one another, and she asked whether they would like to have a "wedding" at school. Soon committees were busy drawing ideas for outfits and cakes, composing invitations, collecting recordings of wedding music, and practicing a special march: "step, stop; step, stop." Preparing a multi-layered cake took many days. Meanwhile, children planned the transformation of their classroom, pacing off the length of a construction-paper carpet. The "brides" and "grooms" arrived for the big day attired in their favorite fancy or fanciful outfits. Some wore princess dresses. One child wore a tinfoil "robot" costume his grandmother helped him make. Family members enjoyed the gala from tiny chairs arranged in rows, and everyone celebrated afterward with cake, juice, and dancing.

Pondering, Processing, and Applying Experiences

This aspect includes forming ideas, reflecting on past events, posing theories about the future, and acting on knowledge of the real world.

Widely Held Expectations

Children begin to:

- Draw on everyday experiences and apply that knowledge to other situations.
- Seek information for further understanding.
- Generate ideas and suggestions and make predictions.
- Describe or act out a memory of a situation or action.
- Form hypotheses about cause and effect.

Strategies for Early Educators

- Allow ample amounts of time for activities involving individual choice and shorter periods for large-group activities.
- Provide time for sharing experiences that involve more than one child or adult.
- Give children time to plan what they are going to do that day and provide time later for them to think and talk about what they did.
- Provide children with the means to represent their ideas in more than one medium (e.g., painting, drawing, blocks).
- Furnish materials that will facilitate the re-creation of memories or experiences that a child can share.
- Supply materials that encourage a spirit of inquiry.
- Encourage children to ask questions of one another and share/compare ideas.
- Listen and respond to exchanges of children's words and thoughts (e.g., open up a discussion of what happened in a class meeting).
- Set an example by thinking out loud.
- Discuss the sequencing and timing of experiences.
- Promote decision-making.

Strategies for Families

- Create time at home every day to talk with your children. Use meal times to talk about your day and ask about theirs. Talk about what you did yesterday and what you will do tomorrow.
- Pay attention as your child talks about her experiences and ask follow-up questions that will encourage her to think and reflect, such as "How did you feel about

that?" or "Why do you think that happened?" or "What else might happen?"

- Talk about the books, videos, and television programs your family enjoys.
- Provide time for unscheduled activities that allow your child to explore the world on his own and to generate ideas.

Curiosity, Information-Seeking, and Eagerness

This aspect includes expressing interest in the world, asking questions to find answers, and experimenting with materials.

Widely Held Expectations

Children begin to:

- Use multiple strategies and all available senses to explore the environment.
- Choose to participate in an increasing variety of experiences.
- Demonstrate an eagerness and interest in learning through verbal and nonverbal means while playing, listening, questioning, and interacting.

Strategies for Early Educators

- Offer choices.
- Make materials available that can be used or combined in a variety of ways.
- Provide items for use in dramatic play that authentically reflect life (e.g., a real firefighter's hat, a real doctor's stethoscope, or an authentic kimono).
- Stock the classroom with materials that appeal to both genders and a full range of learning characteristics, cultures, and ability levels of children. Schedule large uninterrupted blocks of time every day for children to use these materials.
- Listen to children and build on their individual ideas and concepts.
- Set an example by sharing children's excitement in discovery and exploration on their level (e.g., digging through snow in winter to see if the grass is still there; looking for flower buds in spring and yellowing leaves in fall).
- Use open-ended and leading questions to explore different interests or to elicit suggestions (e.g., "How can you make the car go faster?" or "How does the water make the wheel turn at the water table?").

Strategies for Families

- Allow your child to play with pots and pans, cups, mixing spoons, and plastic containers.
- Provide supervised experiences with everyday items that can be manipulated (such as nuts and bolts) or taken apart (such as an old electric mixer with the cord removed).
- Let children help with household chores such as cooking, folding laundry, and washing dishes and talk about what you are doing.
- Plan family outings to interesting places, such as parks, museums, national monuments, and science centers.
- Include your child in daily errands, such as trips to the grocery store, bank, or post office.
- Spend time outside exploring nature.
- Make time to join your child in playful activities.
- Share your cultural traditions.
- Ask questions and encourage children to do likewise.

Risk-Taking, Problem-Solving, and Flexibility

This aspect includes independent thinking, recognizing problems and trying to solve them in a variety of ways, and a willingness to try new things and collaborate with others.

Widely Held Expectations

Children begin to:

- Demonstrate a willingness to choose a variety of both familiar and new experiences.
- Demonstrate the ability to tell the difference between appropriate and inappropriate (or dangerous) risk-taking.
- Attempt a variety of strategies to solve problems.
- Demonstrate resilience in the face of challenges.

Strategies for Families

- Recognize “mistakes” as opportunities to learn. (For example: If a teddy bear is left out in the rain, ask “How can we fix it?” or “What can we do so this won’t happen again?” Express confidence that your child will make a better choice the next time.)
- Take your own mistakes in stride.
- Let children know that their thinking is valued as much as – or even more than – getting the “right” answer. Encourage them to share their thinking with you.

Strategies for Early Educators

- Set up clearly defined interest areas where children can work with a variety of interesting building materials and other items, focus on what they are doing, and have their work protected from accidental destruction by others.
- Furnish an abundant supply of thought-provoking, complex materials that can be used in more than one way (e.g., blocks or clay) and are not limited to a single “right” answer.
- Provide challenging, high-quality tools and equipment.
- Establish a predictable, yet flexible, routine.
- Show genuine care, affection, and kindness toward children (e.g., validate their disappointment when a block structure falls down; encourage them to figure out what happened and rebuild).
- Recognize that “mistakes” are inevitable and treat them as opportunities to learn.
- Set an example by acknowledging one’s own “mistakes” and modeling constructive reactions to them.
- Help children think and talk through different approaches to problems (e.g., when their favorite game isn’t available, encourage them to consider another choice).
- Encourage children to share, listen, and ask questions of one another and compare strategies and solutions.
- Promote collaboration to achieve common goals.
- Model flexibility.

Persistence, Attentiveness, and Responsibility

This aspect refers to the ability to sustain attention, pursue difficult tasks, cope successfully with trying situations, and take responsibility for one’s own learning.

Widely Held Expectations

Children begin to:

- Demonstrate the ability to remain engaged in an experience.
- Work toward completion of a task despite distractions or interruptions.
- Seek and accept help or information when needed.
- Develop a sense of purpose and the ability to follow through.

Strategies for Early Educators

- Furnish the classroom with a variety of materials that allow children with diverse interests and abilities to experience success.
- Organize the space in a way that protects children who want to work meaningfully for extended periods of time.
- Provide resources that allow children to carry explorations to a deeper level of meaning and understanding.
- Be flexible in allowing children to use materials in a creative and integrated way.
- Establish procedures, routines, and rules to instill responsibility.
- Plan projects that are completed over the course of several days.
- Structure the day so transitions and distractions are minimized.
- Recognize and plan for children's differences and their diverse ways of learning.
- Watch for and acknowledge increasing complexity in a child's play (e.g., "Your tower of blocks became a fire station and now you've built a whole town").
- Allow children to share ownership of the classroom by participating in discussions related to classroom decisions and helping to establish rules and routines.
- Offer assistance only after determining a child's need and intent.
- Ask probing questions when children reach a state of confusion, to bring them to a greater understanding.
- Celebrate perseverance as well as the completed project (e.g., make comments like "You're the kind of person who doesn't give up").
- Provide real-life and purposeful experiences (e.g., "How many graham crackers will we need for your table at snack time?").
- Show that you value children's thinking processes by acknowledging their work and effort (e.g., "Look how long and hard you worked on this").
- Encourage children to listen carefully to what others in the class are saying and ask questions.

Strategies for Families

- Allow your child to play and learn skills at a pace that is comfortable and be supportive of his efforts. Build enough time into the morning schedule to allow him to dress himself, even though you could do it in less time.
- Organize toys, books, and puzzles so children can access them and not be distracted by clutter. Provide shelves, baskets, or other containers so they can sort their toys and put their space in order.

- Rotate toys so your child can make full use of them and not be overwhelmed.
- Give your child chores and break them down into manageable steps. Work together and offer choices. (For example, say "Which would you like to do first – pick up your blocks or pick up your clothes?").
- Involve children in planning family activities, such as vacations or trips to museums, festivals, parks, and the library.

Imagination, Creativity, and Invention

This aspect includes originality, playfulness, and having multiple interests.

Widely Held Expectations

Children begin to:

- Take on pretend roles in play and make-believe with objects.
- Approach tasks and experiences with increasing flexibility, imagination, and inventiveness.
- Use or combine materials/strategies in novel ways while exploring and solving problems.
- Think more openly and creatively by comparing and contrasting solution strategies.

Strategies for Early Educators

- Provide children with adequate time to fully explore materials.
- Set up well-organized, clearly defined interest areas abundantly stocked with thought-provoking materials.
- Provide open-ended materials that can be used in more than one way and are not limited to one "right" answer.
- Illustrate and model how different kinds of media and materials can be used together.
- Provide materials reflective of diverse cultures, abilities, and family structures.
- Introduce materials and explore a range of ways to use them.
- Invite children to think of other ways to use the materials.
- Provide experiences in which the goal is to try many different approaches rather than finding one "right" solution.
- Foster cooperative learning groups.
- Promote the integrated use of materials throughout activities and centers (e.g., say "Let's get some paper

from the writing center to make signs for the city you made in the block center”).

- Challenge children to consider alternative ideas and endings of stories.
- Help children accommodate and build on one another’s ideas to achieve common goals (e.g., suggest that individual block structures can be put together to make a much larger one).

Strategies for Families

- Enjoy reading a variety of books with your child.
- Allow children to solve problems in their own way.
- Show appreciation and enthusiasm for children’s efforts. Ask them to talk about what they did and what happened.
- Encourage pretend play. Put a blanket over the dining room table to make a “cave.”
- Engage children in making up games, jokes, songs, and stories.

Aesthetic Sensibility

This aspect includes appreciation and enjoyment of culture and beauty in its many forms, including music, art, humor, dance, drama, nature, and photography.

Widely Held Expectations

Children begin to:

- Appreciate and use humor.
- Demonstrate a sense of wonder and pleasure.
- Take delight in beauty.

Strategies for Early Educators

- Use soft surfaces, light colors, and comfortable furniture to create a warm, inviting classroom atmosphere.
- Provide materials children can manipulate, explore with their senses, and use in different ways.
- Display children’s artwork on a rotating basis, along with other items of beauty (e.g., wall hangings, tapestry, weavings, posters, stained glass, or arrangements of flowers and leaves).
- Acquaint children with the many different kinds of music and musical instruments.
- Provide occasions for children to move, dance, and pretend. Let them choose which costumes, materials, and artifacts to use.

- Invite professional artists, musicians, dancers, and craftspeople representing different cultures and languages to visit the classroom.
- Visit local museums, art exhibits, dance recitals, theater productions, poetry readings, concerts, or other arts venues.
- Borrow library prints of great artwork representing a variety of countries and ethnic groups, hang them at the eye level of the children, and have conversations about them.
- Put illustrated coffee-table books in the classroom’s book area.
- Set an example by demonstrating spontaneity, a sense of wonder, and excitement.
- Use reflective dialogue when talking with children about what they have experienced.
- Laugh with children and show that you enjoy sharing their sense of humor.
- Provide opportunities for sharing authentic cultural traditions.
- Invite parents to share their artistic and musical gifts with the class.

Strategies for Families

- Point out and share in your child’s wonder of nature, such as a cloud formation, ripples in a pond, or dew on a flower.
- Find time every day to have fun with your child.
- Discuss what you are seeing and enjoying during walks and drives, such as a beautiful building, flowers and trees in bloom, or sweet smells.
- Provide opportunities for your child to experience a variety of authentic cultural activities, such as attending an international festival.
- Share jokes, funny anecdotes, and riddles.
- Take your child to local museums, cultural exhibits, and musical events.
- Tell your children stories about your own childhood.

Emotional and Social Development

- Developing a Sense of Self
- Developing a Sense of Self with Others

“Peer relations contribute substantially to both social and cognitive development and to the effectiveness with which we function as adults. Indeed, the single best childhood predictor of adult adaptation is not school grades and not classroom behavior but, rather, the adequacy with which the child gets along with other children.”

Willard W. Hartup

The Emotional and Social Development domain involves children’s feelings about themselves and their relationships with others. Development in this domain is influenced by a child’s temperament, cultural expectations, and early experiences. Emotional support and secure relationships foster the child’s self-confidence and self-esteem. Particularly important in this domain are the skills children demonstrate while making friends, appreciating differences, solving conflicts, and functioning effectively in groups. These characteristics form the foundation for learning and the relationships that give meaning to life. Positive relationships are essential to a child’s emotional development and later academic success.

Preschool children are beginning to demonstrate the emotional well-being and social skills needed to interact well and to form and keep relationships with adults and peers. They are beginning to express their own feelings appropriately and seek help when needed.

Children of this age group are beginning to demonstrate some degree of independence and follow basic rules and routines. They work and play alone at times, as well as participate in group activities and work or play cooperatively with other children.

Identity: Exploring the Possibilities

Josh and Javita were working on a block construction, but every time they tried to place large blocks on top of smaller ones, the stack teetered and fell down. Josh finally pushed all the blocks off the table in frustration. Their teacher had been observing and went over to talk with them. “I’ve noticed that the blocks keep falling down, and I can tell this makes you angry,” she said thoughtfully. “I wonder why this keeps happening? Maybe there is a different block that can go on the bottom.” Javita chose the largest block and began stacking again; Josh joined in, and soon they had succeeded in building a tall tower. The teacher proceeded to help them make a “SAVE” sign to protect their work and then snapped a photo of them with their construction. Copies of the picture went into the children’s portfolios, documenting their growing ability to work together cooperatively and manage frustrations.

Developing a Sense of Self

Emotional and social development refers to children’s feelings about themselves and their relationships with others. These areas of development are influenced by maturation, temperament, cultural expectations, and experiences.

Widely Held Expectations

Children begin to:

- Show self-confidence as they develop abilities and potential.
- Demonstrate persistence with challenging activities, showing a can-do attitude.

- Demonstrate increasing self-direction and independence, especially with regard to self-help skills and separating from primary caregivers.
- Demonstrate increasing competence in regulating, recognizing, and expressing emotions verbally and nonverbally.
- Enjoy playing alone or near other children.
- Develop skills for coping with adversity and change.
- Express and manage anger appropriately.
- Develop an awareness of personal uniqueness, regarding themselves as having certain abilities, characteristics, preferences, and cultural identities.
- Recognize that they are members of different groups (e.g., family, preschool class, ethnic group).
- Use pretend play to express thoughts and feelings.

Strategies for Early Educators

- Help establish a sense of trust and security by developing warm and responsive relationships with every child. Greet each of them by name daily. Through smiles or friendly gestures, show you are pleased to see them.
- Respect individual temperaments and personal uniqueness and be aware of any personal circumstances in a child's life.
- Encourage children to express their feelings through appropriate words and actions.
- Communicate often with children, both individually and in small groups. Listen to what they are saying and show you value their opinions by acknowledging them and building on their ideas.
- Involve children in planning related to the classroom (e.g., ask for and use their ideas about visual displays, book selections, and activities).
- If possible, use children's home language in daily conversations with them.
- Help children identify themselves as unique individuals and as members of different groups (e.g., create and display family photo books; ask the children to describe something that is special about another child; put a full-length mirror in the classroom; use given names and pronounce them correctly).
- Design the classroom in a way that stimulates and challenges children and gives them choices that are appropriate for a range of ages, developmental stages, and abilities (e.g., freshen materials in activity centers to reflect emerging themes generated by children and children's interests).
- Support the growth of children's feelings of competence and self-confidence (e.g., use books and games they create; provide access to materials that encourage them to stretch their abilities; provide positive comments about their accomplishments).

- Allow children to experiment without fear of criticism or danger. Treat mishaps such as spilling, dropping, or knocking over objects as opportunities for positive learning.
- Make the classroom environment safe, pleasant, and joyful. Promote the use of humor and singing.
- Make room in the classroom for cozy, safe areas where children can be alone if they wish.
- Get to know children's families and value them as partners. Invite their participation and input through comment cards, home visits, and casual conversation – especially when things are going well.

Strategies for Families

- Provide your child with a dependable, warm, and loving relationship.
- Listen to your children and observe them. Know what they are interested in and build on that with activities you can share.
- Involve your child in planning activities such as meals, celebrations, and outings.
- Nurture a child's natural curiosity and encourage the trying of new things by sharing the world and celebrating it together.
- Help your child identify and understand the emotions she feels.
- Set a good example through the way you address intense feelings such as fear, anger, jealousy, sadness, and excitement and in the way you handle conflict.
- Help children see the natural consequences of their actions in a positive way – such as helping them put away their toys while explaining that this will make it easier to find them the next time.
- View all experiences, both positive and negative, as opportunities for further exploration and learning.
- Raise children's awareness of their cultural heritage and their pride in it.
- Understand what can realistically be expected of children in general and your child in particular.

Developing a Sense of Self with Others

Critical conditions of emotional and social development include emotional support and secure relationships that foster a child's self-confidence and self-esteem. A child who is securely attached to family and culture develops a healthy sense of identity.

Widely Held Expectations

Children begin to:

- Approach others easily with expectations of positive interactions.
- Seek out others when needing emotional support, physical assistance, social interaction, problem-solving, and approval.
- Develop awareness of personal behavior and its effect on others.
- Balance their own needs with those of others in the group.
- Work to resolve conflicts positively.
- Play and interact cooperatively with other children (e.g., taking turns, exchanging ideas).
- Show interest in and respond to other points of view.
- Respond to others' feelings, including showing empathy.
- Develop the ability to distinguish between unintentional and intentional actions.
- Show ease and comfort in their interactions with familiar children and adults.
- Form and maintain positive relationships, including friendships with children and adults.
- Recognize, respect, and accept similarities and differences among people, including people with disabilities and those from varying cultures.
- Follow social rules, transitions, and routines that have been explained to them.
- Recognize the classroom as a caring community in which members take care of property, respect the rights of others, and keep one another safe.

Strategies for Early Educators

- Create opportunities for children to interact with others who have varying characteristics and abilities, identifying and pointing out areas in which they share a common interest.
- Observe children in the classroom and facilitate their entry into social groups with their peers.
- Promote respect and appreciation for each child's culture and the cultures of others (e.g., develop a family photo wall and talk about each family, including people of various cultures, ages, and abilities).
- Invite families to visit the classroom and share their cultural experiences.
- Alert children to the feelings and emotional needs of others (e.g., display and talk about pictures depicting various emotions; point out how children feel in various real-life situations).
- Help children see the effect of their behavior on others by encouraging them to see things through other perspectives and share their ideas about solving

problems and social conflicts (e.g., facilitate the process of conflict resolution).

- Protect children's right to express emotions. Allow them to be sad or angry and validate those feelings by naming them and talking about them. Encourage them to ask for help when needed.
- Ask for children's ideas in establishing classroom rules and limits. Establish, model, and explain simple rules in terms they can understand.
- Be aware of social interactions among children and create opportunities to support friendships.
- Make the classroom the children's space, with displays of their creations, experiences, interests, and cultures.
- Create many inviting areas of the room where small groups of children can play.
- Model asking for and understanding the viewpoints and opinions of others.
- Promote an atmosphere of cooperation instead of competition (e.g., introduce activities that require two or three children to work together).
- Provide opportunities for children to be responsible members of the classroom community, respecting shared rights and property and helping others (e.g., assign individual cubbies for belongings; rotate responsibility for tending classroom plants).
- Maintain an ongoing flow of information between school and family, through home-school journals or cassette tapes, suggestion boxes, weekly newsletters, phone calls, or classroom visits.

Strategies for Families

- Encourage and reinforce caring behavior in your child by outwardly showing affection to members of your family.
- Share your feelings and emotions.
- Create opportunities for positive interactions and friendships in a variety of settings (such as participating in neighborhood potlucks or impromptu ball games).
- Encourage children to ask for assistance when needed, being aware of their emerging skills.
- Establish, explain, and model simple rules (a bedtime routine, for example) in terms your child can understand.
- Promote respect and appreciation for your own culture and for the cultures and abilities of others. Establish traditions such as sharing family stories and celebrating special events or occasions.

Health and Physical Development

- Self-Care
- Safety Awareness
- Motor Skills
- Physical Health and Growth

“Since researchers are becoming increasingly concerned about the low level of fitness in all children ... it is imperative that early childhood programs offer a regular movement program. I have found that young children are fascinated with their bodies. They enjoy activities that explore the use of muscles (including the heart) and the different ways we can make our bodies strong and healthy (e.g., stretching, jogging, climbing, skating, swimming, and dancing). Providing lots of opportunity for locomotor activity on a regular basis contributes to children’s fitness level.”

Gisela Loeffler

The domain of Health and Physical Development encompasses opportunities for children to begin developing and refining motor skills, self-care, physical health and growth, and safety awareness. These opportunities are provided in safe and accessible environments that respect cultural and individual differences.

During the preschool years, children begin to practice new motor skills such as balance, coordination, strength, and the ability to grasp writing tools. They also begin demonstrating self-help skills such as dressing themselves.

Children 3 to 5 years old need to be able to see and hear well; vision and hearing problems must be corrected to the greatest extent possible and adaptations made as needed. Likewise, children should have healthy teeth or have their dental problems treated. They need to have immunizations on schedule to prevent diseases, and they need to be assured that any health problems are detected and treated as early as possible. Children also need proper nutrition and rest, in order to have the energy and mobility to explore their environment and increase their ability to concentrate. In addition, early identification and intervention are critical for children with disabilities.

Well-Being: Getting in the Game

The children were enjoying their daily outdoor play period. Jordan and Sarah put on helmets and headed for the tricycles in the bike area. Latasha, Ashley, and Devon worked on puzzles at the picnic table. Patrick and Melia painted on the sidewalk with water. In the designated open area, a small group of children and a parent volunteer bounced a large playground ball. Molly, a child with a visual impairment, sat alone nearby, and her teacher joined her. While they were talking, the ball bounced over to them. “Your mom tells me you really like to play ball at home,” the teacher said. “Would you like to play today?” She flicked a switch on the ball that made it beep. Molly replied with a smile, “Yeah, I do want to play!” Taking hold of the girl’s hand, the teacher stood up and said, “Let’s go!”

Self-Care

Self-care refers to the development and use of eating, dressing, and hygiene skills, and other indications such as taking responsibility for possessions.

Widely Held Expectations

Children begin to:

- Develop an awareness of hygiene.
 - Follow basic hygiene practices (e.g., brushing teeth, washing hands).
 - Increase independence with basic self-help skills (e.g., feeding oneself, toileting, dressing oneself).
 - Develop the ability to care for personal belongings.
 - Help with routine care of the environment (e.g., put toys away).
-

Strategies for Families

- Demonstrate and talk with your child about hygienic practices such as hand-washing, bathing, and proper dental care.
 - Provide opportunities for your child to practice self-care skills as independently as possible, honoring your own cultural framework. Examples include asking for help when appropriate, feeding oneself, dressing, washing hands, toileting, and locating personal items.
-

Strategies for Early Educators

- Teach and model hygienic practices (e.g., washing hands, covering mouth and nose when sneezing or coughing, and dental care).
 - Use interesting and entertaining ways to practice personal care and self-help skills (e.g., add baby doll outfits and clothing with fasteners to the dramatic play center).
 - Provide instruction and facilitate ample opportunities for children to practice self-care skills as independently as they are able (e.g., verbally or nonverbally asking for help, feeding themselves, dressing, washing hands, toileting, and locating personal items).
 - Maintain environments that support self-care and hygiene (child-size sink, toilet, coat rack, toothbrushes, etc.).
 - Encourage children to show independence in self-care practices. Provide time, support, and equipment as needed.
-

Safety Awareness

Safety awareness refers to development of the ability to identify potential risks and use safe practices to protect oneself and others.

Widely Held Expectations

Children begin to:

- Demonstrate an understanding of the importance of personal safety.
 - Develop awareness of and the ability to follow basic health and safety rules (e.g., fire and traffic safety).
 - Trust and cooperate in a comfortable, safe environment.
 - Recognize and avoid potentially harmful persons, objects, substances, activities, and environments.
-

Strategies for Early Educators

- Provide a safe, healthy, supportive environment with appropriate supervision.
 - Teach safety rules and model safe practices (e.g., bus safety, playground safety, staying with the group, safe use of classroom materials, and knowing personal identification information).
 - Teach and model appropriate responses to potentially dangerous situations, including fire, violent weather, and strangers or other individuals who may cause harm.
 - Provide and monitor appropriate media content. Eliminate access to violent and inappropriate programming, video games, and movies.
 - Report all suspected child abuse or neglect.
-

Strategies for Families

- Provide a safe, healthy, supportive environment for your children, with appropriate supervision.
 - Talk about safe practices and model them yourself, such as looking both ways before crossing streets and wearing a helmet when bicycling. Use seatbelts and child-restraint seats. Make sure children know their full name and other personal identification information.
 - Discuss with your child appropriate responses to potentially dangerous situations, such as inappropriate touching. Teach them fire safety rules and how to use 911 to summon help.
 - Monitor what your child sees on television and at the movie theater and eliminate access to violent and inappropriate shows, video games, and films.
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Motor Skills

Fine motor refers to movement of the small muscles of the hand and arm that control the ability to scribble, write, draw, tie shoes, use a keyboard, and many other activities requiring finger, hand, and hand-eye coordination.

Gross motor refers to movement of the large muscles in the upper and lower body that control the ability to walk, run, dance, jump, and other skills relating to body strength and stamina.

Widely Held Expectations

Children begin to:

- Develop small muscle control and coordination.
 - Experiment with handheld tools that develop strength, control, and dexterity of small muscles (e.g., spoons, paintbrushes, crayons, markers, safety scissors, and a variety of technological tools, with adaptations as needed).
 - Explore and engage in activities that enhance hand-eye coordination, such as using eating utensils, dressing themselves, building with blocks, creating with clay or play dough, putting puzzles together, stringing beads, and using other manipulatives.
 - Develop body strength, balance, flexibility, and stamina.
 - Develop large muscle control and coordinate movements in their upper and/or lower body.
 - Explore a variety of equipment and activities that enhance gross motor development (e.g., balls, slides, locomotive toys, and assistive technology).
 - Increase the ability to move their bodies in space (running, jumping, skipping).
-

Strategies for Early Educators

- Provide daily opportunities and a variety of activities for children to use handheld tools and objects.
 - Model the use of drawing and writing tools in daily activities.
 - Plan activities that use a variety of materials to support fine motor skill development, with adaptations as needed (paper, pencils, crayons, safety scissors, play dough, manipulatives, blocks, etc.).
 - Provide child-size tables and chairs.
 - Supervise and encourage appropriate use of materials to foster greater success and enjoyment.
 - Encourage children to take part in active play every day, such as climbing, running, hopping, rhythmic movement, dance, and movement to music and games.
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- Supervise and participate in daily outdoor play. Provide adequate space and age-appropriate equipment and materials, with adaptations as needed.
 - Plan daily physical activities that are vigorous as well as developmentally and individually appropriate.
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Strategies for Families

- Provide your child with a variety of tools and objects that small hands can hold, manipulate and use – such as silverware, toothbrush, comb, or hairbrush.
 - Show your child how you use drawing and writing tools in your daily activities (for example, creating a grocery list, jotting down a telephone number, addressing an envelope, or using the computer to write a letter).
 - Keep a ready supply of simple materials such as paper, pencils, crayons, play dough, and blocks available in a place where your child can work with them for extended periods of time.
 - Make physical activity a big part of your child's daily life – running, hopping, dancing, playing games, and moving rhythmically.
 - Supervise and take part in frequent periods of outdoor play and forms of exercise that enhance physical fitness.
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Physical Health and Growth

Physical health and growth focuses on dietary habits and nutrition awareness, the development of healthy exercise habits, and attention to other wellness issues.

Widely Held Expectations

Children begin to:

- Participate in a variety of physical activities for longer periods of time (e.g., exercise, games, and active play).
 - Transition from high-energy to low-energy activities (e.g., calming or other relaxing activities).
 - Recognize and eat nutritious foods.
 - Develop an awareness of personal health and fitness.
 - Participate in games, outdoor play, and other forms of exercise to enhance physical fitness.
 - Engage in adaptive physical activities as appropriate.
 - Make better use of their vision and hearing, and benefit from correction and aids as needed.
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Strategies for Early Educators

- Provide time for frequent exercise and active play by limiting the use of television and videos in the classroom.
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- Encourage and support children’s need for rest and relaxation by scheduling both active and quiet times.
- Model and discuss healthy eating habits and provide nutritious snacks and meals.
- Talk with families about health concerns that may be affecting a child’s development (e.g., growth, hearing, vision, and appropriate clothing for weather conditions).
- Help families identify and use local health, medical, and dental resources for routine checkups and treatment of illness.
- Increase opportunities, supervise and actively participate in children’s outdoor play.
- Play visual and auditory discrimination games such as “I spy” and take listening walks.

Strategies for Families

- Encourage exercise and active play and limit the time your child spends watching television, playing video games, and using the computer.
- Establish routines for bedtime and quiet time.
- Set an example with healthy eating habits and make sure your child has adequate nutrition.
- Identify and use local health, medical, and dental resources for routine medical and dental checkups and treatment of illness.
- Make sure children are properly dressed for weather conditions and activities.
- Increase outdoor play and provide appropriate supervision.

(b)(6)

Language Development and Communication

- Receptive Language
- Expressive Language
- Foundations for Reading
- Foundations for Writing

“The basic need to communicate coupled with a rich and stimulating language environment seem to be the main factors that propel children’s early language learning. Parents, grandparents, and early education caregivers need to know that child language development begins in infancy and is an ongoing process in which young children expand and refine their knowledge and use of language largely with the help of facilitating adults.”

Dorothy S. Strickland

Receptive Language

Receptive language traditionally refers to a listening vocabulary, knowledge of spoken words, and understanding connected speech. Here it also refers to understanding non-verbal language such as signs, gestures, and picture symbols, and includes expectations that reflect the needs of children using non-verbal communication.

Widely Held Expectations

Children begin to:

- Understand increasingly complex sentences, including past, present, and future tenses.
- Understand and use a growing vocabulary.
- Attend to language for longer periods of time, such as when books are read, people are telling stories, and during conversations.
- Consistently respond to requests for information or action (e.g., respond to questions and follow one- and two-step directions).
- Comprehend and use language for multiple social and cognitive purposes (e.g., understand and talk about feelings, ideas, information, and beliefs).
- Develop familiarity with sounds in words (e.g., listening to, identifying, recognizing, and discriminating).
- Understand that people communicate in many ways, including through gestures, sign language, facial expressions, and augmentative communication devices.

Strategies for Early Educators

- Use facial expressions, gestures, and a rich and varied vocabulary when speaking and reading with children.
- Introduce new words and concepts by labeling what children are doing and experiencing while providing opportunities for conversations.
- Give children clear instructions that help them move from simple directions to a more complex sequence. State directions positively, respectfully, carefully, and only as needed.
- Use gestures and props to help children understand and respond to verbal and non-verbal cues.
- Provide opportunities throughout the day for children to talk, share, and discuss stories and interact with each other and with adults.
- Engage children in one-on-one conversations; listen and respond to what they are saying.
- Tell stories and read aloud to children, repeating their favorite books. Vary the tone and pitch of your

From birth, children are learning language. As families and other caregivers talk, sing, laugh, read, and interact with children, they are providing a strong beginning for them to become successful readers and writers. Children of preschool age are beginning to develop many language competencies, using language as a tool to communicate their needs, interact socially with others, and describe events, thoughts, and feelings.

Research increasingly demonstrates that children who are provided environments filled with print, books, and conversations with supportive adults acquire knowledge and skills that greatly facilitate their success when they begin to receive formal instruction.

In North Carolina, an increasing number of children entering school come from families who speak a language other than English. The competencies addressed in this domain can be developed in any language and, for most children, will be developed first in their primary language. Strengthening language and communication competencies in children's native languages helps prepare them for the additional task of learning English.

Dialogue: *The Wide World of Words*

Taking advantage of the bilingualism of his classroom families, the teacher read "The Three Little Pigs" aloud in English and then had Maria's mother read the story in Spanish. Afterward, the children acted out the story, using puppets, sticks, straw, and pretend bricks, and the teacher pointed out that the props would be available in the dramatic play center along with audiotapes of the story in the two languages. During center time, Jesús put a wolf puppet on his hand and approached Alice, saying: "Huff, puff, blow down!" Alice pointed to "No!" on her augmentative communication board. Jesús then turned to Johnny and repeated his command. Johnny declared, "Not by the hair on my chinny-chin-chin!" After observing the children's play for a period of time, the teacher made a note in his anecdotal records that the three children could repeat parts of a story using new language and vocabulary with enthusiasm.

voice while reading to emphasize different characters, moods, or other qualities in a story.

- Help children discriminate sounds in spoken language through rhymes, songs, and word games, using various media (e.g., CDs and tapes of music and stories).
- Offer different types of music rhythms, patterns, and tempos and have the children imitate these by clapping or playing musical instruments.
- Model and provide opportunities for children to communicate in different ways (e.g., home languages and also manual signs, gestures, and devices).

Strategies for Families

- Talk with your children. Engaging in conversations whenever and wherever you are together helps them understand increasingly complex language and words.
- Assign simple tasks. Engaging children in small jobs helps them learn to follow directions. Directions should be clear and positive and kept to a minimum.
- Be expressive. Use gestures and props to help your child understand and respond to verbal and non-verbal cues.
- Be a good listener. Notice and respond to what children say and do. Ask questions and pause to give them time to think and respond.
- Protect your child's hearing through routine health examinations and prompt medical attention to suspected ear infections.
- Have fun with words. Singing songs and playing rhyming and word games (nursery rhymes, poems, finger plays) help children develop an understanding of different sounds.
- Help children understand and appreciate that communication occurs in many ways, through languages that are different from your own and also through manual signs, gestures, and devices.
- Talk, sing, and play with your children using your home language – the language you know best.

Expressive Language

Expressive language includes speaking and other means of communication such as sign language and use of communication devices.

Widely Held Expectations

Children begin to:

- Use verbal and non-verbal language (gestures, devices, signs, and picture symbols) to communicate for multiple purposes (e.g., to express wants, needs,

ideas, feelings, and to relate personal information and experiences).

- Use language as a part of pretend play to create and enact roles.
- Use language to establish and maintain relationships.
- Initiate and engage in conversations.
- Describe experiences and create and/or retell simple stories.
- Ask questions and make comments related to the topic of discussion.
- Communicate messages with expression, tone, and inflection appropriate to the situation.
- Use increasingly complex and varied language structures, sentences, and vocabulary.

Strategies for Early Educators

- Create an environment of trust and support in which children feel free to express themselves.
- Provide opportunities for children to engage in dialogue, through frequent one-to-one conversations, small group interactions with adults, and with other children.
- Encourage children to describe their family, home, community, and classroom.
- Pause when reading and talking so children can ask questions and propose answers.
- Help children remain focused on the main topic of conversation by redirecting and restating current ideas.
- Encourage creative attempts at putting words and sentences together to use language for a variety of purposes.
- Build on children's interests when conversing with them.
- Provide props and opportunities that generate discussions and questions.
- Support children's use of their home language, gestures, communication devices, sign language, and pictures to communicate.
- Talk with children using their families' native language (through interpreters when necessary).
- Create an accepting, culturally diverse environment that is nurturing, supportive, and interesting for all children.
- Ask open-ended questions that encourage conversation.
- Ask questions that stimulate children's creativity.
- Expand on what children say by adding information, explanations, and descriptions.

Strategies for Families

- Encourage children to express their thoughts and feelings.
- Provide opportunities for your child to talk in social situations with adults and other children.
- As you read to children or talk with them, pause to let them ask questions, make comments, and complete ideas.
- Seek out your child's opinion. For example, ask, "What do you think we need to do?"
- Encourage children to discuss and add to stories as you read to them. Ask "What do you think will happen next?"
- Talk daily about everyday events and activities.
- Use descriptive language. If your child observes, "That's a dog," respond "Yes, that is a big, white dog."
- Show interest in what children have to say by asking open-ended questions that require more than a "yes" or "no" response.
- Set an example for good speech and language. Use complete sentences and pronounce words correctly.
- Support children's use of gestures, communication devices, sign language, and pictures as needed to communicate.
- Encourage children to speak the language used in the home. This will not interfere with learning English.

Foundations for Reading

Foundations for reading involves developing knowledge and skills in oral language, vocabulary used in understanding the world, concepts of print, the alphabetic principle, and phonology.

Motivation for Reading and Vocabulary and Comprehension Widely Held Expectations

Motivation for Reading – Children begin to:

- Show an interest in books, other print, and reading-related activities, including using and sharing books and print in their play.
- Enjoy listening to and discussing storybooks, simple information books, and poetry read aloud.
- Independently engage in reading behaviors (e.g., turning pages, imitating adults by pointing to words, telling the story).
- Independently engage in writing behaviors (e.g., write symbols or letters for names, use materials at the writing center, write lists with symbols/letters in pretend play, write messages that include letters or symbols).

- Show preferences for favorite books.
- Use books that communicate information to learn about the world by looking at pictures, asking questions, and talking about the information.

Vocabulary and Comprehension – Children begin to:

- Develop knowledge about their world (what things are and how they work) and use this knowledge to make sense of stories and information books.
- Discuss books by responding to questions about what is happening in stories and predicting what will happen next.
- Relate personal experiences to events described in familiar books.
- Ask questions about a story or information in a book.
- Imitate the special language in storybooks and story dialogue (repetitive language patterns, sound effects, and words from familiar stories) and use it in retellings and dramatic play.

Strategies for Early Educators

- Provide and share fiction and non-fiction books that stimulate children's curiosity.
- Create comfortable and inviting spaces in different parts of the classroom for children to read; stock these reading nooks with a variety of reading materials.
- Provide time when children are encouraged to look at books on their own.
- Promote positive feelings about reading. Allow children to choose books they want to read. Reread favorite books.
- Make multicultural books and materials available to help children develop an awareness of individual differences.
- Create a connection between home and school through such means as developing a take-home book program, sharing books from home, engaging parents in literacy experiences, holding workshops, or creating a newsletter for parents.
- Provide multi-sensory approaches to assist reading (e.g., tape players, computers, and assistive technology).
- Point out authors and illustrators and discuss what makes a book a favorite book.
- Provide children with materials they can use to act out and retell stories (flannel board cutouts, puppets, props, pictures, etc.).
- Respond to children's observations about books and answer their questions.
- Reread books multiple times, changing the approach as children become familiar with the book. On occasion, ask questions that tap their understanding

of why characters are doing things and talk about the meaning of unfamiliar words.

- Make books available in children’s home languages.

Strategies for Families

- Read with your child every day.
- Help instill good reading habits by regularly reading books, magazines, and newspapers and discussing what you read.
- Bring into your home a variety of high-quality reading materials that are relevant and interesting to children.
- Talk about connections between your child’s personal experiences and events and objects in books you’ve read.
- Visit the library regularly with your children and let them select favorite books. Suggest to friends and relatives that they give books as gifts.
- Encourage your child to read books along with you, ask questions, and retell the stories. Reread favorite books.
- Use your home language when reading, singing, and playing word games with your child. You will be helping your child learn and enjoy the time you spend together.

Book and Print Awareness, Alphabet Knowledge, and Alphabetic Principle Widely Held Expectations

Book and Print Awareness – Children begin to:

- Be aware of print and understand that it carries a message by recognizing and creating it in different forms and for a variety of functions (e.g., labels and signs).
- Recognize that print can tell people what to do, and understand that print and simple symbols are used to organize classroom activities (e.g., where to store things, when they will have a turn).
- Pretend to read familiar books in ways that mimic adult reading.
- Hold a book upright while turning pages one by one from front to back.
- Occasionally run their finger under or over print as they pretend to read a familiar book.
- Understand some basic print conventions (e.g., concept of letter, concept of word).
- Learn to identify their name and the names of friends.

Alphabet Knowledge – Children begin to:

- Know that letters of the alphabet are a special category and are different from pictures and shapes.

- Recognize and name some letters of the alphabet, especially those in their own name and in the names of others who are important to them.

Alphabetic Principle – Children begin to:

- Understand that letters function to represent sounds in spoken words.
- Make some sound-to-letter matches, using letter name knowledge (e.g., writes “M” and says “This is Mommy”).

Strategies for Early Educators

- Draw children’s attention to print in the environment and discuss what it is communicating (e.g., instructions, labels, menus).
- Assist children in creating their own books, class books, and stories.
- Reread books multiple times, changing the approach as children become familiar with the book. On occasion, ask questions that tap their understanding of why characters are doing things and talk about the meaning of unfamiliar words.
- Use children’s names in daily routines (e.g., to mark turns, keep track of who is present, etc.) to help them become familiar with the letters in their names.
- Discuss letter names in the context of daily activities (as opposed to teaching one letter per week) and provide opportunities for children to hear specific letter sounds, particularly beginning sounds.
- Provide opportunities to explore letters and sounds (e.g., with literacy tools and models such as magnetic letters, rubber stamps, alphabet puzzles, sponge letters, clay, ABC molds, and alphabet exploration software).
- Make books available in children’s home languages.

Strategies for Families

- Read to your child every day.
- As you read, call attention to the many different kinds of written materials in your home (labels, newspapers, magazines, cereal boxes, recipe cards, greeting cards) and in the outside world (billboards, menus, signs).
- Read alphabet books. Put magnetic letters on the refrigerator. Point out letters in familiar names and signs.
- Give children magazines, menus, lists, notes, tickets, and other print materials to use in pretend play.
- Use your home language when reading, singing, and playing word games with your children. You will be helping your child learn and enjoy the time you spend together.

Phonological Awareness Widely Held Expectations

Phonological Awareness – Children begin to:

- Enjoy listening to songs, poems, and books that have rhyme and word play and learn the words well enough to complete familiar refrains and fill in missing words.
- Enjoy and repeat rhythmic patterns in poems and songs through clapping, marching, or using instruments to beat syllables.
- Play with the sounds of language, learning to identify and then create rhymes, attending to the first sounds in words.
- Associate sounds with written words, such as awareness that different words begin with the same sound (e.g., Keshia and Katie begin with the same sound).

Strategies for Early Educators

- Read and reread books that have rhymes and refrains. Encourage children to fill in missing words and complete familiar refrains.
- Play word and rhyme games. Sing songs. Repeat chants.
- Discuss letter names in the context of daily activities (as opposed to teaching one letter per week) and provide opportunities for children to hear specific letter sounds, particularly beginning sounds.
- Provide opportunities to explore letters and sounds (e.g., with literacy tools and models such as magnetic letters, rubber stamps, alphabet puzzles, sponge letters, clay, ABC molds, and alphabet exploration software).
- Make available books in children's home languages.

Strategies for Families

- Read and reread books that have rhymes and refrains. Encourage your child to join in.
- Recite nursery rhymes. Sing songs. Play word games.
- Share alphabet books. Put magnetic letters on the refrigerator. Point out letters in familiar names and signs.
- Use your home language when reading, singing, and playing word games. You will be helping your child learn and enjoy the time you spend together.

Foundations for Writing

Foundations for writing involves a progression of developing skills, beginning with using symbols with meaning, then writing scribbles that have meaning and attempting to make letters.

Widely Held Expectations

Children begin to:

- Use a variety of writing tools and materials (e.g., pencils, chalk, markers, crayons, finger paint, clay, computers).
- Use a variety of writing in their play and for a variety of purposes (e.g., labels, lists, signs, messages, stories).
- Represent thoughts and ideas through drawings, marks, scribbles, and letter-like forms.
- Learn how to tell their thoughts for an adult to write.
- Play with writing letters and mastering conventional letterforms, beginning with the first letter of their name.
- Use known letters and approximations of letters to write their own name.
- Attempt to connect the sounds in a word with its letterforms.

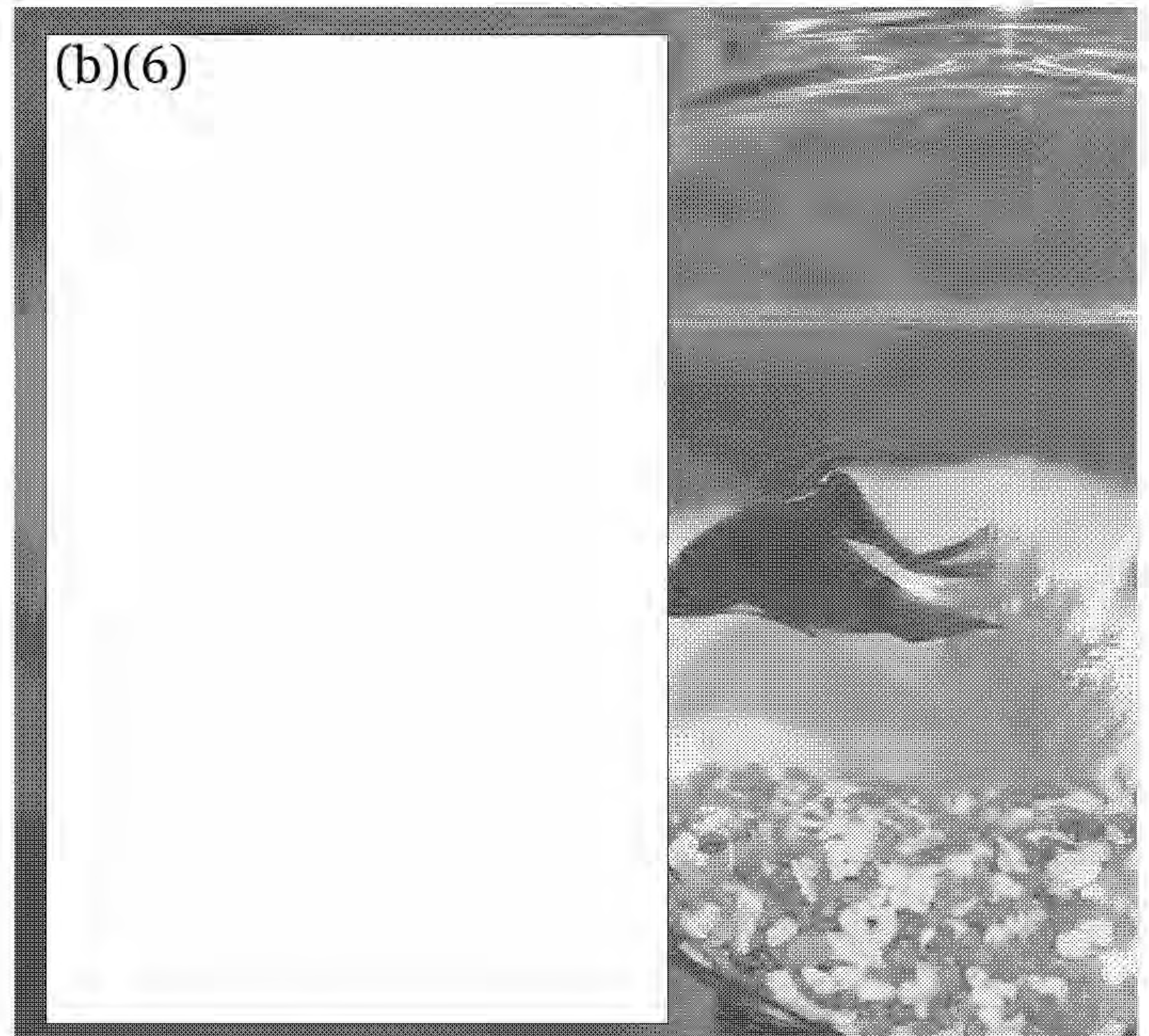
Strategies for Families

- Encourage your child to scribble, draw, and print by keeping markers, crayons, pencils, and paper on hand.
- Talk about what you are doing as you write, to help your child relate writing to everyday life (such as making out a check or creating a shopping list).
- Invite your child to help you write a note or compose a greeting card.
- Respond enthusiastically to the drawings, scribbles, letter-like shapes, and other writing your child produces.
- When your child asks, help with writing familiar words and numbers, such as family names and phone numbers.
- Encourage children to retell experiences and describe ideas and events that are important to them.
- Provide food packages and magnetic letters for your child to explore letters and sounds. Point out writing on packages.
- Accept and celebrate your child's writing attempts, understanding that it takes many years to learn to form letters and spell in conventional ways.

Strategies for Early Educators

- Give children opportunities to draw, scribble, and print for a variety of purposes.
- Provide a variety of tools, such as markers, crayons, pencils, chalk, finger paint, and clay. Provide adaptive writing/drawing instruments and computer access to children with disabilities.
- Promote literacy-related play activities that reflect children's interests by supplying materials such as telephone books, recipe cards, shopping lists, greeting cards, and storybooks for use in daily activities.
- Provide a variety of literacy props in centers (e.g., stamps and envelopes for the post office; blank cards, markers, and tape for signs in the block center).
- Help children use writing to communicate by stocking the writing center with alphabets and cards that have frequently used and requested words (e.g., "love," "Mom," "Dad," and children's names with photos).
- Show step-by-step how to form a letter on unlined paper when a child asks.
- Encourage children to retell experiences and events that are important to them through pictures and dictation.
- Write down what children say and share those dictated writings with them.
- Think aloud as you model writing for a variety of purposes in classroom routines (e.g., thank-you notes, menus, recipes).
- Assist children in making their own books and class books.
- Display children's writing and comment on their successes.
- Use unlined paper for children's writing so they will focus on letter formation instead of letter orientation.

(b)(6)



Cognitive Development

- **Mathematical Thinking and Expression**
- **Scientific Thinking and Invention**
- **Social Connections**
- **Creative Expression**

"Children are born true scientists. They spontaneously experiment and experience and reexperience again. They select, combine, and test, seeking to find order in their experiences. "Which is the mostest? Which is the leastest?" They smell, taste, bite, and touch-test for hardness, softness, springiness, roughness, smoothness, coldness, warmness: they shake, punch, squeeze, push, crush, rub, and try to pull things apart."

R. Buckminster Fuller

The Cognitive Development domain focuses on children’s natural curiosity and ability to acquire, organize, and use information in increasingly complex ways. In the search for meaning, they learn through playing, exploring, discovering, problem-solving, thinking logically, and representing symbolically.

Preschool children are developing the cognitive framework that will allow them to develop increasingly sophisticated concepts and to communicate with the world they live in. They have a growing awareness of self, family, and community. They typically learn their own names, form ideas about family roles and community helpers, and learn the names of some colors. They begin to understand that their actions have an effect on their environment and are able to think about things that are not present. They begin to understand simple scientific concepts by noticing, wondering, and exploring. They begin to ask questions as they engage in increasingly more focused explorations. They begin to demonstrate good problem-solving skills and also begin to express themselves creatively using a variety of media.

Creativity: Inspiration Takes Wing

The feeders outside the window allowed the class to study a variety of birds up close, and one day Nathan and Lucinda decided to build a feeder. As the two children got to work in the carpentry center, their teacher noticed Patima, a new student who spoke little English, quietly watching. Collecting bird replicas from the dramatic play center, the teacher used words, actions, and pictures to explain what was going on and accompanied the child to join them. A lively discussion ensued about how big the feeder needed to be. Lucinda and Patima placed the replica birds end to end and decided to make the feeder big enough for two birds to eat at the same time. Patima shared her observation that birds fling seeds while they eat, prompting the children to fetch a butter tub from housekeeping to glue onto the board. After they had proudly trooped outside to hang their feeder and fill it with seed, the children recounted the steps of the project and collaborated in drawing pictures of each step for the other children to use.

Mathematical Thinking and Expression

An early knowledge of mathematical concepts forms the basis for later learning, not just in mathematics but in other domains as well.

Widely Held Expectations

Children begin to:

- Experiment with and use numbers and counting in their play.
- Recognize and describe common shapes.
- Understand and use words that identify different positions in space (e.g., in, out, under, over).
- Recognize and duplicate simple patterns within their environment using manipulatives, art materials, body movements, etc.
- Sort, classify, and order objects on the basis of one or two attributes (color, shape, size, small to large, short to tall, etc.).
- Describe or demonstrate a sequence of events.
- Understand size and volume and make comparisons (short/tall, big/small, full/empty, length, weight, height, same, more, less).
- Participate in activities that involve non-standard measurement.
- Understand the passage of time within their daily lives (daily routines and the order of events).
- Use a variety of strategies to solve problems.
- Make and check predictions through observations and experimentation.

Strategies for Early Educators

- Make a variety of materials easily accessible for all children for the purpose of developing and refining mathematical knowledge (e.g., blocks and accessories, collections, sand and water accessories, art supplies, dramatic-play props, manipulatives, and literacy materials).
- Prompt thinking and analysis by asking open-ended questions (e.g., “How will you know how many plates you need for the guests at your party?”).
- Provide large amounts of uninterrupted time for active exploration.
- Provide a variety of manipulatives that can be counted, sorted, and ordered.
- Schedule multiple counting activities in the context of daily experiences and routines.
- Read stories, sing songs, and act out poems and finger plays that involve counting, numerals, and shapes.

- Use the vocabulary of geometry to identify shapes within the classroom and surrounding environment.
- Display a picture schedule of the daily classroom routine that can be referred to throughout the day.
- Model problem-solving strategies.
- Provide opportunities to observe naturally occurring patterns within the indoor and outdoor environments. Use art materials and manipulatives with children to create patterns (e.g., weaving, painting, stringing beads, and building blocks).
- Talk with children about relevant past and future events.
- Provide opportunities to measure (e.g., “How many steps does it take to walk from the front door to your cubby?” or “How many blocks long is your arm?”).
- Provide opportunities to weigh objects (comparing the weight of common classroom objects using a balance scale).
- Participate in activities that involve making observations (e.g., rainfall or changes in temperature).

Strategies for Families

- Play with your children. Talk about what they are doing. Count and use numbers as you play together. Take advantage of every opportunity to count.
- Read books with your child related to numbers, colors, shapes, sizes, patterns, and measurement.
- Provide everyday opportunities to explore math concepts. Ask your child to sort and count groceries or the laundry, help set the table, and predict the number of cups of water it will take to fill a pitcher.
- Set aside, protect, and participate in periods of time every day for free play that is initiated by your child.
- Help children develop mathematical skills through music by singing, dancing, and playing with simple homemade instruments – oatmeal boxes, pots and pans, wooden spoons, or juice cans filled with rice or dry beans.
- Share in the planting and care of a plant or garden. Observe and measure plants as they grow. Keep a journal of your child’s observations.
- Help your child organize toys, pointing out concepts such as “in,” “on,” “under,” and “beside.”
- Allow your child to help you prepare an afternoon snack. Talk about the recipe and let him measure, pour, and stir the ingredients.
- Cook with your child. Help your child understand how to measure the ingredients and observe the changes in the ingredients as liquid is added and when heat is applied through cooking or baking.

Scientific Thinking and Invention

Scientific thinking and invention refers to the ways in which children use the process of inquiry and thinking to form ideas about the way things are.

Widely Held Expectations

Children begin to:

- Expand knowledge of their environment through play.
- Demonstrate awareness of and respect for their bodies.
- Demonstrate an awareness of seasonal changes and weather conditions.
- Identify, discriminate, and make comparisons among objects by observing physical characteristics.
- Use one or more of the senses to observe and learn about their environment.
- Observe and care for living things (e.g., classroom pets and plants).
- Demonstrate an awareness of ideas and language related to time (e.g., day and night, yesterday, today, tomorrow).
- Demonstrate an awareness of changes that occur in their environment (e.g., freezing/melting, color mixing).
- Ask questions and seek answers about their environment through active engagement with materials.
- Use simple tools for investigation of the classroom and the world.
- Manipulate their environment to produce desired effects and invented solutions to problems (e.g., deciding to attach a piece of string to the light switch so they can independently turn off the lights).
- Represent and demonstrate an understanding of discoveries (drawing, graphing, communicating, etc.).
- Make estimates based on experiences with objects (e.g., “Will this block fit in the same hole?”).
- Engage in representational thought (e.g., thinking about things that are not present).
- Understand the uses and roles of various forms of technology.
- Share responsibility by participating in the care of their environment (e.g., chores and recycling).

Strategies for Early Educators

- Engage children in observing events, exploring natural objects, and reflecting on what they learn (e.g., hang a birdfeeder outside the classroom window and use binoculars to observe the visitors; or even better, just go outdoors).

- Give children freedom to come up with their own solutions to problems. Listen to their ideas. Model the thinking process by talking out loud about a problem and reflecting on how it might be solved.
- Model language that encourages children to express wonder, pose questions, and provide evidence of discoveries.
- Create a sensory center to stimulate curiosity and exploration. Mix colors (paint, markers, food coloring, crayons) to see what happens.
- Model and teach responsible behavior. Guide children in the handling and care of pets, plants, and learning tools.
- Provide a science discovery center where children can compare the properties of objects such as shells, rocks, nests, and skeletons. Also include science materials throughout the indoor and outdoor environments.
- Provide simple tools (e.g., magnifying glass, binoculars, eyedropper, sieve, simple microscope) to use in exploration.
- Encourage scientific exploration throughout the classroom (e.g., set up sinking and floating experiments at the water table; provide cooking experiences that encourage the observation of changes in matter; equip the block center with materials that encourage explorations of vehicles and ramps).
- Take class walks throughout the year to collect a variety of objects, observe them carefully, and describe differences in shape, edges, color, texture, and size.
- Provide experiences for children to use a variety of technologies (simple tools, writing utensils, telephone, computer, etc.).
- Expose children to the scientific method of inquiry: observing, questioning, predicting, experimenting, and representing results.
- Plant gardens that change over the seasons. Provide a diversity of plants and trees that attract wildlife (e.g., butterfly bushes, trees for birdhouses, and bird feeders).
- Provide a variety of outdoor natural materials (smooth stones, shells, pinecones, acorns) that children can investigate.

Strategies for Families

- Encourage your children to experiment. Talk to them about what they discover (for example, which toys sink in the bathtub and which float).
- Listen to and build on your child's ideas. Use her interests to help plan family activities and adventures.
- Foster your child's ability to ask questions, form ideas, and speculate about what might happen "if..." Use books from the library, simple experiments, information from the internet, educational videos, and television programs to find answers to questions.

- Provide simple experiences that expand a child's sense of wonder and caring about the environment. Plant a small pot with seeds and guess how long it will take for them to sprout. Keep a record of how long it takes.
- Take your child on nature walks. Take a bag along and collect small rocks, feathers, leaves, and other objects to explore and discuss. Observe wet and dry places and how the sun warms objects it shines on.
- Pick up trash while taking a walk and deposit it in public bins. Talk about how the environment is hurt when people discard trash haphazardly.

Social Connections

Social connections refers to the ability to recognize another's perspective and respond appropriately.

Widely Held Expectations

Children begin to:

- Identify, value, and respect similarities and differences between themselves and others (gender, race, special needs, culture, language, history, and family structures).
- Understand relationships, roles, and rules within their own families, homes, and classroom.
- Participate as a member of the group in a democratic classroom community.
- Observe and talk about changes in themselves and their families over time.
- Make sense of their physical, biological, and social worlds by asking questions and engaging in pretend play.
- Demonstrate awareness of different cultures through exploration of customs and traditions, past and present.
- Identify characteristics of the places where they live and play and the relationships of those places to one another.
- Recognize and identify the roles of community helpers.
- Participate in activities to help others in the community.
- Explore, think about, inquire, and learn about the people in their classroom and community.

Strategies for Early Educators

- Equip a dramatic play area with a variety of props reflecting different aspects of families, communities, and cultures to encourage a true understanding of others.
- Change props according to the interests of the children.

- Provide literature and music that reflect a variety of cultures and traditions.
- Use literature, puppets, and role-playing to help children connect to the feelings of others.
- Give children access to a wide selection of quality multicultural books.
- Implement activities that reflect the similarities and differences among the children and families within the classroom (e.g., do body tracing and provide children with multicultural crayons to represent the variety of skin tones).
- Promote observations and discussions of things that are similar and things that are different.
- Invite community helpers into the classroom.
- Welcome families into the classroom to share their cultures, traditions, and talents.
- Explore the physical, biological, and social world, beginning with your school (e.g., a visit to another classroom) and then into the community, through field trips.
- Involve children in school and community service projects.
- Model cooperation and negotiation.
- Involve the children in the making of rules for the classroom.
- Hold class meetings to discuss concerns and issues that occur in the classroom. Encourage children to use a variety of problem-solving strategies to work through any concerns (e.g., use role-playing and puppets to help children empathize with their peers).

Strategies for Families

- For safety, teach your children their full name, telephone number, and street address and familiarize them with landmarks close to home.
- Take children on outings – to museums, parks, the library, neighborhood fire station, shops, grocery store, and laundry.
- Involve your family in school and community service projects.
- Celebrate family and community traditions. Take your child to local festivals to learn about other cultures. Start family traditions of your own.
- Encourage children to assume responsibility by asking for their input in creating a shopping list and then helping with the shopping itself. Give your child small household chores, such as putting away clothes and toys. Let them make some decisions for themselves (such as whether to brush their teeth first or put on their pajamas).
- Keep maps and globes around your house and let your children see you use them. Before taking a trip, use a

map to show your child where you are going and how you plan to get there.

- When you go somewhere, use directional terms (for example, “We need to turn left here” or “Grandma’s house is three blocks away from us; at the gas station we will turn right”).
- Share relevant work experiences with your children. Take them to your work place, if appropriate.

Creative Expression

Creative expression encompasses self-expression, originality, risk-taking, divergent thinking, and appreciation of cultural diversity.

Widely Held Expectations

Children begin to:

- Participate in art, music, drama, movement, dance, and other creative experiences.
- Use a variety of materials and activities for sensory experiences, exploration, creative expression, and representation.
- Plan and create their own drawings, paintings, and models using various art materials.
- Experience and use learning in all curricular areas, including creative arts, to reinforce learning in other curricular areas (e.g., tying an art or music project into a language development experience).
- Share experiences, ideas, and thoughts about artistic creations.
- Express interest in and show respect for the creative work of others.
- Show creativity and imagination in using materials and in assuming different roles in pretend play situations.
- Develop awareness of different musical instruments, rhythms, and tonal patterns.
- Imitate and recall tonal patterns, songs, rhythms, and rhymes.
- Respond through movement and dance to various patterns of beat and rhythm.

Strategies for Early Educators

- Encourage children to talk about and share their creative expressions with others.
- Provide access to a variety of materials, media, and activities that encourage children to use their imagination and express ideas through art, construction, movement, music, etc.
- Develop classroom procedures that encourage children to move materials from one learning center to another (such as using markers and paper in a dramatic play area).

- Use an abundance of multicultural books, pictures, tapes, and CDs in the classroom.
- Take children to museums, galleries, plays, concerts, and other appropriate cultural activities.
- Invite authors, artists, musicians, and storytellers to the classroom so children can observe firsthand the creative work of a variety of people in the arts.
- Give children opportunities to respond through music, movement, dance, dramatic play, and art (e.g., following expressive movement experiences, ask them to draw a picture of themselves and then tell you about the picture).
- Expose children to a variety of literature experiences, including poetry, musical games, and finger plays.
- Provide appropriate instruments (e.g., maracas, rhythm sticks, bells, tambourines, drums, sand blocks, shakers) for musical experimentation.
- Provide age-appropriate art materials (non-hazardous paints, modeling materials, a wide variety of paper types, writing and drawing utensils of various sizes and types, and collage materials).
- Use a variety of horizontal and vertical surfaces (easels, floor, and walls) and two- and three-dimensional objects (boxes, clay, and plastic containers) for creative expression.
- Play music, provide materials such as scarves, streamers, and bells, and make room indoors and outdoors for children to move freely.
- Encourage children to move and use their bodies in space (e.g., pretending to be a cat, a volcano, or a butterfly).
- In reading stories to children, look for words and images that suggest movement (e.g., “Can you move as softly as the wind blew?” or “This picture of a mountain shows hard, pointed shapes; can you make hard, pointed shapes with your body?”).
- Provide space and simple materials (scarves, blocks, play dough) that can be used in a variety of ways to encourage creative play. Brainstorm with children for ideas about materials to enhance their play.
- Make prop boxes to hold basic materials for pretend play (e.g., props for a beauty parlor, post office, pet store, doctor’s office).
- Use community outings to introduce new ideas and concepts. Open the classroom to members of the community.
- Demonstrate that you value children’s creative expressions by displaying their work in the classroom at their eye level.

Strategies for Families

- Encourage your children to talk about what they create and take time to listen to their thoughts.
- Take them on outings to museums, art galleries, and festivals. Ask what they saw that they liked best, and why.
- Bring home books, tapes, and videos involving creative expression. (Much is available free at public libraries.)
- Create an art box that contains markers, crayons, scissors, paper, tape, and play dough.
- Collect magazines for your child to cut out pictures. Fill a box with string, leftover wallpaper, dress patterns, tissue paper, paper towel rolls, small boxes, fabric, or other such items children can use creatively.
- Sort through old clothing and accessories for dress up and pretend play. Encourage pretend play by keeping an old blanket or sheet and some large boxes on hand for creating tents and other hideouts.
- Listen with your child to appropriate CDs, tapes, and the radio to provide musical experiences that span a variety of tastes. Encourage your child to move to the music. Dance with your child.
- Be a responsive and appreciative audience. When you watch your children moving, name what you see and join them. Say, for example, “You’re making circles with your arms. I want to make circles, too!”

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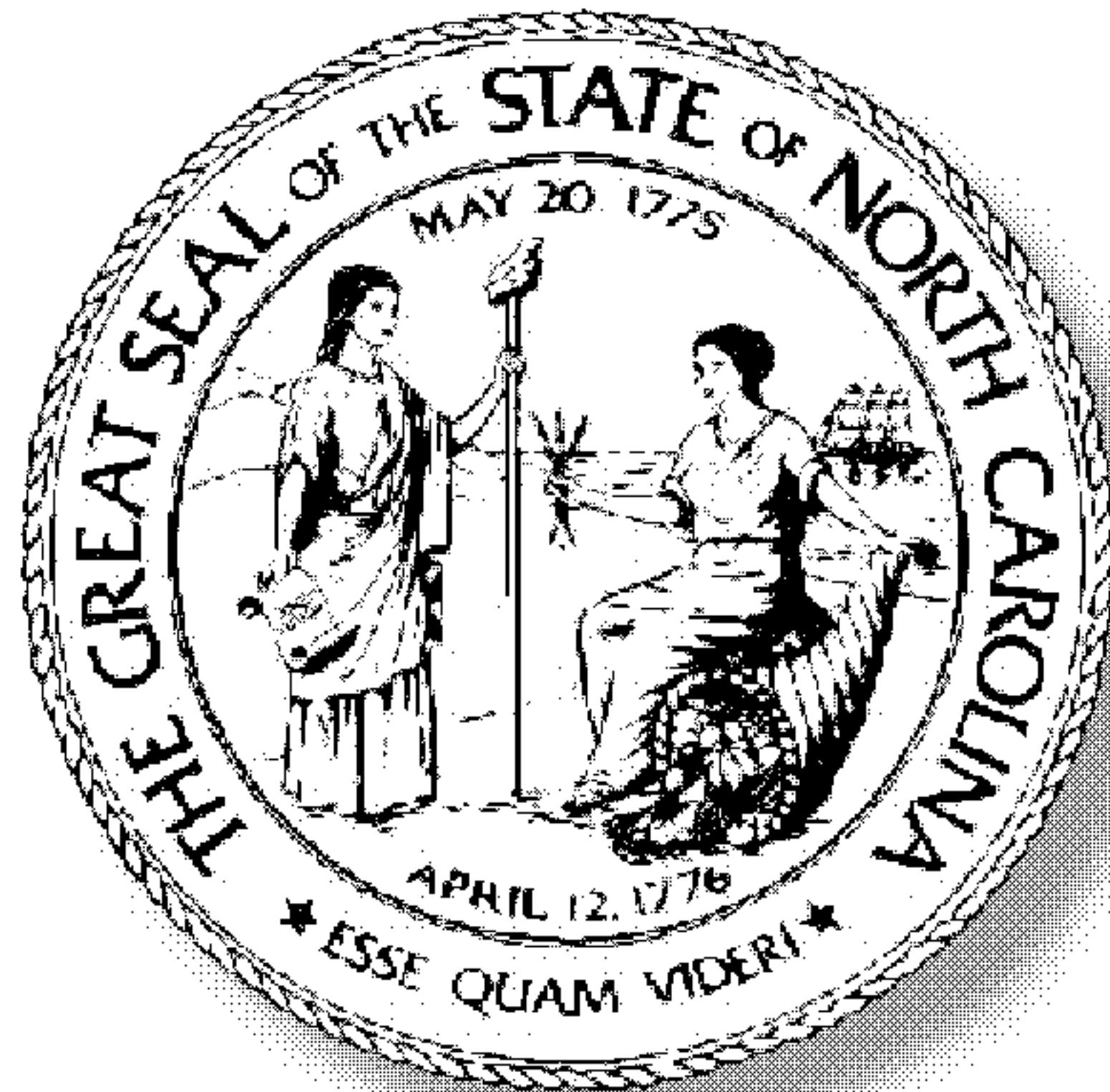
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Infant–Toddler Foundations



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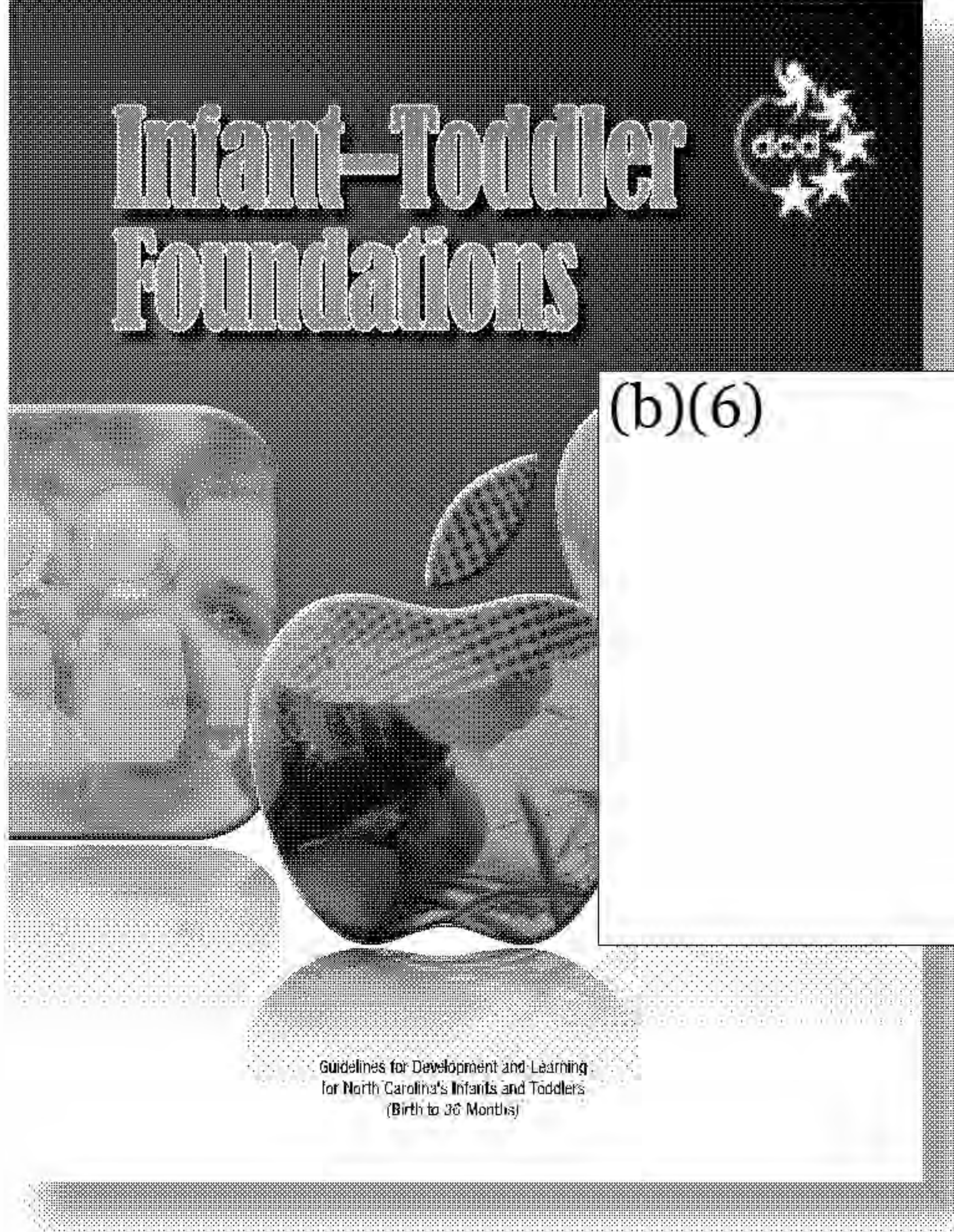
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About this Publication

Infant-Toddler Foundations describes the characteristics, skills, and knowledge we want children in North Carolina to develop from birth to 36 months of age. This publication provides guidelines for the development and learning for ALL infants and toddlers. It is a companion to *Foundations: Early Learning Standards for North Carolina Preschoolers and Strategies for Guiding Their Success* (NC Department of Public Instruction, 2004). Together, these two documents provide guidelines for children's development and learning from birth through age five.

With this publication, North Carolina joins the ranks of states that provide guidelines for young children's development and learning starting at birth. These guidelines are an essential part of our state's early childhood system.

In this publication you will find guiding principles for parents, caregivers, teachers, and other professionals who care for infants and toddlers. There are guidelines for infant and toddler development and learning in five domains. These domains include Emotional and Social Development, Health and Physical Development, Approaches to Learning, Language Development and Communication, and Cognitive Development.

The guidelines are followed by specific strategies adults can use to promote development and learning. There are "Real World Stories" that show how these strategies can be carried out in a variety of settings such as homes and child care classrooms. This publication describes how infants and toddlers develop and learn when they receive high quality care and education. It also describes the experiences that adults need to offer every young child to support development and learning in all areas.

The idea for developing infant-toddler guidelines came from a statewide group of early childhood leaders from across North Carolina. This group participated in a planning grant received by the North Carolina Division of Child Development (DCD) in 2004: the National Infant & Toddler Child Care Initiative @ Zero to Three. The purpose of this grant was to improve the coordination of services among early childhood programs and to recommend needed services for infants, toddlers and their families.

The planning group met for a year and a half. The team joined North Carolina Even Start to develop infant-toddler guidelines for the state. In May 2005, a small task force of early childhood experts began writing these guidelines. By the end of 2005, the Division of Child Development began funding the project and recruited additional specialists from higher education, non-profits, and state agencies to join the group. The objective was to create an accessible resource that caregivers and families could use to guide their daily interactions with the infants and toddlers in their care.

The North Carolina Infant-Toddler Guidelines Task Force worked throughout 2006 and 2007 to create these guidelines.

Task Force members studied research, policy statements, and professional literature about how to support the development of infants and toddlers. We spent many hours reviewing guidelines from other states and crafting language that would be clear and useful to readers.

It was a priority to write guidelines, strategies, and examples that support the care and education for ALL children. This includes children with disabilities, children who live in poverty, children at risk, children from different cultures and backgrounds, and children whose first language is not English. This information was checked for consistency and alignment with other standards that infant-toddler professionals in North Carolina are expected to follow. These other standards include *Foundations* and the Early Childhood Outcome Indicators from the Office of Special Education Programs in the U.S. Department of Education (Early Childhood Outcomes Center,

2005). In addition, we also aligned these guidelines with the West Ed Program for Infant-Toddler Care Developmental Milestones (Lally, et al., 2003).¹

We invited individuals from a wide variety of agencies and professions to give feedback on this document. Program directors, teachers, family child care providers, early intervention professionals, infant-toddler specialists, DCD staff, and families all gave input about what should be included. A total of 158 individuals in 15 focus groups across the state provided feedback on the guidelines. The places where focus groups were held are noted in the front of this publication. In addition to the focus groups, expert reviewers from North Carolina and across the country gave feedback on these guidelines. We are grateful to everyone who contributed to this publication for their support of North Carolina's infants and toddlers and their families, teachers, and caregivers.

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“All infants and toddlers” includes children with emotional or physical disabilities, children from different cultures and circumstances, children whose first language is not English, children who have special health care needs, and children who have other special needs of any kind such as the effects of living in poverty, experiencing violence, abuse, neglect, or other family stresses.

¹ Other standards studied include North Carolina's licensing regulations for child care facilities, the *Infant Toddler Environment Rating Scale: Revised Edition* (Harms, Cryer, & Clifford, 2006) and the *Family Day Care Rating Scale* (Harms & Clifford, 1989) used to determine program quality points under the star rating system, and *Caring for Our Children, 2nd Edition* (American Academy of Pediatrics, 2002), which specifies national standards for the health and safety of child care environments.

Introduction

In recent years, we have learned a great deal about development during the first three years of life. Magazine articles describe the amazing things infants and toddlers can do. New research explains how their brains develop. When infants and toddlers experience caring relationships and positive environments every day, they are on their way to a bright future. Negative experiences and environments can create barriers to development and learning. With help, many children are able to overcome these barriers, but harmful experiences can have long-lasting effects. Clearly, a child's future depends on the strength of the foundation set during the first three years of life.

We have also learned about the vital role that caring adults play in children's lives. Infants and toddlers need adults who are warm and sensitive to their needs. Loving relationships are necessary for young children's emotional, social, physical, and cognitive development. To nurture development in all these domains, adults must know how children typically grow and develop. They must recognize that each child has individual strengths and may have special challenges. This allows families, caregivers and teachers to offer learning activities at the right level for each child. These experiences support and challenge young children to reach their potential.

There are many different cultures in North Carolina. A child's culture and background affects how he or she develops. Adults who work with young children must learn about and respect each child's culture and background. Gaining cultural knowledge and respect

helps caregivers and teachers work with families as a team. These partnerships help families reach goals they set for their children.

Some infants and toddlers face significant challenges in their everyday lives. These challenges include disabilities, special health care needs, poverty, violence, abuse or neglect, and other family stresses. Adults who care for these young children must be prepared to meet their special needs. They must begin by building trust and a sense of safety for children who are living in poverty or other stressful circumstances. This sense of security supports all learning and development.

This publication will assist people who work with infants, toddlers, and their families as they carry out these major responsibilities. The guidelines provide a common vision for the development and learning of all infants and toddlers in North Carolina. This common vision can help teachers, caregivers, and families work together for children's futures. Caring adults will be better able to nurture children consistently and create high quality learning environments. *Infant-Toddler Foundations* provides the guidance that caregivers and teachers need to realize their shared hopes and dreams for North Carolina's youngest citizens. By following these guidelines, adults can build positive relationships with children and nurture their desire to learn.

History and Background

There have been many national and state-level efforts to improve the quality of infant and toddler care. Two recent publications, *From Neurons to Neighborhoods* (National Research Council and Institute of Medicine, 2000) and *Eager to Learn* (National Research Council, 2001), have contributed to these efforts. In these reports, the National Research Council reviewed research and made policy recommendations about early childhood development and learning in the United States. The publication *Hardwired to Connect: The Scientific Case for Authoritative Communities* (YMCA of the USA, 2003) speaks of the importance of nurturing communities to help children grow into healthy, happy adults.

Early Head Start and the National Child Care and Development Fund are federal programs aimed at improving the quality of infant-toddler care. The Individuals with Disabilities Education Act (IDEA) mandates appropriate services for infants and toddlers with disabilities. These programs help provide high quality experiences for some of the infants and toddlers who need them most. Recent efforts focus on creating a system that ensures high quality programs for this age group. For example, the National Infant & Toddler Child Care Initiative @ Zero to Three, mentioned earlier, works with states to build a high quality infant and toddler child care system. It is funded by the U.S. Department of Health and Human Services. Such coordinated efforts are critical, because the average quality of infant and toddler child care continues to be low.

Within our own state, there have been numerous efforts to improve the quality of programs for infants and toddlers. North Carolina's Smart Start program is an early childhood initiative that is recognized across the nation. Smart Start formed public-private partnerships in every county that work together to help children be ready to succeed in school. Many other states have started similar programs. The T.E.A.C.H. Early Childhood[®] Scholarship Project focuses on increasing early childhood teacher education levels. The Child Care W.A.G.E.[®] Project supports education and increases compensation for early

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childhood teachers. Both of these programs started in North Carolina and both have expanded to several other states. These programs reward teachers and caregivers for staying at the same child care facility. They also support consistent relationships between adults and children that are so important to early learning.

The list of groundbreaking programs in our state does not end there. The North Carolina Division of Child Development (DCD) has funded many programs to improve the care infants and toddlers receive. DCD developed a star-rated licensing system for child care centers and family child care homes. This system helps parents locate programs that choose to meet higher standards of quality. DCD also funds a network of infant-toddler specialists. These professionals help child care facilities improve their infant and toddler programs and increase the number of spaces devoted to infant and toddler care. DCD collaborates with other programs that improve the health and safety of infants and toddlers in child care. Examples of these programs include Sudden Infant Death Syndrome (SIDS) training, emergency preparedness training for child care providers, and the services provided by child care health consultants. In 2005, regional Children's Developmental Services Agencies (CDSAs) were created to coordinate all assessment

and intervention services for children birth to three with disabilities and their families. In 2006, the state legislature significantly increased funding to serve infants and toddlers with disabilities through these agencies. North Carolina also offers high-quality preparation for the infant-toddler workforce. Birth through Kindergarten licensure is available through four-year colleges and universities. The Infant-Toddler Care Certificate Program is available through the community college system.

Even with these programs in place, North Carolina still faces the same challenges as the rest of the nation. Recent data show that the average quality of infant-toddler classrooms in this state continues to be lower than the level needed to promote optimum development and learning. With an increasing number of infants and toddlers in out-of-home child care for many hours each week, poor quality care is a grave concern. The fact that much of this care is unlicensed further increases concerns about quality.

High program quality is one essential element of an early childhood system that ensures positive outcomes for all children. It is also necessary to define more clearly the outcomes or end results that are desired for children so that child care providers can work toward goals they understand. Such guidelines specify desired results for infants and toddlers that all teachers and caregivers can share and strive to achieve.

As of 2005, all states had developed or were completing early learning guidelines for preschool children ages three through five. Almost half of the states had published guidelines for infants and toddlers or were in the process of writing them (Scott-Little, Kagan, & Frelow, 2006). North Carolina now joins this group of states. This set of guidelines strengthens continuing efforts to meet the challenges related to infant-toddler program quality. When teachers and caregivers use the strategies in this document to help infants and toddlers develop as these guidelines describe, program quality will improve.

Hopes for these Guidelines

Individuals who care for and educate infants and toddlers are on the forefront of providing what children need to thrive and learn. Communities and policymakers play a vital role by providing vision, support, and funding. We hope this publication will raise awareness about how important the first three years of life really are. We hope policymakers and communities will increase funding and support for infant and toddler programs. For children and for society as a whole, there is no more important work than caring for infants and toddlers.

The guidelines and strategies in this publication reflect up-to-date knowledge about infant and toddler development and learning. We hope they will help families, caregivers and teachers focus on experiences that will make a difference in children's lives. We hope that all adults who work with infants and toddlers will use these guidelines to set up environments, plan activities, and decide what is important to observe and assess in children's development. We hope they will use this document to talk with families about age-appropriate goals for their children.

When the words infants, toddlers, and children are used in this document, they refer to ALL children ages birth to three. This includes children who have or are at risk for disabilities and delays and children with special health care needs. It includes children who live in all neighborhoods, children of migrant workers, and children who are culturally and

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linguistically diverse. The following section explains how to use these guidelines to help ALL infants and toddlers develop and learn.

How to Use These Guidelines

We recommend that you begin by reading *Infant–Toddler Foundations* cover to cover. You will learn about:

- Principles that guided the writing Task Force and should guide your work with young children and families.
- Practical tips for using these guidelines appropriately.
- “What to Look For” – the guidelines for the development and learning of infants, young toddlers, and older toddlers.
- “What to Do” -- the strategies for supporting development and learning of infants, young toddlers, and older toddlers.
- “Real World Stories” show positive strategies at work in different settings.
- “Important Milestones” to help you determine whether infants and toddlers are developing like other children their age or might need to have their development evaluated.
- Other resources and references that can help you in your work with infants, toddlers, and families.

Once you have reviewed *Infant–Toddler Foundations* as a whole, it is time to focus on the children and families in your care. Check the age levels at the end of this section to see which guidelines might apply to the children you work with. Study the guidelines for your age group(s) under “What to Look For” in each domain area. You will find guidelines divided into five domains: Emotional and Social Development, Health and Physical Development, Approaches to Learning, Language Development and Communication, and Cognitive Development. Each domain is further divided into three to five areas. It may be helpful to start by focusing on one domain at a time.

These guidelines help to tell the story of what children at different stages of development may begin to do. You will probably notice that infants and

toddlers in your group regularly do some of the things listed for their age group. They may just be starting to show some abilities, and they may not yet do some of the things described. This is normal. Use the guidelines to think about “next steps” for each child in your group.

Then consider the natural moments during the day that might offer chances for children to take these next steps. What activities might you plan? What materials might you add to the environment? For children with disabilities or special needs who may not be at the same level as other children their age, use the same process described above: Think about “next steps” for these children by considering their current level of development and how they might develop next.

After the guidelines in each area, you will find strategies to support development and learning listed under “What to Do.” The strategies will help you think about how to turn a guideline into a natural moment for development and learning. Many of these strategies can be carried out with no special equipment needed. Choose strategies that seem most likely to help the children you care for take their “next steps.”

Sometimes the guidelines for a child’s age group do not seem to describe how a particular child is developing right now. This may happen whether or not a child has a disability. When this happens, look

at guidelines for younger or older age groups as appropriate. Use the *Foundations* document for preschool children if needed. Your goal is always to learn what developmental steps the child is taking now. Then you can choose strategies to support those next steps. Many strategies for children

with disabilities are suggested. Be creative and find ways to adapt other strategies. Families and other professionals can suggest additional ideas.

Finally, it is important to understand some of the terms used frequently in this document. These and other important terms can be found in Appendix C.

- **Teachers and Caregivers.** Adults who work with infants and toddlers include teachers and caregivers in centers; family child care home providers; kith and kin or family, friend and neighbor care; early intervention professionals, and many

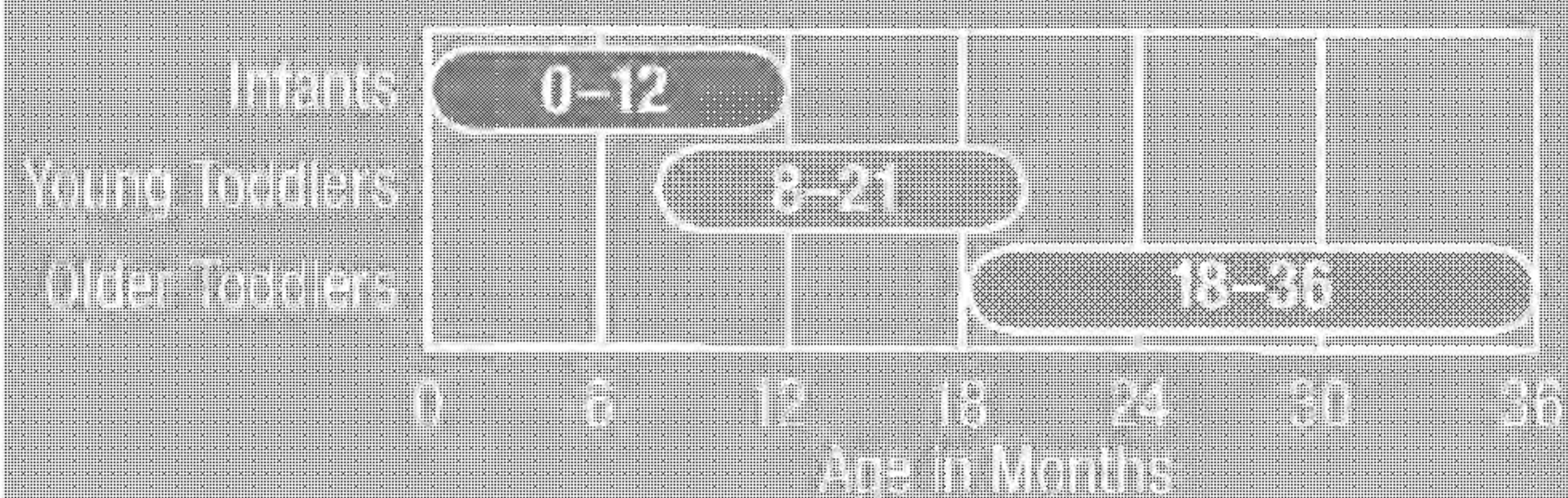


others. We use the terms “teachers” and “caregivers” to refer to adults who work with infants, toddlers, and their families. These terms are meant to include adults who work in other roles as well.

- **Domains and Areas.** “Domain” refers to one of the five broad categories in which guidelines and strategies are grouped, such as Emotional and Social Development. “Area” refers to one of the smaller categories within domains, such as Developing a Sense of Self.
- **ALL children.** The phrases “ALL children” and ALL infants and toddlers” are used to emphasize that the guidelines apply to all infants and toddlers in North Carolina, whatever their circumstances and needs.

A word about age levels

Guidelines for development and learning are divided into the three overlapping age levels described below. These age ranges help the reader know “where to start” when using the guidelines.



Use these age ranges as a general guide, not a rigid timetable! Many children will not reach all of the guidelines at the infant level by the time they are 12 months old. Likewise, some children under 18 months may display some abilities and skills listed at the older toddler level.

These guidelines can be used to help decide “what comes next” and to provide appropriate experiences for each child. Base your decision on what the child is able to do at this time, not the child’s age. This is especially important for children with disabilities.

Remember: Do NOT use these age ranges as “deadlines.” Each infant or toddler develops at his or her own pace.

Consult Appendix A if you are concerned about a child’s progress.

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Guiding Principles and Practices

Broad principles about how infants and toddlers grow, develop, and learn have guided the writers as we developed these guidelines. These principles should also guide the reader who is using the guidelines. Keeping these principles in mind will help you see each child as a whole person who is part of a family, a community, and a culture. These principles in turn suggest related broad practices to be carried out by all adults who work with infants and toddlers. Each guiding principle is presented below with the major practices and actions it suggests. By following these principles and practices, you will make it possible for each child to develop to his or her potential.

Principle One

Nurturing and responsive relationships are essential for healthy growth and development.

Relationships with sensitive, caring adults are a must for children’s development in all domains. Children develop strong emotional bonds, or secure attachments, with trusted adults. In fact, nurturing relationships promote healthy brain development. Infants and toddlers are much more likely to thrive when they have at least one close, secure relationship with a loving adult. These relationships can be with

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Practices

Build positive relationships with children.

Support positive relationships between children and all of the important adults in their lives.

Nothing is more important for infant and toddler development than the relationships adults build with the children in their care. To form these relationships, respond sensitively to children's communication and feelings. Pay attention to their strengths, needs, and interests. Keep expectations flexible. During a hectic day, it is sometimes easy to focus mostly on completing activities, transitions, and routines, reaching particular learning goals, or managing children's behavior. Make relationships the first priority. All other goals then become easier to reach. Children are more motivated and able to participate in activities and follow guidance when they care about and trust their caregivers. The strategies suggested in this publication promote strong, loving relationships with infants and toddlers.

anyone who is a regular part of a child's life. It might be a parent, family member, teacher, or caregiver. All are important.

Caring relationships help infants and toddlers develop social skills and learn about their feelings. When infants and toddlers feel secure with their caregivers, they feel free to explore their world. This hands-on exploration helps them to learn. When a sensitive adult helps a toddler just enough to finish a challenging activity, the toddler develops problem-solving skills and self-confidence. Children's interest in the people they care about leads them to watch and listen to these adults. This helps young children learn words. Research even suggests that positive nurturing can make a child less vulnerable to stress, depression, and anxiety. All development takes place in the context of relationships. The characteristics described in these guidelines develop best when infants and toddlers have secure relationships with the adults who care for them.

A child's culture may seem obvious due to race or ethnic origin, but culture is much more than these obvious differences. It influences all aspects of everyday life, such as how people talk and listen and how they carry out daily routines.

Parents and home environments have a major impact on children's development. Strengthen the relationships between children and their family members. Begin by forming supportive relationships with families. Communicate daily with families about each child's care. Exchange information and suggestions and work as a team.

Sharing these guidelines can be a starting point to build relationships with families. Focus on the positive and affirm families' commitment to their children. These steps can be especially helpful for families who are raising children with disabilities. Some children do not respond to positive interactions in the ways parents expect or hope they will respond. Your support can help parents continue their efforts and encourage them to try another approach. This support gives families' confidence in their ability to raise healthy, happy, successful children.

Principle Two

Each child develops within a culture.

Culture influences how people think about children's development and learning. Members of each culture share beliefs, attitudes, and values about what is good for young children. A child's culture may seem obvious due to race or ethnic origin, but culture is much more than these obvious differences. It influences all aspects of everyday life, such as how people talk and listen and how they carry out daily routines.

Adults help children become successful members of their culture. Adults let children know what they value and how to behave. Success may mean different things to different cultures. Children's culture influences how they develop and learn. It may influence how they respond to the strategies and activities suggested in this publication. North Carolina is home to families and children from a wide variety of ethnic and cultural backgrounds. Knowing each child's cultural background will help teachers and caregivers use these guidelines appropriately.

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Practice

Respect and value the diversity of children and families.

Families from diverse cultures have varied hopes and expectations for their children. Culture also affects how families view children with disabilities and what they want for these children. Show respect for families by asking about their goals for their children and listening to what they tell you. Listening can lead to an understanding of the family's culture. Work with families and adapt the strategies in this publication to achieve the family's goals whenever possible. Recognize that what feels "normal" and "right" may be different for different families. There are many ways to raise healthy, happy, successful children.

Help infants and toddlers feel secure and comfortable by providing care that's as much like home as possible. Include materials and activities from the cultures of the children and families in the group. Understand and support each child's culture and way of learning. "Correcting" behaviors and practices that are culturally based can confuse children and hurt their sense of self. Work with families to help children whose first language is not English to continue speaking their home language as they learn English. Most of all, think of the diversity of children and families as something to celebrate. Help all children to understand and enjoy the wonderful variety of people who are part of the human race.

Principle Three

Each child is unique.²

Although these guidelines describe what most young children from birth to three are likely to be learning and doing, each child is different. A wide range of abilities and behaviors is normal for children of the same age. A child may advance quickly in one area and proceed more slowly in another. Different children also have different temperaments. One child may be eager to try new things and meet new people,

² This guiding principle and several others are identical or similar to the guiding principles for the *Foundations* document for preschool children. The authors are deeply appreciative of the ideas offered by this earlier document.

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while another may hang back and need more support from a trusted adult before joining an activity or meeting a stranger. A young child with a disability may be very much like his or her peers in some ways and very different in others.

Practice

Respect each child and work to meet his or her unique needs.

Observe each child carefully to learn about his or her individual development, needs, interests, and temperament. Use these guidelines to pinpoint what each child is learning to do right now. Then choose strategies that are likely to support children in their efforts. This means keeping each child in mind when planning the routines of the day, creating activities, and adding materials to the environment.

Use what is learned from observing children to guide interactions with each child as well. Show you understand each child's language, behavior, and feelings. For children who have delays or disabilities, work with families and other professionals to make and carry out formal plans to meet their needs. An Individualized Family Service Plan (IFSP) is written for a child with a disability and his or her family. A health care plan is written for a child with a chronic health condition like asthma or food allergies. Carry out these plans as part of daily activities and routines.

Principle Four

Each child develops as a whole.

Children's bodies, feelings, thinking skills, language, social skills, and love of learning all develop together. These guidelines are divided into different domains and areas of development to make them easier to read and think about. In the child's life, they cannot be separated; a child develops and grows in all domains at once. Each new ability or skill builds on earlier ones. Each new ability or skill also helps the child develop in more than one domain.

For example, a young toddler learns to look for her mother's reaction to a noisy new toy. This shows that she trusts her mother and feels secure with her (Emotional and Social Development). She may also learn the name of the toy by looking at and listening to her mother talk about it (Language Development and Communication). The toddler also knows that her mother's face and body can tell her "try this toy" or "don't touch this toy." This knowledge will help to keep her safe and healthy in unfamiliar situations (Health and Physical Development). Similar guidelines sometimes appear in more than one domain or area. This overlap occurs on purpose. It shows that development in one area is connected to development in other areas.

The importance of a "medical home":

All infants and toddlers should receive regular health care. Immunizations protect the child against life-threatening illnesses. Well-child visits help identify health or developmental needs that may require early intervention services. These visits should include vision, hearing, dental, and developmental screenings. Having a "medical home" means that the child sees the same health care provider regularly. A health care provider who sees a child regularly is more likely to notice anything that is out of the ordinary. This is one reason why a "medical home" is so important for infants and toddlers.

Practice

Promote the development of the whole child.

Use activities, materials, and daily routines to support children's development in all areas. To help children be ready for school, focus on their emotional and social development, health, and attitudes about learning. These contribute to future learning and success. So do children's thinking skills, their basic knowledge, and their communication skills. No one area is more important than another area is.

Strategies listed under "What to Do" in one domain will help children to develop in other domains as well.

For example, use diapering as a special one-on-one time with an infant. This builds a secure relationship, a foundation for emotional and social development. The diapering routine also promotes cognitive development by helping the infant anticipate what comes next. Talking during diapering promotes language development by helping the infant to connect what is happening to the words for common objects and events.

Observe each child's health daily and encourage each family to take their child to see the same health care provider regularly. These steps reduce the chance that health and physical problems will interfere with a child's learning and development later. Remember, and remind parents and policymakers, that being ready for school involves much more than knowing colors, shapes, numbers, and letters.

Principle Five

Development begins before birth and continues throughout life.³

These guidelines focus on development between birth and three years. However, the infant's body, brain, and abilities develop in amazing ways before he or she is born. And development in all areas continues through the infant and toddler years into the preschool years and beyond. This includes brain development.

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In other words, it is incorrect to focus only on the infant-toddler years. This focus "begins too late and ends too soon" (National Research Council and Institute of Medicine, 2000, p. 7). These guidelines cover a significant part of a child's development, but they tell only part of the story. People keep developing throughout their lives.

Practice

Promote prenatal care and education.

Help children and families make smooth transitions, and strengthen programs for children of all ages.

Prenatal care supports the health and well-being of a mother and her baby. The health of the mother and the family directly affect the infant's development before birth. Families affected by depression, violence, or substance abuse need early treatment. This supports the health of the family and the child developing in the womb.

Provide emotional support to families. Tell them about the benefits of prenatal care and healthy practices. Advocate for improved prenatal care and education programs in your community. These steps will help babies come into the world ready to continue developing and learning as described in these guidelines.

Help children and families make smooth transitions when they leave infant-toddler programs. Work with

³ This principle is taken from the *Florida Birth to Three Learning Standards* (Florida Partnership for School Readiness, 2004).

other teachers and caregivers to make programs for preschoolers ready to receive them. High-quality programs for preschoolers and older children build on the foundation created in the first three years. Work with other advocates to improve programs and schools for all children in your community. Children will reach their full potential only when high-quality environments, caring relationships, and effective teaching continue throughout their childhood.

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Principle Six

Development occurs in predictable patterns.⁴

Even though each child develops at his or her own pace, there are predictable steps or stages of development. One ability or skill usually develops before another one. The earlier achievement forms the foundation for the later one. For example, most children sit up, crawl, pull to stand, “cruise” along furniture, and then walk independently. Children vary a great deal, however, in when and how they reach each stage. One child may progress quickly from a “belly crawl” to cruising and walking. Another child, with a quiet temperament, may be content to sit and

explore toys that are within reach and begin walking rather late. A third child, with a physical disability, may need physical therapy and special equipment to help him walk. All three children eventually progress to walking in their own way and at their own time. These guidelines describe the typical steps in a young child’s development. There will be differences in the way children achieve these steps.

Practice

Know typical patterns of development and be able to recognize variations.

Develop a thorough knowledge of the steps and stages of development. These guidelines outline typical patterns, but it is important to learn more about child development. This deeper knowledge leads to reasonable expectations for children. It suggests environments and experiences that are appropriate for young children. Knowing the typical patterns of development helps you to know the “next step” for each child.

Learn about the many ways that development can vary as well. Be able to recognize when this variation is within the range of normal development. Know when to ask for further evaluation to find out if a child has a delay or disability. Appendix A of this book includes a list of “Important Milestones.” Use this resource to help you decide whether a child may need further screening.

Principle Seven

Infants and toddlers are active learners and they learn through play.

Infants and toddlers are ready to learn from birth. They learn best in safe environments where they can be actively involved in things that interest them. Children respond to what excites them and gives them pleasure. This stimulates them to move on to new discoveries.

To learn about the world and about what they can do, infants and toddlers must be able to play with toys and materials. They do not need special or expensive toys to help them develop and learn. What they need is time to explore the everyday world with all of their

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Practice

Set up environments to encourage active exploration and play.

Get involved and follow children's interests during their play.

Inform parents, colleagues, and policymakers about the importance of active learning and play.

High-quality infant-toddler environments encourage exploration and play. Create a daily schedule that includes plenty of time for children to choose what they want to do. Plan activities, but do not require all children to participate. Place an assortment of materials where infants and toddlers can reach them. Arrange space so children can move around and explore safely. Allow infants and toddlers to be out on the floor for most of the day. Do not confine them in swings, bouncy seats, or playpens for long periods of time. Infants and toddlers also learn from their active involvement in caregiving routines. For example, they can experience textures of foods during mealtime and learn to separate trash from dishes to be washed during cleanup.

Setting up the environment and completing routines is not enough however. Children learn more when adults get involved in their play. Notice what infants and toddlers are doing and respond to their interests. Help children pursue the things they are interested in, listen to them and answer questions, and talk about what they are doing. Show toddlers how to play together and resolve conflicts. For children whose disabilities make it harder for them to explore and play with other children, bring the environment to them. Show children new possibilities and skills and draw other children into play with children who have disabilities.

Tell others about the role of active exploration and play in children's learning. All parents, colleagues, and policymakers share the goal of preparing children to succeed in school. Some may believe that the best way to do this is to provide school-like experiences earlier in life. Be prepared to explain how active exploration and play are, in fact, better ways to help children be ready for school.

senses and to move their bodies freely. Children who have disabilities learn to explore in ways that work well for them. They may explore in different ways from their peers who are developing typically. Some children need prompting or coaching from adults to play and explore. These guidelines describe how infants and toddlers develop in settings where they can move about and explore their world for much of the day.

Young children learn through play. Play includes activities that are freely chosen by the child, meaningful, and enjoyable to children. Infants and young toddlers often repeat actions that help them discover what objects are like and what their bodies can do. Later in the toddler years, play begins to be more symbolic. It becomes a way for children to show what they know and remember and to try out new roles. This kind of play helps children develop thinking skills and early literacy skills. As older toddlers begin to play together, they learn from one another and start to develop the social skills they will need for success in school and later in life. The strategies in this publication suggest many ways to help infants and toddlers develop and learn through play.

Becoming an Advocate for Children in Child Care

A child care **ADVOCATE** is a person who speaks and writes to others, including law-makers, to ask for support for young children, their families and caregivers.

- Learn all you can about how infants and toddlers develop and learn.
- Apply what you learn to create a high quality child care environment for young children.
- Share your ideas, skills and resources with other child care providers.
- Write or call your congress people and senators and tell them your concerns.
- Raise community awareness.
- Share with others your love for young children.
"I really enjoy working with young children. I love helping them develop into wonderful human beings."
- Explain to others why quality child care is important for infants and toddlers!
"Young children are our future. They need nurturing and safe environments and loving caregivers like me."
- Ask your community for what you need!
"I want to remain an infant caregiver but I need affordable health insurance. I wish child care providers were paid enough to get health insurance." OR "I want to learn more about early childhood development but I need substitute care so I can attend class."
- Invite community members and local politicians to visit your child care center or home. Tell them what you need!
"Several child care providers are organizing a tour of local child care facilities. The mayor and town council are invited and the local radio station will attend."
- Write articles for local newspapers, fliers and bulletins.
- Join professional organizations that work for the good of young children and families.

(See Appendix B for a list of state and national organizations.)

Principle Eight

ALL children are children first.

Many infants and toddlers develop in ways that are not seen as “typical” for their age. They may have a disability or be delayed in reaching some milestones of development. They may be “at risk” for delays due to poverty, premature birth, abuse or neglect, or many other circumstances. They may have special health care needs. Some infants and toddlers may need extra time or assistive technology to complete activities that other children do easily.

All children develop in their own unique way, as part of a family, a community, and a culture. They thrive on positive relationships and time to play with adults and other children. They are motivated to learn about and influence the world around them. Children with disabilities and other special circumstances will make progress on the abilities and skills listed in this document. They may do so at different ages and in different ways than other children.

Practice

Promote inclusion and high quality inclusive settings for ALL children.

High-quality infant-toddler programs include all children and celebrate each child’s strengths. Anyone who works with infants, toddlers, and families is likely to have a child with a disability or other special need in their group at some point. Child care providers who responded to a recent survey reported that 3.54% of the children in their programs had a delay or disability (Partnerships for Inclusion, 2005).

Learn new skills and strategies as needed to work with children in your group. Prepare the environment to be accessible to each child and encourage positive interactions among all children. The effort required to reach these goals benefits every child. Children with disabilities learn appropriate behaviors and new skills from their peers, who act as role models. All children in the program learn to appreciate the strengths and gifts of people with different abilities. This publication includes strategies to meet the needs of individual children. This includes children who have disabilities,

delays, special health care needs, and other special circumstances.

Principle Nine

Everyone in a child's life plays a role in his or her development.

As discussed in Principle One, relationships with families, caregivers, and teachers provide the foundation for young children's development. However, many other people in a child's community also play a role in nurturing that development. People who administer programs set policies for their organizations. They supervise staff and emphasize the goals they believe are most important. Primary health care providers monitor children's health. They are the experts many families turn to first with questions about a child's development.

Lawmakers and other community leaders decide how to spend public money. They also pass laws and make rules that affect the quality of programs. Charitable organizations and foundations fund programs that help infants and toddlers. Collaboration among different people and organizations – or a lack of collaboration – affects the success of programs that support infants, toddlers, and their families.

Decisions made by people in these roles can affect the health and wellness of parents and caregivers. This in turn affects the well-being of infants and toddlers. These guidelines focus on the things caregivers and parents can do day to day to support young children's development and learning. However, many other people and organizations affect how well caregivers are able to realize their hopes and dreams for children.

Using These Guidelines

It is important for everyone who uses this publication to follow the Guiding Principles. Follow these "Do's and Don'ts" to be sure you are using these guidelines appropriately.

They SHOULD be used to...

- Provide a common set of guidelines for development and learning.
- Recognize individual differences among infants and toddlers.
- Educate professionals, families, communities, and policymakers about the importance of the first three years of a child's life and the contribution of adults who work with infants and toddlers.
- Promote shared responsibility for very young children's early care and education.
- Support high-quality environments and experiences for ALL infants and toddlers.
- Support appropriate caregiving and teaching practices in infant and toddler programs.
- Provide a guide for choosing or creating appropriate curricula to help ALL children develop and learn.
- Provide a guide for observing young children's development and learning.

They should NOT be used to...

- Serve as an assessment checklist.
- Single out or "blame" anyone.
- Decide that any child has "failed" in any way.
- Deny access to programs or services.
- Create expectations and requirements for programs that conflict with other standards child care providers must follow.
- Emphasize child outcomes without recognizing the need for high-quality programs to provide those outcomes.
- Take the place of formal developmental screening or evaluation of children.
- Discredit the values, beliefs, or culture of any family.

Appreciation is expressed to the authors of *Foundations for many of these ideas about using guidelines for development and learning appropriately.*

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Practice

Work together with colleagues, families, administrators, policymakers, and communities to support young children's development.

As stated in the Foundations guidelines for preschool children, "it takes everyone working together" (NCDPI, 2004, p. 7). Individuals who work with infants and toddlers have a special responsibility to make others aware of how very young children develop. Use these guidelines as a starting point to educate people in the community about infant and toddler development. Explain the resources that are needed to support infant and toddler programs. This may be as simple as talking to a colleague about appropriate infant and toddler practices. Or it may involve writing letters or attending public meetings. There are many ways to advocate for policies and funding that will benefit infants, toddlers, and families. Learn about the wide range of programs and services available in the

Decide "what comes next" for each child in different areas and create opportunities for the child to develop those abilities or skills.

community. Collaborate with others to coordinate services for children and families.

If you are an administrator, consider staff wellness when making decisions about your program. Staff members who are healthy and not under stress are more likely to provide the sensitive, caring interactions young children need. Use these guidelines for staff development. Share them with families.

Consider family needs as well as children's needs when setting goals and policies. All of these steps will help teachers and families are ready to form positive relationships with infants and toddlers. It will help them provide the support and the challenges that young children need to develop and learn.

Parents, caregivers and teachers have day-to-day responsibility for helping infants and toddlers reach the goals described in these guidelines. They cannot do it alone. They must have support from administrators, policymakers, and the community to achieve these goals.

Frequently Asked Questions

What ages are covered by *Infant–Toddler Foundations*?

These guidelines and strategies apply to children from birth to 36 months of age. *Foundations* covers guidelines and strategies for children ages three, four, and five who are not yet in kindergarten. Together, the two sets of guidelines cover all of the years before children enter kindergarten. Some readers may be surprised that children 24 to 36 months of age are considered “toddlers.” Many programs think of only one-year-olds as toddlers. These guidelines and strategies are appropriate for two-year-olds as well. Expecting two-year-olds to behave like older preschoolers often leads to frustration for both children and adults. Use this book to create appropriate expectations and nurturing environments for all children under the age of three.

What does it mean if a child in my group does not do the things described in the guidelines for his or her age level?

The age levels in this book provide a general guide about what to look for at different ages. Some of the characteristics usually emerge early in the age range for each level; others emerge later. However, each child is different. Some children will seem to “jump ahead” in one area while moving more slowly in another. Even children at the top of an age range may not show every ability or skill listed for that level. Look at a child’s overall pattern of development and progress to decide whether he or she is developing as expected. Do not focus narrowly on just a few skills or abilities.

On the other hand, be alert for signs of possible developmental delays. When children do not reach expected milestones by a certain age, their development may need to be checked. A list of “Important Milestones” is found in Appendix A. If you see that a child is not reaching important developmental milestones by the expected age, talk with parents about what all of you have observed. Contact your regional Children’s Developmental

Services Agency (CDSA) for further information about developmental screening. (To locate the CDSA for your area, call (919) 707-5520 or visit www.ncei.org/ei/itp/cdsa.html.) Always discuss a referral with the child’s family.

How are these guidelines different from standards we already have?

Infant–Toddler Foundations focuses on how we can expect infants and toddlers in North Carolina to develop and learn when they receive high-quality care and education. Thus, these guidelines focus on the development and learning of children. They do not focus on standards or requirements for child care programs. Many other standards focus on program characteristics that support children’s development and learning. These include licensing rules for child care facilities, quality indicators in the Environmental Rating Scales, and program standards for Early Head Start. Standards for national accreditation by the National Association for the Education of Young Children or the National Association for Family Child Care also focus on program characteristics.

Use these guidelines along with standards for programs such as those listed above. High-quality programs help infants and toddlers develop and learn as described in these guidelines. Children develop best in programs with high standards.

Some programs such as Early Head Start and the Infant-Toddler Program for children with disabilities have their own expectations for child outcomes. *Infant–Toddler Foundations* is designed to be consistent with these expectations.

How can I use these guidelines in my work with children who have disabilities or delays?

Infants and toddlers with disabilities or delays will make progress toward the guidelines defined in *Infant–Toddler Foundations* when they receive high-quality care and education. They may move more slowly than their peers in some or all areas. Some children will not develop all of the skills and abilities listed. When working with an infant or toddler with

a disability, begin by looking at the guidelines at their age level. If none of the guidelines at this age level seem to describe what the child with a disability is trying to do now, look at an earlier age level. For some children, guidelines at two or three different levels will describe their current development. Decide “what comes next” for each child in different areas and create opportunities for the child to develop those abilities or skills.

The strategies listed under “What to Do” in each area can help all children develop and learn. Some strategies will work better with some children than others. It will be necessary to adapt strategies to help particular children learn. Specialists such as early interventionists, speech-language pathologists, physical therapists, and occupational therapists can help parents, teachers and caregivers learn special strategies. These strategies will help children with disabilities or delays develop to their full potential.

Early Intervention for Infants and Toddlers with Disabilities and Delays

The North Carolina Infant-Toddler Program provides services for children ages birth to three who have disabilities and delays. According to the requirements of the Individuals with Disabilities Education Act (IDEA), children and their families receive specialized services. Regional Children’s Developmental Services Agencies (CDSAs) coordinate these services. They receive referrals, coordinate assessments, and determine whether children are eligible for services. Each eligible child and family has an Early Intervention Service Coordinator to work with them. This person works with the family to write and carry out an Individualized Family Service Plan (IFSP). This plan describes outcomes the family wants to work toward for themselves and their child. It outlines the services to be provided and is reviewed at least every six months. For more information and to locate the CDSA for your region, visit <http://www.ncei.org/ei/itp.html> or call 919-707-5520.

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Are these guidelines meant for families, too?

Many families will find the information in this publication useful. Child care providers can use this publication to help families understand what your child care program is trying to accomplish and why you do the things you do. It can also help families understand what is reasonable to expect of their children at different ages. Families often worry about whether their children will be ready for school. These guidelines and strategies help to show how the everyday activities of infants and toddlers will help them to be ready. Many of the strategies in this publication are things families can do at home to help their children develop and learn.

Some families will enjoy reading *Infant-Toddler Foundations* from cover to cover. Others will prefer to attend workshops or just talk with you about it. Introduce these guidelines to families and ask whether they would like to learn more. Follow their suggestions for learning experiences that will be helpful for them. Keep in mind that some families have a beginning literacy level. Share information by talking with these families rather than handing them a document to read. Locate adult translators or interpreters to help you communicate with families who speak limited English.

Is this a curriculum for infant and toddler programs?

Infant–Toddler Foundations is NOT a curriculum. It provides a guide for choosing and evaluating curricula and daily activities. These guidelines can help you decide what experiences will help infants and toddlers develop and learn in important ways. The strategies suggest opportunities to provide for children. This publication will not tell you which curriculum, activities, or materials are best for the children in your care.

There are many different curricula that might help infants and toddlers in your group develop as these guidelines describe. Think about children’s needs and their current development. Consider their families’ cultures and preferences. Bear in mind your own philosophy, the resources you have available, and any other factors that are important to you. Then you can choose a curriculum, or develop your own curriculum, to meet the needs of the children you serve.

Is this an assessment tool?

It is *not* an assessment tool. *Never* use these guidelines identified under “What to Look For” as a checklist. Using the possible observations listed under the “What to Look For” section as a checklist could suggest that there is something wrong with children who have not achieved everything on the list. The information listed under “What to Look For” are guidelines which describe the areas of development and learning that parents, teachers and caregivers should promote. Use the “What to Look For” material to guide your observations of children. Observations tell you whether infants and toddlers are developing the characteristics described in each domain area.

The strategies listed under the “What to Do” sections of each domain area are provided to help you use your observations to choose appropriate activities, toys, and materials for children. While you may want to try many or all of these strategies, remember not all children will respond to each one. Appropriate experiences help each child take the next step and continue to progress. Because each child is unique, some strategies will work with some children and not with others.

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Are these guidelines based on research?

These guidelines and strategies are based on current research about child development. This research helped the Task Force decide which guidelines were most important to include. We also reviewed research to make sure the guidelines state appropriate expectations for infants and toddlers. In other words, research tells us what characteristics infants and toddlers are likely to be developing in the first three years of life. These guidelines reflect what we have learned through research.

Why does *Infant–Toddler Foundations* include these domains?

The five domains in this publication are part of North Carolina’s official definition of school readiness. This definition was developed in 2000 by the Ready for School Goal Team (Scott-Little & Maxwell, 2000), based on a national report on school readiness (National Education Goals Panel, 1995). The domains are the same as those used in the *Foundations* document focused on preschool children ages three to five, so the two sets of guidelines can be

used together easily. In everyday life, it is not possible to separate these domains. Each child develops as a whole person. However, organizing the information into five domains makes it easier to think about and explain the important aspects of infant and toddler development.

How does *Infant–Toddler Foundations* relate to *Foundations*?

This publication covers the same domains of development as North Carolina’s early learning

guidelines for preschoolers (*Foundations*). In most cases, the areas of development listed under each domain are also the same as *Foundations*. In some cases they are different because a different organization was needed to show infant and toddler development more accurately. The table below shows how the domains and areas of this document align with the domains and areas of *Foundations*. When infants and toddlers develop the characteristics and behaviors described in these guidelines, they are ready to accomplish the Widely Held Expectations described in *Foundations*.

Alignment Chart for *Infant–Toddler Foundations* and *Pre-K Foundations in North Carolina*

| Domain | Infant-Toddler Foundations | Foundations |
|---|---|--|
| Emotional and Social Development | Developing a Sense of Self | Developing a Sense of Self |
| | Developing a Sense of Self with Others | Developing a Sense of Self with Others |
| | Learning About Feelings | Developing a Sense of Self AND Developing a Sense of Self with Others |
| Health and Physical Development | Physical Health and Growth - Nutrition - Sleep - Physical Activity | Physical Health and Growth |
| | Self-Care | Self-Care |
| | Safety Awareness | Safety Awareness |
| | Gross Motor/Large Muscle | Motor Skills |
| | Fine Motor/Small Muscle | |
| Approaches to Learning | Curiosity and Eagerness | Pondering, Processing, & Applying Experiences and Curiosity, Information-Seeking & Eagerness |
| | Confidence, Risk-Taking and Problem Solving | Risk-Taking, Problem-Solving & Flexibility |
| | Attention, Effort, and Persistence | Persistence, Attentiveness, & Responsibility |
| | Imagination, Creativity and Invention | Imagination, Creativity and Invention |
| | Wonder and Delight | Aesthetic Sensibility |
| Language Development and Communication | Receptive Language (Hearing/Listening/Understanding) | Receptive Language |
| | Expressive Language (Talking/Communicating) | Expressive Language |
| | Early Literacy | Foundations for Reading AND Foundations for Writing |
| Cognitive Development | Sensory Exploration & Discovery | Scientific Thinking & Invention |
| | Social Connections | Social Connections |
| | Concept Development & Memory | Pondering, Processing, & Applying Experiences AND Mathematical Thinking & Expression |
| | Problem Solving | AND Scientific Thinking & Invention |
| | Creative Expression | Creative Expression |

Why do similar guidelines and strategies appear in more than one domain?

For very young children, one developmental step often forms the foundation for future development in more than one domain or area. For example, the ability to imitate others helps a child form relationships and learn words. Imitation allows children to participate in pretend play and learn self-care routines. Toddlers imitate the use of common objects, appropriate ways to behave, and much more. Thus, imitation appears in the guidelines for all five domains. Repeating guidelines in this way helps to show how all of the domains are connected.

How will these guidelines help children to be ready for school?

It is easy to see how some of these guidelines relate to the things children will learn later in school. For example, when toddlers do things described in the guidelines like “discover nature and changes in nature” and “try to count and use some number words,” it is obvious that these behaviors show early science and mathematics knowledge developing.

Some readers may wonder how other guidelines relate to school readiness. For example, how does the infant’s ability to “use their face and body to express emotion” help them to be ready for school? If you think about the later skills and abilities that depend on being able to communicate feelings, the answer becomes easier to see. When adults respond sensitively to children’s feelings, children know it is all right to express them. When adults use words for feelings, children begin to use words for feelings, too. As they get older, children can use words instead of reacting with their bodies. Children who cannot talk may use body movements to communicate. They may use special equipment, sign language, or cue

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cards to help them communicate with words. Better communication helps children get along well with peers and adults. This in turn helps them succeed in school. Infants need to begin expressing their feelings, and adults have to respond appropriately, before the process described above can start.

Healthy development in all domains is necessary for success in school. Together, all of the skills, abilities, and characteristics included in these guidelines form the foundation for learning in kindergarten and later grades.

Emotional and Social Development

Children's emotional and social development involves their thoughts and feelings about themselves and their relationships with others. Learning to manage and express feelings is also part of this domain. Infants and toddlers become aware of themselves and how they are different from anyone else. They begin to learn how to manage their emotions and form positive relationships with adults and peers.

A child's temperament plays a big role in emotional and social development. Temperament is the unique way a child responds to the world around him or her. People react differently to infants and toddlers with different temperaments. For example, adults may not interact as warmly with a toddler who is shy and solemn as they do with a toddler who is bubbly and friendly. This can affect children's relationships with others and how children see themselves. Sensitive adults accept that each child is different. They learn to interact with children in ways that match their temperaments and show caring for all children.

Sensitive interactions also help infants and toddlers form secure attachments. Attachment is the strong tie children feel with special people in their lives. Children feel pleasure and comfort when the people they are attached to are nearby. They form attachments to adults who are present much of the time, such as family members and caregivers.

Healthy emotional and social development depends on secure attachments. Children develop a positive sense of self when they experience positive emotional support and secure relationships. Many experts believe that healthy emotional and social development is necessary for infants' and toddlers' future development and learning in all domains.

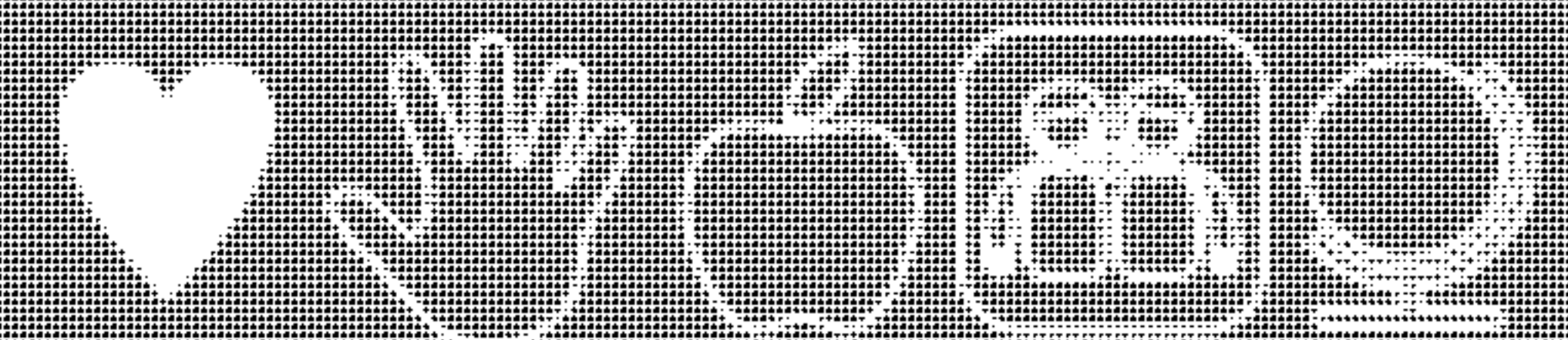
Infants and toddlers with sensory impairments, such as vision or hearing loss, may need specialized assistance to develop a strong sense of self. Caregivers must make the effort to understand and respond to their signals, and show them how to explore and influence the world around them.

Infants and toddlers who have or are at risk for disabilities may need extra help to form relationships and express feelings appropriately. They can develop to their potential when caregivers remain warm and consistent and teach them the skills they need.

Developing A Sense of Self

Developing A Sense of Self With Others

Learning About Feelings



Developing a Sense of Self

Children learn about themselves as unique individuals through their interactions with the world around them. They develop awareness of their bodies, their feelings, and their ability to influence the world around them.

(b)(6)

Young Toddlers may begin to:

- ♥ Use hands, mouth and eyes in coordination to explore their own body.
- ♥ Recognize themselves in a mirror (move body on purpose to see action in mirror, say name or "That's me.").
- ♥ Explore the environment on their own.
- ♥ Show caution toward places where there are drop-offs or heights.
- ♥ Cry, laugh, or express feelings in other ways to get another person to do something.
- ♥ Show outward pleasure in things they have done (clap, smile big at adult, say "Yay!").
- ♥ Control some impulses (look at forbidden object and say "No, no," allow adult to direct them to a different activity).

Older Toddlers may begin to:

- ♥ Become aware of themselves as unique individuals (recognize themselves in pictures, say "I big girl.").
- ♥ Show awareness of specific body parts.
- ♥ Participate in play with others.
- ♥ Adjust their behavior to be appropriate for the situation they are in (tiptoe near a sleeping baby, imitate adult manners at special event).
- ♥ Display intense emotions such as temper tantrums less often.
- ♥ Use objects in the environment to show others what they want them to do (bring box to adult to be opened, open door to show they are ready to leave).
- ♥ Show emotions such as pleasure, shame, embarrassment, guilt and frustration.
- ♥ Develop "I can do" attitude (start task with confidence, say "Me strong!").
- ♥ Attempt to take care of themselves without help from others (push adult away, say "Me do it myself!").
- ♥ Show increased awareness of their own toys and other possessions (say "Mine", put things in own room or cubby).

What to Look For

Infants may begin to:

- ♥ Coo to show they are happy or excited.
- ♥ Cry to show distress or pain.
- ♥ Soothe themselves and settle down once their basic needs are met.
- ♥ Develop awareness of fingers, hands, toes and feet.
- ♥ Gain awareness of body control (study own hands and feet moving, roll over and back).
- ♥ Show interest in their image in a mirror (stare, smile, reach out to touch).
- ♥ Eat and sleep on a more regular schedule.
- ♥ Respond to their name.
- ♥ Show preferences for certain foods.

What to Do

- ☑ Observe children carefully. Learn how each child prefers to be held for feeding, sleeping or comforting and how he or she reacts to things like noise, light, or touch. Use what you learn to provide consistent, predictable care and help each child be comfortable. Share what you know with others who care for the child.
- ☑ Keep brief notes on each child to help you remember the unique needs of each

individual child. Use this information as you plan how you will care for the child.

- ☑ Take plenty of time to interact with each infant in a relaxed way during everyday caregiving routines such as diapering, dressing and feeding. Plan ahead so that you have everything you need (such as supplies and clean hands) before you start routines. Then you can focus only on the child.
- ☑ Hold and talk to babies individually throughout the day, not only during diapering, dressing and eating times. Cuddle them while reading a book or playing with a toy.
- ☑ Talk with infants as you watch them explore their bodies. For example, say "Look, at your hands, Aaron. You are moving your fingers."
- ☑ Be on the floor with children. Support and encourage them by making eye contact and talking with them.
- ☑ Offer a comfort object such as a favorite blanket or stuffed animal to help a child feel secure when he or she is stressed.
- ☑ Place unbreakable mirrors in different areas of the room so children get to see themselves often (for example, above the changing table and on the walls at child's eye level).
- ☑ Let children feed themselves finger foods (but be aware of choking hazards). Encourage them to hold their bottle or cup and provide small spoons so they can practice scooping food.
- ☑ Display pictures that show people from different cultures and different types of families in a positive way. Include pictures of children in your group and their families.
- ☑ Offer toys, materials and activities that are interesting and challenging for children to explore. When a child has mastered a toy or puzzle, offer one that is a little harder.
- ☑ Try to avoid telling children "no" by giving them many choices that are OK. Give them many chances to make choices and decisions. For example, if a toddler tries to grab a toy from another child, offer two other similar toys to choose from. Offer two different snacks, or let children choose which book to read.
- ☑ Respect toddlers when they try to get what they want or do something their own way. Be patient, give them time to work at things, and encourage them to communicate what they want.

Real World Stories

Ms. Butler has just added a play tunnel and beach balls of various sizes to her toddler classroom. Two-year-old Trey grabs a large ball and shoves it into one end of the tunnel. The ball gets stuck at the first rib, and he kicks it hard. It doesn't budge. Trey runs around, crawls through, and pushes the ball back out from the other end with his head. "Look, Ms. Butler!" he calls. "I got it out!"

"Good for you! Is there another ball that would fit?" she asks. Trey looks around at all of the balls and chooses a smaller one. He squats down and pushes it into the tunnel, watching to see if it rolls through. Then he crawls through the tunnel after the ball.

Allia, who is two-and-a-half and new to the classroom, watches Trey with interest. "Would you like to try it?" Ms. Butler asks. Allia nods but doesn't move. Ms. Butler moves closer to the tunnel and points to two different balls. "Shall we try this one, or that one?" Allia runs over, picks up the smaller ball, and slowly crawls through the tunnel, pushing the ball in front of her.

Trey starts to come back through the tunnel in the opposite direction. Ms. Butler gently tells him to start at end where she is standing. "Allia's coming through," she explains. "You can't want to bump into her." Trey looks in and sees Allia, then runs around to Ms. Butler. Allia crawls out the other end and holds the ball over her head with a big smile on her face.

Both toddlers in this example try a new challenge and show pride when they succeed. This experience helps them feel good about themselves and what they can do. Ms. Bennett makes this possible by providing the tunnel and the beach balls. She knows that children have different temperaments and that some need more encouragement than others. Trey jumps right in. All he needs is an enthusiastic response and a well-chosen question. Allia is slower to warm up to the new activity. Ms. Butler also knows that adults in Allia's home often show children how to play. Allia may be waiting for directions. The teacher gives just enough direction and support to help her get started. The toddler's happy expression shows that she is becoming more confident.

This activity also gives toddlers the opportunity to begin learning how to play together. Ms. Butler helps them do this when she reminds Trey to look out for Allia. When the toddlers are more familiar with the activity and each other, she may let them try to work out the problem of meeting each other in the tunnel.

- ♥ DEVELOPING A SENSE OF SELF and SENSE OF SELF WITH OTHERS
- CONFIDENCE, RISK-TAKING AND PROBLEM-SOLVING
- ✎ GROSS MOTOR, PHYSICAL ACTIVITY
- PROBLEM SOLVING

Developing a Sense of Self With Others

Infants and toddlers develop the beginnings of social skills as they interact with other people. They form attachments, show caring and concern for others, and learn how to play with other children.

What to Look For

Infants may begin to:

- ♥ Become attached to caregivers who are consistent, sensitive and responsive.
- ♥ Notice other infants (look at them, reach for them, touch them).
- ♥ Make eye contact with others.
- ♥ Seek to be near their caregivers.
- ♥ Enjoy being held, rocked or talked to.

(b)(6)

- ♥ Imitate sounds, facial expressions or gestures they see other people do (peek-a-boo, hands up for “so big”).
- ♥ Become upset when another infant is crying.
- ♥ Recognize and reach out to familiar people.
- ♥ Smile, cry, or physically show that they need attention from a caregiver.

Young Toddlers may begin to:

- ♥ Imitate actions of older siblings and playmates.
- ♥ Enjoy playing alongside other children, sometimes imitating their actions.
- ♥ Offer toys and objects to others.
- ♥ Show attachment and emotional connection towards others (“check in” with caregiver while playing, greet family member with big hug).
- ♥ Look at familiar caregivers to see how they are reacting to a situation or person.
- ♥ Repeat behaviors to get attention (throw or bang toys, make loud sounds).
- ♥ Cry when their parent or family member leaves (separation anxiety).
- ♥ Separate from parent or main caregiver without being overcome by stress.

Older Toddlers may begin to:

- ♥ Show attachment with people who take care of them on a regular basis (give hugs and kisses, say “I love you,” seek out caregiver when upset or uncertain).
- ♥ Show interest in other children (spontaneously hugs peers, want to play with certain children, call other children “friends”).
- ♥ Become less likely to get upset when their primary caregiver is not with them.
- ♥ Learn to control their emotions and behaviors with guidance from their caregivers.
- ♥ Play with other children, but may have trouble sharing or struggle for control.
- ♥ Show caring and cooperation (pick flower to give adult, help to put away toys).
- ♥ Communicate concern for others (Hug a child who has fallen and ask “Are you OK?”).
- ♥ Offer help to meet the needs of others (give soft doll to crying child, pick up item someone dropped).
- ♥ Play with others with a common purpose.
- ♥ Try out roles (fire fighter, shopper) and relationships (parent/child) through imitation and pretend play.

- ♥ Develop an awareness of their behavior and how it affects others (know that yelling makes child sad, sharing toy makes playmate happy).
- ♥ Use words to influence playmates' and caregivers' behavior.
- ♥ Show defiant behavior or do what they want to do rather than what someone asks them to do.
- ♥ Use words to make needs known and become less likely to bite, hit or be physically aggressive toward others.

What to Do

- ☑ To promote attachment, allow only a small number of people to care for each young child regularly.
- ☑ When there is more than one caregiver in the room, assign one specific person to be the primary caregiver for each young child. The primary caregiver should complete all of the child's daily caregiving routines, such as feeding and diapering.
- ☑ Assign the same person to be a child's primary caregiver each day. This helps the child develop a strong relationship with the caregiver and helps the caregiver learn about the uniqueness of the child. If the primary caregiver is absent, assign a person familiar to the child to be the primary caregiver.
- ☑ Watch infants for signs that they are not becoming attached. For example, a child might become passive, not react to something that would typically upset a child, or seem not to thrive like other infants. Talk with family members, administrators, or other professionals if you observe these signs.
- ☑ Treat children as individuals by using their names rather than just talking to them as a group.
- ☑ Maintain eye contact and interact with children in an engaging way during caregiving routines such as diapering and feeding.
- ☑ Allow infants and toddlers to be with and watch others much of the day.
- ☑ Set up interest areas with enough toys and materials for two to three children to play without having to argue over the materials.
- ☑ Include materials that show persons from different backgrounds in a positive way. For

Attachment is the emotional bond that forms between babies and the people who take care of them. This can include parents, older siblings, other family members, and child care providers.

example, post family pictures, read books from diverse cultures, offer materials and foods from different groups of people, and post photographs of children with disabilities using adaptive equipment.

- ☑ Encourage family members to say good-bye to their infants and toddlers. This helps children understand what to expect when family members leave and trust that their loved ones will come back.
- ☑ Realize that parents may be afraid that if their child becomes attached to other caregivers, their child might be less attached to them. Reassure parents and guardians that children can become attached to several people and will not become less attached to them.
- ☑ Recognize that fear of strangers and separation anxiety are normal stages of attachment in mobile infants. Help parents understand that fear of strangers and separation anxiety are normal.
- ☑ Support each child's attachment to their family while the child is in your care. Greet both the infant/toddler and family members as they arrive and depart. Talk about family members with children during the day. Set up a communication system (report form, notebook) for letting families know what the child's day has been like.
- ☑ Have a regular schedule so that toddlers know what to expect. Allow enough time in the schedule for toddlers to do things for themselves.
- ☑ Model "gentle touches" for toddlers as they interact with others.
- ☑ Add safe, interesting, and realistic toys and materials to the environment to encourage role and pretend play about many different themes (cloth or soft dolls, work hats and props, telephones, pots and pans).
- ☑ Prepare toddlers for transitions, which are times of change or involve moving from one activity to another. Be prepared for the next activity and offer something to keep toddlers involved while they are waiting (finger plays, movement songs)
- ☑ Model cleaning up and encourage toddlers to participate in clean-up of the play area, interest areas, snack table, and other parts of the room.

Learning About Feelings

This area includes infants' and toddlers' growing abilities to express their feelings, wants, and needs. As children grow older, the way they express their emotions changes. They gain control over some of their feelings and learn new ways to express them.

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- ♥ Imitate actions to express emotions (raise arms like parent when excited, stomp feet like brother when mad).
- ♥ Show signs of separation anxiety.
- ♥ Find comfort in a familiar setting and with a familiar person.

Older Toddlers may begin to:

- ♥ Show new fears based on their new understanding about the world (monsters, animals, big machines).
- ♥ Learn to express different emotions, such as disgust, tenderness, hostility and love.
- ♥ Show emotions about their own abilities or behaviors, such as confidence, doubt, fear, power, pride and shame.
- ♥ Use words, signs, or gestures to communicate emotions.

What to Do

- ☑ Be aware of infants' and toddlers' reactions and reassure them that you are there for them.
- ☑ Pay attention to infants' signals that they are overwhelmed. Give them some quiet time or extra time cuddling with you to help them recover. Take them out of situations where there are too many people, too much noise, or too much stimulation of any kind.
- ☑ Talk about your own feelings with the children. Use words to describe your emotions.
- ☑ Use "feeling" words to acknowledge and label emotions that you see the child is experiencing ("You're very mad!" "You look sad.") This helps the child to feel understood and learn to use words to describe feelings.
- ☑ Understand that expression of feelings (both positive and negative) is important to healthy emotional development. Children need to express both types of feelings and have adults accept these feelings.
- ☑ Provide adaptive equipment and materials when a child needs support to be active and successful in program routines and activities. When children are able to participate, they feel a sense of belonging and security.
- ☑ Comfort toddlers when needed and let them know they are safe and secure. Let them know you care for them even when they have strong negative feelings. Give them hugs, cheers, and hold them in your lap if they welcome these touches. (Some children prefer to be comforted in other ways.)

What to Look For

Infants may begin to:

- ♥ Show happiness, sadness, fear and anger.
- ♥ Cry, coo, smile, laugh.
- ♥ Show when they feel overwhelmed (yawn, look away, extend arms or legs, arch their body, fuss).
- ♥ Use their face and body to express emotion.
- ♥ Stop crying when parent or caregiver comes near.
- ♥ Enjoy being held and cuddled other than at feeding and bedtime.
- ♥ Show pleasure when they are in a familiar setting and with a familiar person.

Young Toddlers may begin to:

- ♥ Express different emotions such as affection, delight, frustration, and shyness.
- ♥ Have strong feelings that they may express physically.
- ♥ Use body language and facial expression to communicate feelings (clap when happy, pout and hunch shoulders when sad).

- ☑ Focus on each toddler's positive qualities and accomplishments. Avoid talking about children as good or bad or messy or neat.
- ☑ Accept the toddler's mistakes as a natural process of learning and exploring. Use supportive language such as "Oh, the milk spilled. Let's get a paper towel and clean it up," rather than "You're so clumsy. You made a mess."
- ☑ Encourage independent choices so toddlers can feel a sense of control and success. For example, let them decide how to play and

when they need to go to the toilet. Let them do things for themselves even if they do not do it exactly the way you would have.

- ☑ Provide child-size equipment. If using adult-size materials and furnishings in a family child-care home, adapt them so children can use them independently and safely.
- ☑ Provide opportunities for toddlers to repeat successful activities over and over again until they are ready to move on to something more challenging. Have many different toys available to toddlers at the same time.

Real World Stories

Mrs. Jackson is playing with her six-month-old granddaughter, Dyanna, on a soft quilt. Dyanna was born two months prematurely. This morning she fusses from time to time, as she often does. Mrs. Jackson talks softly to her and massages her gently. When Dyanna looks away, tenses her body, or whimpers, Mrs. Jackson stops. She waits for the baby to become calm and look again at her face. She knows that Dyanna gets overwhelmed easily. Mrs. Jackson wishes that Dyanna would smile more like her other grandchildren did when they were babies, but she is patient.

Two-year-old Isaac is tossing soft blocks into a laundry basket. Isaac is the son of Mrs. Jackson's neighbor. He is very active and has a hard time focusing and remembering things. Isaac jumps up and down and exclaims, "Two points!" "Good shot!" echoes Mrs. Jackson. Soon Isaac loses interest and begins running around the room. Mrs. Jackson places Dyanna in a carrier on her body, puts on her coat, and moves to the door. Then she suggests that Isaac get his coat so they can go outside. Before they go out, she reminds him they must stay inside the fence to be safe.

Outside, Isaac plays happily on a riding toy and a toddler-sized climber. Dyanna snoozes

in her carrier. Then Isaac makes a break for the chain-link fence and starts to climb. Mrs. Jackson immediately moves close to him. "I know you want to go out, but it's safer in here," she reminds him. "Come down now." Isaac continues to climb. "OK, I'm going to help you down now," she says. She picks him up and places his feet on the ground.

Isaac throws himself down on the ground. He kicks his legs, yelling, "Want out! Want out!" Mrs. Jackson says calmly, "I know you do. But it is safer inside the fence. I'll get out your lawnmower when you're ready to play again." She waits and watches to make sure that Isaac does not hurt himself. Eventually he stops yelling and kicking. "Want mower now," he says. "Thank you for asking nicely," praises Mrs. Jackson as she hands him the toy.

In this example, Mrs. Jackson works hard to form strong, positive relationships with Dyanna and Isaac. She knows their attachment to her will help them learn to manage their feelings and get along with other people. She has learned about each child's unique needs and challenges. Like many premature babies, Dyanna is not as much fun to play with as other babies. She does not give as many positive responses. But Mrs. Jackson does not give up. She is sensitive to

how much stimulation Dyanna can handle. She knows that Dyanna must be calm to interact with her. Mrs. Jackson uses a soft voice and gentle touches to soothe Dyanna and she gives the baby a chance to calm herself.

It's difficult sometimes to be pleasant with a toddler like Isaac. Mrs. Jackson stays calm and positive. She gives him plenty of time for active play indoors and outdoors. She provides activities and toys he likes, and she sets clear limits to keep him safe. Mrs. Jackson anticipates possible problems and is ready to respond calmly. When Isaac has tantrums, she accepts his strong feelings. She also teaches him to manage his feelings in a better way.

Both Dyanna and Isaac are receiving early intervention services because their development is delayed compared to other children their age. Mrs. Jackson is a member of their intervention team. She uses ideas from their service coordinator and other professionals every day as she cares for the children.

- ♥ SENSE OF SELF WITH OTHERS and LEARNING ABOUT FEELINGS
- ✋ SAFETY AWARENESS

For more information about Early Intervention for Infants and Toddlers with Disabilities and Delay see page 26.

Health and Physical Development

The "Health and Physical Development" domain focuses on how young children learn about their bodies. During the first three years of life, young children develop at a pace that is unique to each child. Infants gradually gain control over their bodies and begin to move to explore their world. Toddlers learn to use and control objects and do things for themselves.

Children figure out what they need and what they can do by using their bodies in different ways. They learn how to stay physically and emotionally safe. Infants and toddlers communicate and seek to meet their needs for food, rest, movement, stimulation and exploration. They do this with facial expressions, sounds, actions and words, depending on their abilities.

It is important for adults to respond when young children communicate their needs. Caregivers find it helpful to set up routines and respond consistently. A family's culture influences daily care routines, so caregivers must understand families' cultures and preferences. This allows caregivers to carry out routines and set up environments that feel comfortable and safe to infants and toddlers.

When adults respond quickly to infants' and toddlers' needs, young children learn what to expect and begin to trust others. They feel safe to explore and develop habits that support their physical health and growth. Playing with infants and toddlers indoors and outdoors is also an important part of the caregiver's role. Play is essential to the physical well being of children. It helps them develop fine and gross motor skills, dexterity, and strength.

A caregiver in the child care setting may be the first person to notice that an infant or toddler has special needs. Infants and toddlers with disabilities may need therapy and special equipment such as adaptive strollers, supportive seats and standers to help them move and participate in activities. They may require more time and support to learn some self-care skills and develop more control of their muscles.

Children with special health care needs may need other specialized care, which may include giving medication. They should have a health care plan that explains how to manage the child's health care needs on a daily basis and in emergency situations. Playgrounds and outdoor environments should be made accessible for children with physical or visual disabilities. All children need and benefit from active play.

Physical Health and Growth

Self-Care

Safety Awareness

Gross Motor/Large Muscle

Fine Motor/Small Muscle



Physical Health and Growth

Physical health and growth includes behaviors that promote well-being and a healthy, active life. This section is subdivided into three areas: **Nutrition**, **Sleep**, and **Physical Activity**.

(b)(6)

Nutrition

What to Look For

Infants may begin to:

- ✎ Show excitement and joy when they are about to be fed.
- ✎ Show hunger or fullness using actions, sounds, or words (cry or search for food, turn away when full).
- ✎ Suck and swallow breast milk or formula.
- ✎ Show preferences for different foods.
- ✎ Respond to different textures of foods in their mouth (eagerly wait for the next bite, spit out food, turn head away).
- ✎ Learn to eat different types of food such as liquids, pureed or soft foods, and finely chopped food.

Young toddlers may begin to:

- ✎ Want to feed themselves.
- ✎ Eagerly participate in snacks and mealtimes.
- ✎ Bite, chew, and swallow soft food smoothly.
- ✎ Show interest in many types of food and no interest in other foods.
- ✎ Eat inconsistently (eat a lot at one meal and little at the next, be too busy playing to eat).
- ✎ Ask for food when hungry or accept food when offered.
- ✎ Be willing to try new foods.

Older toddlers may begin to:

- ✎ Enjoy helping with meal and snack routines (set table, wash hands, throw away trash).
- ✎ Bite and chew solid food more easily.
- ✎ Accept or refuse food depending on their appetite and interest.

- ✎ Notice and talk about food textures, temperatures, and tastes (crunchy crackers, warm soup, sweet apples).
- ✎ Understand that some foods are good for them (fresh fruits, vegetables, milk) and some are not very healthy (potato chips, soda).

What to Do

- ☑ Promote and support breastfeeding for young children. Provide storage for breast milk, private areas for nursing mothers, and education about the benefits of breastfeeding for both mother and infant. Feed iron-fortified formula to infants who are not breastfeeding.
- ☑ Wait until an infant shows signs of hunger before feeding. Allow enough time for them to finish bottles or food.
- ☑ Ask families about food allergies and serve only foods children are not allergic to. Also, ask about any history of allergies in the family. Some children may need to avoid eggs, peanuts, nuts and fish until ages two or three.
- ☑ Do not give honey or cow's milk (whole or low fat) to infants under one year of age.
- ☑ Offer infants no more than one new food each week so specific allergies can be recognized.
- ☑ Allow children to leave food uneaten. Do not force them to eat more than they want. They may be full.
- ☑ Allow enough time for children to explore foods with their fingers and to eat.
- ☑ Eat healthy foods with children (fruits, vegetables, whole grains, milk, and meat). Talk about foods and how they help the body. ("Milk makes your bones and teeth strong.")
- ☑ Offer a variety of safe and healthy foods that meet the nutritional needs of infants and toddlers. Ask families what they eat at home and offer these foods. Serve foods that represent the cultures of the children in the classroom.
- ☑ Encourage young children to try new foods. Offer a new food up to 10 times if needed to let a child get used to a new taste and texture.
- ☑ Respect cultural, religious and other family preferences for different foods (for example, no pork or a vegetarian diet). Do not offer foods that go against these preferences.
- ☑ Offer types, sizes and textures of food that each infant or toddler can eat safely and successfully. Work with families, dietitians

Serve Food Safely

When providing food to children less than 3 years of age always consider their feeding needs. Serve food that is easily managed by the children and supports their self-help skills. Avoid hard, round or hard-to-chew foods. Puree foods or soften raw foods by parboiling them if needed.

Choose raw fruits and vegetables carefully. Some may be too difficult for young children to manage and may be a choking hazard. Common choking foods for young children are firm fruits, carrots, celery, cherries, grapes, hard candy and gum, nuts, hot dogs, peanut butter, popcorn, and dried fruits and large chunks of food.

For children with special feeding needs learn how to meet those needs with specially prepared foods, special feeding equipment and close supervision during meal times. Remember to keep meal times positive and social as well as nutritional.

Choking Prevention Tips

- ▶ Cut food into tiny bite size pieces.
- ▶ Serve food in small, manageable quantities.
- ▶ Have the children remain seated while eating.
- ▶ Supervise the children while they eat.
- ▶ Know how to do the Choking Rescue (Heimlich Maneuver) for infants and for children older than 1 year of age.

and health care providers to offer the formula, foods, and other forms of nutrition appropriate for children with special nutritional needs.

- ☑ For young children who need help eating and drinking, offer support, proper positioning, special equipment and many chances to practice eating and drinking.
- ☑ Offer young children soft, small finger foods and make sure they are able to bite, chew and swallow these foods properly. Offer cups and spoons and encourage children to feed themselves when they are ready.
- ☑ Limit juice and other high sugar drinks. Offer water frequently. Limit juice to four-to-six ounces a day. Do not allow children to sip fruit juice throughout the day or drink juice while lying down in bed.
- ☑ Allow and encourage children to serve and clean up food. Provide materials for pretend play about shopping, cooking, serving, eating, and cleaning up.

(b)(6)

Sleep

What to Look For

Infants may begin to:

- ✎ Sleep for longer periods at a time: more at night, and less during the day.
- ✎ Roll over and put themselves in the positions they prefer for sleeping.
- ✎ Show signs of being tired (rub eyes, cry, put head down).
- ✎ Settle down and fall asleep after a routine that includes a series of events

leading up to nap or bedtime (change diaper, read books, play soft music).

- ✎ Sleep and wake at regular times according to their needs.

Young toddlers may begin to:

- ✎ Show they know when it is time to sleep (point at bed, get blanket).
- ✎ Cooperate with sleep routines (choose a book, get preferred sleep toy).
- ✎ Use simple sounds, gestures, or words to show they are tired.

Older toddlers may begin to:

- ✎ Use words for being tired.
- ✎ Initiate and participate in sleep routines (wash hands after lunch, get blanket, lie down on bed or mat).
- ✎ Fall asleep on their own.

What to Do

- Place infants on their backs to sleep for naps, and at night, to reduce the risk of Sudden Infant Death Syndrome (SIDS). Follow doctor recommendations for infants who have special sleeping needs or equipment. A doctor may recommend that certain infants not be placed on their backs to sleep, but this is rare.
- Provide a safe sleep environment for infants and toddlers.
- Carry out sleep routines that meet the child's needs and take into account the beliefs, customs and needs of families.
- Ask families to share the sleep routine used at home and use it in the child

Safe Sleep Practices

Follow these recommendations to create a safe sleep environment:

- ▶ Provide a crib or bed that meets all current safety requirements for the child's age group.
- ▶ Ensure that the sleep surface is firm.
- ▶ Make sure there are no curtains or blind cords hanging near the crib or bed.
- ▶ Keep room temperature moderate to avoid overheating.
- ▶ Take care not to bundle infants in many layers to avoid overheating.
- ▶ Do not place soft toys, objects, or loose blankets in the crib.
- ▶ NEVER smoke near infants.

Adapted from: Task Force on Sudden Infant Death Syndrome. The Changing Concept of Sudden Infant Death Syndrome: Diagnostic Coding Shifts, Controversies Regarding the Sleeping Environment, and New Variables to Consider in Reducing Risk. PEDIATRICS Vol. 116 No. 5 November 2005, pp. 1245-1255.

care environment if appropriate (get rocked to sleep, hold a special toy).

- ☑ Provide a relaxing environment for children when they show signs of being tired (play soft music, turn out the lights).
- ☑ Provide areas for children to rest to accommodate individual sleep needs. Toddlers should have individual nap schedules.
- ☑ Help children learn to calm themselves and fall asleep. For infants, consider playing soft music and quieting the environment.

For older children who choose their own sleep positions, rubbing their back may help them relax and fall asleep.

- ☑ Learn and use the words families use to tell someone they are tired. Use these words and teach children to use them to tell you they are tired.
- ☑ Work with families and health care providers to help young children with special health care needs and disabilities sleep comfortably and safely and get the amount of sleep they need.

Physical activity

What to Look For

Infants may begin to:

- ✎ Show they enjoy physically active play by repeating actions (kick, wave arms, roll over).
- ✎ Respond to rhythms in music and movement games (kick feet, clap hands, smile).
- ✎ Move their bodies to explore the indoor and outdoor environment.
- ✎ Show endurance and stamina by continuing movement through an entire song or activity.

Young toddlers may begin to:

- ✎ Anticipate and ask for outdoor play (point at door and say “Out!”; resist coming indoors).
- ✎ Engage in regular and sustained movement (ride toy all around play yard, go up and down slide over and over).
- ✎ Develop strength and stamina as they use large muscles and participate in physical activity for longer periods of time.
- ✎ Enjoy active play and seek to be physically active (choose to play often on climber, laugh and squeal while running).

Older toddlers may begin to:

- ✎ Engage in lively movements by choice for long periods of time indoors and outdoors.
- ✎ Enjoy more complex movement activities (running, jumping, and skipping).
- ✎ Match body movements to rhythm (move slowly to slow music, dance in time with music).
- ✎ Show pride in new skills and strengths (ask others to watch them, say “I’m big and strong!”).

(b)(6)

What to Do

- ☑ Take children outside often and regularly in all seasons. Dress them appropriately for the weather (raincoats, sweaters, boots, mittens, coats, hats).
- ☑ Show children you enjoy being outdoors and encourage them to explore the outdoor environment.
- ☑ Closely supervise infants and toddlers during physically active play.
- ☑ Invite and encourage children to participate in physical activity and free play every day. Schedule several periods of active physical play each day, with each period lasting thirty to sixty minutes. Include time for child-directed play, not just adult-directed activities.
- ☑ Show and engage children in new and safe ways they can move their bodies indoors and outdoors: run, walk, climb, crawl, dig, pedal, slide, rock, bounce, sway, and jump. Do this for children of all ages, including children with special needs. Show children how physical activity is fun for everyone.
- ☑ Repeat physical activities that children enjoy over and over again. Sing favorite movement songs (“Wheels on the Bus”, “Hokey Pokey”) with actions. Make small changes to help children improve their skills over time.
- ☑ Plan new and different outdoor activities for infants and toddlers. Change materials and toys regularly to promote physical activity and make outside playtime fun.
- ☑ Look for programs or activities in the community that encourage physical activity for families, including children with special needs: parks, greenways, playgrounds, swimming pools, lakes and gyms.
- ☑ Do not offer TV to children under two years of age. Offer physical activity rather than TV for children over two years of age. Many people feel that TV should not be offered to older toddlers in child care. However, if you decide to offer TV to children over two years of age, limit time watching TV, videos, or DVDs to 30-60 minutes per day.
- ☑ Computers are not necessary to help most infants and toddlers learn. Instead, infants and toddlers benefit more from being physically active. Assistive technology and computer experiences help some children with special needs to learn, develop, or communicate. Work with families and specialists to provide appropriate physical activity as well as technology for these children.
- ☑ Some infants and toddlers are highly sensitive to light, noise and the way they are touched. Provide spaces that offer less stimulation so they can feel calm and comfortable. Work with families and specialists to offer appropriate physical activity for these children.

Avoid confining infants in seats and other containers

- ▶ Avoid placing babies in car seats or similar seats except while they are in the car because this can flatten the back of their heads.
 - ▶ Never use wheeled walkers, which delay motor development and are a safety hazard due to the risk of tipping and falling down stairs.
 - ▶ Avoid the use of ‘Johnny-jump-ups’, especially for premature babies, because they contribute to uneven muscle development. Babies’ muscles develop best when they are allowed to move around freely on the floor.
 - ▶ Place babies in safe places where they can move freely instead.
-

Self-Care

Self-care for infants and toddlers begins with a growing awareness of and interest in their own needs. They first get their needs met by communicating with trusted adults. Then they begin to participate in taking care of themselves.

(b)(6)

What to Look For

Infants may begin to:

- ✎ Use different sounds to let caregivers know they need attention.
- ✎ Tolerate care routines (mouth care, hand-washing, diapering, dressing, and bathing).
- ✎ Show interest and assist in routines (open mouth for bottle or spoon, raise arms for dressing).
- ✎ Show a preference for soothing objects and routines (coo during bath, reach for security object, snuggle up to caregiver before nap).
- ✎ Begin to soothe themselves (suck thumb, find pacifier).

Young toddlers may begin to:

- ✎ Use simple sign language, facial expressions, sounds or words to tell you what they need.
- ✎ Cooperate and help with care routines (mouth-care, hand-washing, diapering, dressing, bathing).

- ✎ Drink from a cup and feed themselves with their fingers or a spoon.
- ✎ Protect personal objects and space from others.
- ✎ Help with clean-up routines.
- ✎ Show excitement at completing self-care tasks (show teeth after brushing, hold up hands after washing).
- ✎ Cooperate with medical care, positioning, and use of adaptive equipment.
- ✎ Identify and use objects and follow routines that are comforting (get their blanket and lie down where they usually sleep, pick out favorite book to be read before lunch).

Older toddlers may begin to:

- ✎ Use words or sign language to ask for the things they need (food when hungry, drink when thirsty, go outdoors when they need to be physically active).
- ✎ Soothe themselves when needed (find a quiet area for alone time, look at book before nap).

(b)(6)

- ✎ Increase independence with basic self-help skills (pull up pants, put on socks, shoes and hat).
- ✎ Remember and imitate details of self-care routines (talk through steps while washing hands; tell doll how to brush teeth during pretend play).
- ✎ Start self-care routines and complete some steps independently (undressing, hand washing, brushing teeth).
- ✎ Understand the role of people who help children stay healthy (doctors, nurses, dentists).
- ✎ Show appreciation for possessions (put toys away, handle materials carefully).
- ✎ Use adaptive equipment, ask for help with positioning and movement, or participate in medical care routines as needed.

What to Do

- ☑ Respond quickly and consistently when children tell you they need something. Learn to read their cues, cries, and gestures. Ask family members how and when children may communicate certain needs.
- ☑ Establish regular routines for diapering, toileting, bathing, eating, sleeping, and dressing children. Do things the same way every time as much as possible.

- ☑ Learn about the abilities and customs of children and their families. Set up routines so children can do them successfully. Make routines as similar to home as possible.
- ☑ Talk about care routines with children as they are happening and make it fun for them.
- ☑ Provide children many opportunities to use the toilet when they show they are ready. Support all attempts to use the toilet. Coordinate the timing and process of toilet learning with the family.
- ☑ Model hand-washing and encourage children to practice washing their hands at all appropriate times. Provide hand-washing stations that children can reach safely on their own.
- ☑ Encourage children to practice cleansing their mouths and brushing their teeth. Model tooth-brushing for older toddlers. Provide stations for tooth-brushing that children can reach safely on their own.
- ☑ Use fluoride toothpaste with caution and only with children over age two who can spit out the toothpaste. A small, pea-sized amount of toothpaste is enough for toddlers. Keep toothpaste out of children's reach when not in use.
- ☑ Encourage children to take an active part in dressing themselves. Suggest a step the child can complete. ("Put your foot

Real World Stories

Ms. Donna cares for five children ranging in age from three months to thirty months in her family child care home. She begins her lunch routine by feeding three-month-old Katie. Katie waves her arms and fusses as her bottle is being prepared. Ms. Donna soothes her by saying, "It's hard to wait when you're hungry. Here comes the bottle now." She holds Katie close, looks at her face, and speaks softly to her during feeding. When Samantha (age 30 months) asks for a new puzzle, Ms. Donna says, "I'll get it when Katie is finished. You can look at a book while you're waiting." Samantha pulls a book from a pocket on her wheelchair.

When Katie is settled in her crib for a nap, Ms. Donna helps the other children wash their hands for lunch. Samantha and Leyla (age 19 months) can wash their hands by themselves. Ms. Donna reminds them to "keep rubbing your hands all over with soap." "Get germs off!" exclaims Samantha.

The four children eat lunch with Ms. Donna at a low table. She has organized everything and placed it within reach. Each child has a sippy cup of milk. Samantha and Leyla serve themselves cheese sandwiches and chunks of bananas. Ms. Donna helps them with the steamed zucchini. She places a small amount of each food on the other children's plates. The food is cut up so the toddlers can eat independently.

Brianna (age 18 months) uses a pincer grasp to feed herself pieces of sandwich, banana and zucchini. Colin (age 15 months) eats quickly with his fingers and a spoon and holds out his plate for more. "Colin, say 'More, please,'" prompts Ms. Donna. "Muh, muh" says Colin. "Here's some more," she says as she serves the food.

Leyla eats the cheese sandwich and banana, but leaves the zucchini on her plate. When she asks for more sandwich and banana, Ms. Donna allows her to take more of each. "Maybe you'll like the zucchini next time," she remarks. "It's my favorite vegetable. Yum!"

One by one, the children lose interest in eating or say they are finished. Colin and Leyla throw their trash away and put their dirty dishes in a plastic dishpan on the table. Samantha wipes her tray with a damp paper towel before wheeling her chair to the trash can. Ms. Donna helps the children clean their hands and choose a quiet activity in the play area nearby.

Ms. Donna knows that infants and toddlers learn during caregiving routines. For example, Samantha has already begun to learn about germs. All of the children at the lunch table are practicing self care, fine motor, and language skills. Ms. Donna serves a variety of foods and offers new foods like zucchini many times until the children accept them. She models healthy eating and good manners. Each child makes choices and participates actively. Even tiny Katie can communicate when she is ready for her bottle and when she has had enough to drink.

Ms. Donna allows plenty of time for routines. She understands that infants and toddlers have individual schedules and plans around their needs. Ms. Donna also plans ahead and keeps everything organized. She and the children feel calm and relaxed as they eat.



SELF CARE, PHYSICAL HEALTH and GROWTH
NUTRITION, and FINE MOTOR/SMALL MUSCLE



EXPRESSIVE LANGUAGE

- in your pant leg." "Pull up your pants."
"Pull your arm out of your sleeve.")
- ☑ Allow plenty of time for children to try and participate in all of these self-care tasks.
- ☑ Read books about visits with the doctor and the dentist. Offer play props so children can pretend to visit them.
- ☑ Offer children play food and kitchen utensils from many cultures, especially the cultures of families in your group. Offer toys and props to practice self-care behaviors (healthy play food, dress-up clothes that are easy to put on, tubs to wash baby dolls).
- ☑ Teach children about the importance of good personal health practices. Make sure to take into account individual family beliefs and customs.
- ☑ Ask families and health care providers if a child with disabilities or special health care needs has any special self-care needs. Help children understand and participate in these special self-care tasks. Use picture cards to guide them through the steps of self-care routines like hand washing.

Safety Awareness

Safety awareness is the ability to identify things that might be dangerous and to protect oneself. It begins with infants' natural reflexes, awareness of their own bodies, and trust in caregivers. Toddlers begin developing the behaviors and skills they need to protect themselves and to stay safe as they learn from their experiences.

(b)(6)

Young toddlers may begin to:

- ✎ Experience cause and effect (going downhill fast cause falls; turning the TV up too loud hurts ears).
- ✎ Show some caution on uneven ground and heights.
- ✎ Notice and imitate adult reactions to dangerous people and situations.
- ✎ Respond to warnings and directions from others.
- ✎ Understand the difference between what should be eaten and what should not.

Older toddlers may begin to:

- ✎ Remember cause and effect experiences and apply their experiences to future situations (avoid touching cold railing, walk slowly down hill where fall happened).
- ✎ Increase self-control over their impulses.
- ✎ Recognize and avoid situations that might be unsafe.
- ✎ Understand what their bodies can do and understand their limits.
- ✎ Watch for adult reactions to unfamiliar things or situations that might be dangerous.
- ✎ Understand and follow basic health and safety rules. They still require close supervision from caregivers to follow these health and safety rules consistently.
- ✎ Feel proud when they follow safety rules and ashamed when they do not (say, "Look, I waited!" at corner; hang head after trying to reach forbidden item).

What to Do

- ☑ Provide a safe environment indoors and outdoors so infants and toddlers can explore without hurting themselves or others. Help families learn about safe environments for infants and toddlers.
- ☑ Stay near infants and toddlers at all times and watch to keep them safe.
- ☑ Hold, cuddle, make eye contact and talk with young children to build trust.
- ☑ Play games that name and use body parts. ("Where is your nose?" and "When you're happy and you know it.")
- ☑ Model safe practices for infants and toddlers. (Don't stand on chairs or sit on shelves.)
- ☑ Do not try to make infants or toddlers do things they are afraid to do. Help them learn to trust their feelings about what is safe and what is not safe.

What to Look For

Infants may begin to:

- ✎ Show that they are aware of their body (look at moving hands, reach for feet).
- ✎ Develop trust in adults (calm down with adult help, make eye contact with caregivers).

- ☑ Repeat safety messages every time they are needed. Understand that you may have to repeat them many times. (“Too high. Please put your feet on the ground. Chairs are for sitting.”)
- ☑ Give specific praise to toddlers for remembering safety messages and safe behaviors. (“Thank you for waiting for me.” “That’s good. You’re climbing on the climber.”)
- ☑ Use play with older toddlers to reinforce safety messages and practice responding to dangerous situations. (“Let’s pretend the fire alarm went off. What should we do?”)
- ☑ Help toddlers identify people they can go to when they feel afraid or where to go to feel safe when they need help (family members, caregivers, firefighters and other community helpers).
- ☑ Explain to infants and toddlers why and how unsafe actions can hurt them and others.
- ☑ Continue to supervise older toddlers closely. They are beginning to develop self-control, but it is easy for them to get excited and forget what is dangerous.

Real World Stories

Six infants and two teachers are enjoying a warm fall day in the grassy play yard. The younger babies are having some tummy time on quilts in a shady spot. They wiggle their arms and legs and explore the toys in front of them with their hands and mouths.

Two older infants are crawling on and off the quilts. They stop to pat the quilted fabric, explore toys of different shapes and textures, and pull at the grass. The teachers watch carefully to keep the babies safe. The babies coo with delight. The teachers respond by talking enthusiastically about what the babies are doing.

Casey, an eight-month-old infant who is blind, sits in front of one teacher. From behind, the teacher hands Casey a small ball with a bell inside, saying “Here’s the ball, Casey.” He shakes it and then drops it. The teacher shakes it a little in front of him. “Casey, can you get the ball?” she asks. Casey coos and waves his arms, knocking the ball to the ground. “Where is it?” asks the teacher. Casey waves his arms some more and makes louder sounds. “Let’s get it,” says the teacher. She gently bends Casey forward until his waving arms hit the ball again. Then she helps him to take it between his legs. “You got the ball!” she exclaims. Casey continues to hit the ball with his hands, making the bell jingle.

These teachers recognize that babies, like older children, benefit from outdoor play. The infants have a chance to move their whole bodies and to explore a variety of objects and surfaces. They are strengthening their muscles as they move their arms and legs.

All of the infants show interest in their immediate environment. If they are able, they move toward the things that interest them. They feel the textures of the quilt, grass, and toys, and the smell of the grass. These experiences help them enjoy physical activity, which supports all areas of their development.

The teachers recognize that Casey may not reach out to explore because he does not see what is there. One teacher uses a jingling ball to get his attention. She shows him that he can find things by reaching out and leaning forward. This helps him develop strength and balance. It also helps him learn about the objects around him, which might not happen without the teacher’s help. At the same time, the teacher does not take over his play. She helps him just enough so that he learns what he can do.

 GROSS MOTOR/LARGE MUSCLE and PHYSICAL ACTIVITY

 CURIOSITY AND EAGERNESS

 SENSORY EXPLORATION AND DISCOVERY

Gross Motor/Large Muscle

Gross motor refers to the use of large muscles including those that control the head, neck, trunk, arms and legs. Muscle control allows infants and toddlers to interact with the environment and other people.

What to Look For

Infants may begin to:

- ✎ Gain control of arm and leg movements.
- ✎ Lift and turn their heads to strengthen neck, back and stomach muscles.
- ✎ Support and balance their bodies by pushing up, sitting, or rolling over.
- ✎ Move from place to place as their abilities allow (scoot, squirm, roll, crawl, or cruise).
- ✎ Imitate big motions with their arms, legs, and bodies.

Young toddlers may begin to:

- ✎ Develop strength, balance and coordination by repeating movements (pull up and sit down; bend and straighten).
- ✎ Move their arms and legs together to climb, push, and pull (push a stroller, use riding toys, crawl up steps).
- ✎ Walk or move through the world with more independence (crawl, cruise, use therapeutic walker).

Older toddlers may begin to:

- ✎ Move their legs to complete a task (kick, jump, step, pedal, push away).
- ✎ Plan movements that require a series of steps (use a low slide, duck down to crawl under a table).
- ✎ Master the use of familiar objects (riding toys, crawl tubes, large ball in basket).
- ✎ Perform actions smoothly with balance, strength, and coordination (run, dance, bend over to pick up a toy, reach up high on a shelf).

What to Do

- ☑ Play with infants and toddlers both indoors and outdoors. Make sure the environment is safe. Include play on a variety of surfaces and provide open spaces for free movement.
- ☑ Play with infants on their tummies frequently throughout the day. Place interesting toys in front of them and use a rolled towel to support a baby's chest and arms if needed. For babies who do not like being on their stomachs, try a few minutes of tummy time several times an hour rather than for one long period.
- ☑ Give young children brightly colored and interesting toys to reach for or move toward (balls, mobiles, soft toys).
- ☑ Use diapering time to do baby exercises and to play (bicycling legs, arm lifts, kicking, reaching).
- ☑ Provide pillows, small mounds, balance beams, stepping-stones, and other low barriers for children to climb on and over. This develops balance, builds strength and improves coordination.
- ☑ Run, jump, skip, hop and throw balls with children, both indoors and out. Encourage them to move their bodies indoors and outdoors with movement games, music, and dancing from different cultures. ("I'm a Little Tea Pot", "Little Sally Walker", "De Colores", "All Fish Swimming in the Water")
- ☑ Create mazes and obstacle courses that are age appropriate. For example, invite children to move through tunnels, under chairs, around tree trunks and over low hills.
- ☑ Provide push and pull toys, riding toys (with and without pedals), balls, tools, slides, and other materials that give children chances to exercise large muscles and practice skills.
- ☑ Provide supports or special equipment that allows children with disabilities to participate in physical activities and play (therapeutic walker, scooter board, supportive seating for swings or riding toys, bars for pulling up).
- ☑ Create activities to encourage children with different abilities to play and learn together. For example, play a game of catch with a foam ball with children sitting down on the floor or ground. Include children who cannot walk with other children in a group.
- ☑ Talk with families if you have concerns about how a child is using his or her large muscles.

(b)(6)

Fine Motor/Small Muscle

Fine motor refers to the small muscles of the hands, arms, legs and feet that children use to move or control objects. Infants and toddlers develop finger, hand and eye coordination. This allows them to explore toys, complete self-help tasks, and begin to draw and scribble.

What to Look For

Infants may begin to:

- ✎ Reach for objects.
- ✎ Bring hands together to the middle of the body.
- ✎ Grasp, hold, shake and release objects.
- ✎ Transfer objects from one hand to the other.
- ✎ Use their hands to explore the texture, size and shape of objects.
- ✎ Use a raking motion with hands to pick up an object such as a block or toy.
- ✎ Use a pincer grasp to pick up an object with finger and thumb.

Young toddlers may begin to:

- ✎ Use hands to control objects (stack blocks, pick up or roll a ball).
- ✎ Use hand movements for a purpose (open books, close doors, dump objects from containers).
- ✎ Use hands and eyes together (put together and take apart toys, feed themselves finger foods, fill containers).
- ✎ Use simple tools (spoon for feeding, hammer with pegs, crayon for scribbling).

Older toddlers may begin to:

- ✎ Use more complicated hand movements (stack a few small blocks, try to draw, turn pages one at a time).
- ✎ Use hands and eyes together with more control (complete puzzles, thread beads with large holes, use shape sorters).
- ✎ Help dress themselves.
- ✎ Use tools that require finger and hand control (paintbrush, marker, measuring cups, shovel).

What to Do

- ☑ Hang or hold objects within a child's reach to encourage reaching and bringing hands together.
- ☑ Play games from different cultures that include hand motions with words, such as "Pat-a-cake", "Todos Los Pescados", and "Itsy Bitsy Spider."

- ☑ Put small, safe objects on a tray or protected spot on the floor for children to grab and handle. For example, offer rattles and teething toys to infants; blocks, crayons, and snap-together toys to older toddlers. For children with impaired vision, use toys with switches and varied textures. Increase contrasts to help them see what is there (bright toy on black background; pictures outlined with heavy line).
- ☑ Offer materials and activities to encourage large sweeping motions and the ability to hold objects. For example, children might draw or paint with crayons, finger paints or use objects like rubber stamps and small-wheeled vehicles. Use wide brushes or markers or adapt handles for children with limited grasping ability.
- ☑ Offer children toys and materials to fill, stack, dump and pour, such as small blocks, buckets, plastic cups and water. Provide options for children with different abilities. For example, include play dough, puzzles with and without knobs, empty boxes, and containers with lids.
- ☑ Roll or throw soft balls and toys of different textures back and forth.
- ☑ Give children toys and materials for both indoor and outdoor play that support a wide range of fine motor skills.
- ☑ Work with family members and therapists to provide modified toys and materials that children with disabilities can use to build fine motor skills. For example, children might draw with oversized crayons or feed themselves with a curved spoon.
- ☑ Offer toys with buttons, Velcro®, zippers and snaps.
- ☑ Talk with a child's family if you are concerned about the way a child uses the small muscles of his or her hands and feet.



Approaches to Learning

Children's approaches to learning include how they go about developing new skills and concepts and their attitude toward learning. All children are born learners. Each child approaches learning in his or her own way, figuring out what "works."

For infants and toddlers, approaches to learning begin with their interest in the world around them and their desire to make things happen. They show curiosity and eagerness to interact with people and objects and excitement about their discoveries. Young children may express wonder and delight with smiles, movement, sounds, laughter, and later with language. They learn by doing and trying, when they succeed and even when they do not.

They may try a variety of different ways to get what they want, which is how they begin to solve problems. When infants and toddlers do the same things over and over, they learn new concepts and strengthen their skills. Toddlers may become more creative and begin to use their imaginations during play, music, and art.

All children face challenges. Their learning is affected by culture, language, and individual circumstances. Some children are challenged by developmental delays, poverty, or other risk factors. These children may need additional support and encouragement to develop a sense that they can be successful. For example, children with cognitive challenges may need extra help and direction to learn how to play with toys. A child with autism may show he is having fun in a different way from other children, such as by squealing or jumping. To encourage further efforts, adults must respond positively to children's enthusiasm.

When adults support their efforts, infants and toddlers become more willing to try new things and take risks. Adults encourage children's enthusiasm for learning by honoring their culture, valuing their curiosity, and setting up safe, interesting environments. High quality indoor and outdoor environments invite infants and toddlers to explore and "get into things." Adults who nurture healthy approaches to learning lay a strong foundation for future learning, success, and enjoyment of life.

Curiosity and Eagerness

Confidence, Risk-Taking, and Problem-Solving

Attention, Effort, and Persistence

Imagination, Creativity, and Invention

Wonder and Delight



Curiosity and Eagerness

Infants and toddlers show an interest in the world and want to find out how things work. They show excitement at their discoveries.

(b)(6)

What to Look For

Infants may begin to:

- 🍏 Show interest in themselves (watch own hands, play with own feet).
- 🍏 React to new sights, sounds, tastes, smells, and touches (stick out tongue at first solid food, turn head quickly when door slams).
- 🍏 Show interest in things around them (reach for toys, gaze at trees, stop and listen to sound of clock chiming).
- 🍏 Explore the environment using their senses – smell, hear, see, feel and taste.
- 🍏 React positively to caregiver's face, voice, touch, or actions (smile or gaze at caregiver, make sounds, move body).

Young toddlers may begin to:

- 🍏 Show enthusiasm for exploring and learning (clap, smile, try again and again).
- 🍏 Show curiosity (with pointing, facial expressions, words).
- 🍏 Move toward people and things that interest them.
- 🍏 Be willing to approach new people, things, and experiences.
- 🍏 Start activities that interest them and try to get others involved.

Older toddlers may begin to:

- 🍏 Seek more information about people and things around them ("study" an object carefully, stare for long moments, become completely occupied in figuring out a situation).
- 🍏 Be more willing to try new things.
- 🍏 Explore the indoor and outdoor space around them independently.
- 🍏 Choose their own activities more often.
- 🍏 Show pleasure in new skills and in what they have done.
- 🍏 Show interest in what others are doing.
- 🍏 Try to involve other children in play.
- 🍏 Talk about what they want to do, ask questions, and make their choices known using gestures, facial expressions, or words.

What to Do

- ☑ Stimulate children's senses – smell, touch, hearing, sight, and taste – to encourage children to react and move. For example, place colorful toys around an infant during tummy time, hang wind chimes outdoors, or invite toddlers to smell flowers.
- ☑ Be sensitive to infants and toddlers with special sensory needs. Avoid overwhelming children with stimulation. Provide quiet, uncluttered spaces for children who need them.
- ☑ Talk with infants and toddlers about what they are experiencing and what is happening around them. Notice and respond to children when they react to what is happening.
- ☑ Provide non-mobile children with a variety of materials (colorful toys, rattles, mobiles) to look at, listen to, reach for, and touch.
- ☑ Provide a wide variety of sensory materials for infants and toddlers to explore. Provide both familiar and new materials in response to children's interests. Include materials that are found in their homes.
- ☑ Allow infants and toddlers to choose materials and activities. For some children with special needs, caregivers must introduce toys, begin activities, and play a more active role. Follow children's signals to decide whether to continue, vary, or end an activity.
- ☑ Allow infants and toddlers plenty of time to explore at their own pace indoors and outdoors.
- ☑ Provide safe spaces and remove dangerous items indoors and outdoors so infants and toddlers can explore safely.
- ☑ Show enthusiasm for children's discoveries.
- ☑ Offer toys and activities that are challenging and exciting for each child at his or her individual level.
- ☑ When children express interest, show them what toys will do and how materials can be used.
- ☑ Ask open-ended questions to encourage curiosity. For example, "What will happen when we add the water to the flour?" "What is the man in the picture trying to do?"
- ☑ Express interest in what children are doing and encourage them to notice each other's activities.

Confidence, Risk-Taking, and Problem-Solving

Infants and toddlers become willing to try new things and take risks. They become more confident that they can get the results they want.

What to Look For

Infants may begin to:

- 🍏 Try a variety of approaches for getting what they want (make noise, move arms and legs, reach toward things).
- 🍏 Explore new experiences both indoors and outdoors (toys, foods, people, spaces).
- 🍏 Enjoy repeating actions to make something happen again.
- 🍏 Get upset when the expected does not happen.

(b)(6)

Young toddlers may begin to:

- 🍏 Use trial and error to get something done, get what they want, or solve problems.
- 🍏 Be willing to try or explore unfamiliar things and interact with new people.
- 🍏 Show interest in toys that offer a challenge and try to work them.
- 🍏 Explore freely without a familiar adult nearby.
- 🍏 Imitate adult actions

and problem-solving (talk on the phone, stir in a pot, get a toy from behind the couch).

- 🍏 Let a caregiver know that they need help (point, gesture, ask for help).

Older toddlers may begin to:

- 🍏 Try many different ways of doing things to get what they want or solve problems.
- 🍏 Show confidence in their own abilities (try to lift a heavy object, work for a long time on a difficult puzzle).
- 🍏 Want to do things their own way. (“Me do!”)
- 🍏 Express a belief that they can do things for themselves (push adult’s hand away, say “I can do it.”).
- 🍏 Try new challenges willingly and with enthusiasm.
- 🍏 Show pride in what they have done.

- 🍏 Develop new interests.
- 🍏 Seek help from others using words, signs, picture boards, and other forms of communication.

What to Do

- ☑ Be kind, caring, and loving toward infants and toddlers. Your support gives children the confidence to take risks.
- ☑ Respond consistently to children’s efforts to communicate. Talk to infants and toddlers!
- ☑ Establish a regular yet flexible routine. Model flexibility. (“Oops, that didn’t work! Let’s try something else.”)
- ☑ Show pride in what infants and toddlers have done. Respond to children’s expressions of pride. (“You have a big smile on your face! You look proud that you went down the slide all by yourself.”)
- ☑ Allow infants and toddlers to do things their own way and take some risks. Intervene when needed to keep children safe.
- ☑ Help children take a closer look to increase their understanding. (If a child is interested in leaves, take him outdoors to collect leaves. If a child is interested in a plastic dinosaur, read her a book about dinosaurs.)
- ☑ Encourage children to try new experiences and new ways of doing things.
- ☑ Ask questions and actively involve children in finding answers. (“I wonder where your teddy bear went.” “I wonder where the ants sleep.” “What do you think?”)
- ☑ Seek and accept children’s ideas. Let them know that their thinking and their efforts are valued more than “getting the right answer.”
- ☑ Help children deal with mistakes in a positive way. Avoid criticizing or making fun of them.
- ☑ Take your own mistakes in stride. Model for children by talking about what you are doing as you remain calm, figuring out what went wrong, and trying again.
- ☑ Recognize that some children with disabilities, such as children with autism, have difficulty trying new things, using a toy in a different way, or varying their routines. Work with other professionals to learn strategies that help these children try new things and accept changes. Use pictures to help them understand what will happen next.

Attention, Effort, and Persistence

Infants notice people, events, and things around them.

Toddlers are able to focus for longer periods of time. They become more able to stick with an activity even as it becomes more difficult.

(b)(6)

What to Look For

Infants may begin to:

- 🍏 Focus and pay attention to people and things around them.
- 🍏 Try hard to make things happen (bat at a mobile, make sounds to get attention).
- 🍏 Repeat interesting actions over and over.
- 🍏 Show interest in the different qualities of an object (notices the sound of a rattle, then be drawn to the “feel” of it, exploring it with mouth or hand).

Young toddlers may begin to:

- 🍏 Focus for longer periods of time when the child has picked the activity.
- 🍏 Repeat successful experiences (do shape sorter over and over, climb up and down stairs).
- 🍏 Repeat experiences they enjoy.

- 🍏 Work longer to reach a goal (fill a container completely, try to put on a shoe).
- 🍏 Keep trying even when things don't work (try for a long time to zip a jacket, try to engage a busy adult in play).

Older toddlers may begin to:

- 🍏 Stay focused longer on a person or a more complex activity.
- 🍏 Keep working on an activity even after setbacks.
- 🍏 Keep working on activities with other things going on around them.
- 🍏 Enjoy showing and/or telling others what they have done.
- 🍏 Want to complete activities and do them well.
- 🍏 Cooperate with others to reach a goal.

What to Do

- ✓ Plan your day to be predictable for infants and toddlers and be flexible in carrying out your plan.
- ✓ Plan for smooth transitions when moving children from one activity to another (lunch to nap, center time to cleanup to snack). Let children know when changes are coming. Work with families to ensure smooth transitions when children arrive and depart.
- ✓ Allow infants and toddlers to use materials in their own ways. However, keep in mind that some children with disabilities may use materials to stimulate themselves in ways that do not help their development. Learn how to respond appropriately to this behavior.
- ✓ When children indicate they need help, respond by listening and observing to determine what kind of help is needed.
- ✓ Offer help when children show that they want it and need it.
- ✓ Adjust levels of help to fit different situations and children's abilities.
- ✓ Organize space and provide time so that infants and toddlers can work on an activity for as long as they want. Allow them to repeat activities and experiences.
- ✓ Add new things to the indoor and outdoor spaces around infants and toddlers. Provide a wide range of things to notice (windsocks and flags that move in the breeze, bird feeders outside the window, new photographs of family members).
- ✓ Provide moderately challenging activities and materials that allow children to try hard, to try different ways of doing things, and to experience success.
- ✓ Give ample time to children to solve problems without interrupting them.
- ✓ Encourage a child to keep working and praise his or her efforts. Focus on effort rather than results.
- ✓ Encourage children to work together and help them notice each others' contributions.

Real World Stories

Sylvia sits on the floor with two nine-month-olds in her child-care classroom. There are many toys nearby on very low shelves. Sylvia offers each child a small soft doll with simple facial features. Each doll makes a noise when shaken.

Nathan, who has Down syndrome, brings his doll to his mouth with both hands. Then he drops the toy and grins at Sylvia. She shakes the doll gently on the floor in front of him. He looks down, picks up the doll with both hands, and brings it to his mouth again. "That feels good in your mouth, doesn't it?" Sylvia comments. Nathan smiles at her and drops the doll again. Sylvia once again calls his attention to the doll, and he repeats the process. Later, Nathan drops the doll and shows no interest in picking it up again. Sylvia chooses two of his favorite toys from the shelf and places them just out of reach in front of him.

Emma grasps her doll with one hand and quickly puts it in her mouth. First she chews on it and rubs it on her face using one hand and then the other. "That's soft," says Sylvia. Then Emma holds the doll in front of her and stares at its face. "She has a face," comments Sylvia. Emma smiles and coos, and Sylvia smiles back. Next, Emma shakes the doll, pauses and shakes it again. She listens to the sounds it makes and laughs. Sylvia responds, "You like that noise!" in a few minutes, Emma tires of the doll. She crawls over to the shelf to find a new toy.

In this example, Sylvia helps both children focus and use their hands to explore objects. She is more active in her efforts to help Nathan. She still allows him to explore in his own way. She respects his choice when he loses interest in the doll. Nathan has not begun to crawl, so Sylvia places two new toys that he likes nearby. This encourages Nathan to continue playing and to reach for the toys. Learning and reaching strengthen his muscles and large motor skills.

Emma notices and explores several aspects of her doll. Sylvia does not have to prompt her to do this. Sylvia encourages her by talking about what Emma is seeing and doing. This helps Emma learn words for objects and events. Emma can crawl and find a new toy for herself when she's ready. Sylvia knows that Emma can move to something new on her own. She allows Emma to choose her next activity.

👁️ ATTENTION, EFFORT AND PERSISTENCE

✋ FINE MOTOR, GROSS MOTOR

🗣️ RECEPTIVE LANGUAGE

🧠 CONCEPT DEVELOPMENT AND MEMORY

Imagination, Creativity, and Invention

Infants and toddlers watch what others do, begin to pretend, and use materials in new and different ways.

(b)(6)

What to Look For

Infants may begin to:

- 🍏 Try out a variety of sounds and movements.
- 🍏 Imitate sounds, movements, and facial expressions.
- 🍏 Become fascinated with people, objects, or activities.
- 🍏 Try a familiar action with a new object or person (try to bounce a block, wave bye-bye to a toy, make a sound to get a new adult's attention).

Young toddlers may begin to:

- 🍏 Do new things with familiar objects or combine them in unusual ways (use a dress-up boa as a snake, pound a drum with a plastic bottle, try to stack bears).
- 🍏 Move to music in their own ways.
- 🍏 Explore art and other materials freely.

- 🍏 Imitate a wide variety of actions of other people, often playfully.

Older toddlers may begin to:

- 🍏 Make believe, pretend, and act out familiar life scenes.
- 🍏 Use materials in new ways to explore and solve problems (bring a big spoon to the sand table when all of the shovels are in use, use dump truck as "grocery cart").
- 🍏 Communicate in creative or silly ways (make up own unique signs, repeat nonsense words and sounds, play with rhyming names).
- 🍏 Accept and use ideas from others.
- 🍏 Make up songs, chants, and rhymes.
- 🍏 Tell stories and pretend to read.
- 🍏 Be creative when planning and carrying out art work, music, and pretend play (add new colors and shapes, vary tempo and loudness, invent a new character).

What to Do

- ☑ Look and plan for children's differences and their many ways of learning. Use real objects, pictures, music, language, books, the outdoors, active play, quiet activities, and group activities to appeal to children who learn in different ways.
- ☑ Make a wide variety of changing experiences available to all infants and toddlers, including children with special needs. Encourage feeling, smelling, looking, hearing, and tasting.
- ☑ Read a variety of books and look at pictures with infants and toddlers. Ask them to talk about what they see.
- ☑ Provide materials that can be used in more than one way and are not limited to one right answer.
- ☑ Encourage children to notice what others are doing. ("See the way Sue is using the block for a race car." "Look at Luis and Mary. They are pretending to bake a cake.")
- ☑ Include unusual art and music materials when planning creative activities for children (jumping on bubble wrap, painting with feet, using classroom items such as blocks and toy pots to make music or create rhythm).
- ☑ Accept getting messy as part of a child's learning.
- ☑ Encourage children to think of different ways to use materials.
- ☑ Provide experiences in which there are many different ways to reach the goal. Encourage trial and error.
- ☑ Allow and encourage children to solve problems in their own ways.
- ☑ Provide materials for toddlers to pretend, use one object to represent another, and take on roles. This includes dress-up clothes for a variety of play themes and toys that can be used for many things, such as blocks, scarves, and clay.
- ☑ Encourage toddlers to think about new ideas. ("Have you ever wondered where snow goes?" "Where do birds live?")

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Wonder and Delight

Infants and toddlers first develop likes and dislikes. With a growing sense of playfulness, they begin to see things as “funny” and enjoy surprising others. They are attracted to things that please their senses.

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What to Look For

Infants may begin to:

- 🍏 Show delight in pleasurable experiences.
- 🍏 Smile, giggle, and laugh at things they like (peek-a-boo, fuzzy animal, favorite food).
- 🍏 Show likes and dislikes for certain objects, people, and experiences and respond to things they consider “pretty” (songs, pictures, toys, colors).
- 🍏 Show wonder at new activities and discoveries (delight in crawling, finding a ball under a blanket).

Young toddlers may begin to:

- 🍏 Show surprise at unexpected or unusual events.
- 🍏 Express likes and dislikes through facial expressions, sounds, and movements.
- 🍏 Show amazement at things they find attractive (say “aaah” and reach for a brightly colored toy, gaze at fluttering leaves).
- 🍏 Seek to repeat favorite experiences.
- 🍏 Enjoy copying sounds, actions, and words.
- 🍏 Act silly.

Older toddlers may begin to:

- 🍏 Play, understand, and delight in simple games.
- 🍏 Purposely do silly things with peers.
- 🍏 Discover things that interest and amaze them and seek to share them with others.
- 🍏 Use words, signs, or other means to express emotions (likes, dislikes, joy, pleasure).
- 🍏 Enjoy beauty and find certain things beautiful.

What to Do

- ☑ Smile and laugh with infants and toddlers and show that you enjoy being with them. Find time every day to have fun with children.
- ☑ Share children's delight at pleasurable experiences.
- ☑ Play music of all kinds (classical, jazz, folk, etc.), not just children's songs.
- ☑ Expose infants and toddlers to art of all kinds, going beyond typical art for children (great paintings, sculpture, mosaics, etc.).
- ☑ Dance and do creative movement with children, using all kinds of music and props both indoors and outdoors. Encourage children to move or respond in their own ways.
- ☑ Give infants and toddlers many opportunities to experience beauty through all their senses (touching snow, looking at rainbows, smelling freshly mowed grass, tasting different foods, listening to birds chirp).
- ☑ Talk about the things you like and share your enjoyment with infants and toddlers.
- ☑ Provide opportunities to share cultural traditions (foods, celebrations, toys, activities, art, etc.). Involve families in sharing things that are enjoyed in their home and culture.
- ☑ Ask children to communicate what they like, dislike, and enjoy. Use actions, facial expressions, and/or words to reflect what a child seems to be communicating.
- ☑ Be silly and share humor with children. Share jokes and funny stories.

Real World Stories

Carina and Josie are making cakes in the sandbox outside their two-year-old classroom. Cakes and piles of sand surround them. One girl holds the mold while the other fills it with sand and pats it down.

"Mas... mas... no mas!" says Carina as Josie works. "More... more... no more!" echoes Josie when they change places. Now it is Carina's turn to hold the cake mold. A mischievous grin appears on her face. "Mas... mas... mas..." she says, as the mold begins to overflow. Josie gives Carina a questioning look. Then she grins back. "Mas... mas... more... more..." she continues, as sand falls to the ground. Soon both girls are giggling joyfully. They take turns overfilling cake molds and buckets on purpose.

The teacher watches their silly play and smiles. She also notices that Tyler, who does not speak, is watching the two girls carefully. Suddenly, he smiles broadly and makes the sign for "more" with his hands. "More!" exclaims the teacher, repeating the sign. "Tyler is signing 'more!'"

Josie fills her next mold. She looks at Tyler from time to time. When he signs "more," she piles the sand higher. Tyler jumps up and down with excitement. He throws his arms wide apart before he brings his hands together to sign. The teacher smiles and laughs with the children. She speaks and signs to Tyler when he looks at her.

These older toddlers show their growing sense of humor and delight in silly things. They pretend they don't understand when a container is full, and their teacher values their developing sense of humor and fun. She does not interrupt or direct them back to more careful cake-making.

She also observes that Tyler seems to understand what is happening and tries to communicate. Her quick response rewards his efforts. She notes the girls include him in their fun. Tyler might not have been able to join their play without the teacher's help.

The teacher chose not to interrupt the girls to ask questions or make comments about the concepts of volume, fullness, and "more." She knows that, although their play is silly, they are still learning about these concepts. The children's language shows what they know. There will be many other chances to ask questions and extend their thinking about concepts.

🍏 WONDER AND DELIGHT

🍏 DEVELOPING A SENSE OF SELF WITH OTHERS

🍏 EXPRESSIVE LANGUAGE

🍏 CONCEPT DEVELOPMENT AND MEMORY

Language Development and Communication

Infants and toddlers often understand much more than they are able to say. During their first three years, they learn the meaning of many words, signs, and other forms of communication. Infants and toddlers express their needs, wants, and feelings through crying, gesturing, moving, looking, making marks with crayons, and talking. They build early literacy by exploring books, listening to songs and nursery rhymes, hearing stories, drawing and scribbling.

Adults build nurturing relationships with infants and toddlers by watching, listening, and responding consistently to their communications. Caregivers form and maintain these relationships when they hold, massage, talk, read and sing with infants and toddlers. They can learn to understand and respond to even the youngest baby's cues through touch and message.

Young children begin to understand and use language as part of these nurturing relationships. They must have live models. Television and "educational" electronic games are no substitute for conversations with caring adults. The foundations of reading and writing begin in infancy when adults talk and read to children. Infants and toddlers learn to value reading and writing when they see adults using these skills in everyday life.

Many families speak languages other than English at home. Infants and toddlers need to continue learning and speaking their family's language as they learn English. This helps them to stay close to all of the important people in their lives. It will also help them understand concepts and learn to read in the future. Books and print in their family's language and from their culture are especially important.

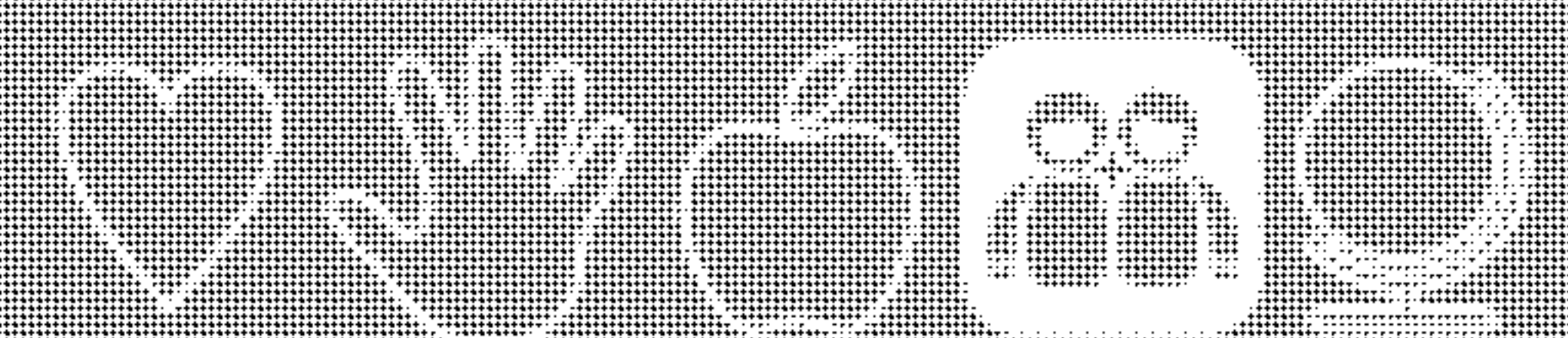
Adults may also need to use sign language and gestures to help children understand language. Sign language gives infants and toddlers a way to communicate before they can talk. It enhances language development and decreases frustration.

Some infants and toddlers use assistive listening devices to help them hear. These devices allow them to learn the sounds and words that make up language. Caregivers can learn the skills to help these children attend to and use spoken language. Family members can explain how to use the assistive devices their infants and toddlers use for hearing.

Receptive Language

Expressive Language

Early Literacy



Receptive Language (Hearing/Listening/Understanding)

Infants and toddlers learn the sounds of words and ways to use the words of their family's and caregiver's language(s) when adults talk, read, and sing with them.

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What to Look For

Infants may begin to:

- ☐ Respond in many ways (move, startle, and coo) to sounds, toys, and music.
- ☐ Respond to voices (smile, coo, babble).
- ☐ Recognize familiar voices and become quiet if crying.
- ☐ Gaze at faces.
- ☐ Pay brief attention to the same object the caregiver is looking at.
- ☐ Understand differences in tones of voices.
- ☐ Recognize spoken or signed words for common items.

- ☐ Respond to simple requests ("Where are your shoes?" "Can you show me the puppy?").
- ☐ Respond to their names (older infants).

Young Toddlers may begin to:

- ☐ Follow the caregiver's gaze to look at the same objects or people.
- ☐ Understand simple, frequently used words, sentences and questions.
- ☐ Follow simple directions ("Put your pillow on the bed." "Please sit by me.").
- ☐ Respond to comments and questions about pictures, play, people, and things that are happening right now.

Older Toddlers may begin to:

- Understand many new vocabulary words and a variety of concepts (big and little, in and out).
- Understand and respond to gestures, facial expressions, tone of voice and some words that show strong emotions.
- Respond to more complex questions (“What is she doing?” “What happened to the bear in the story?”).
- Follow two-step directions (“Pick up the paper and put it in the trash.” “Get your cup and put it on the table.”).

What to Do

- Listen to, watch, talk to and play with infants and toddlers at their eye level.
- Hold babies making sure they can see or feel your mouth. Then, make sounds, or repeat the sounds babies make.
- Respond to infants when they look at you, cry, smile, coo, say words, and reach or move toward you. Talk to them, pick them up, and imitate their sounds back to them.
- Have fun making sounds and talking with infants and toddlers! Show them you enjoy these conversations.
- Smile big, make silly faces, use high and low voices, and hug infants and toddlers. Use many hand gestures and sign language appropriate for infants and toddlers, like waving your hand when saying, “Come here.”
- Play turn-taking games: make a sound and wait for the infant or toddler to make a sound before your next turn.
- Take infants and toddlers outdoors to listen to different sounds. Point out the sounds by saying things like, “Hear the fire truck!” or “Listen to the buzzing bees!”
- Learn to say at least a few words to children in their family’s language. Learn greetings, words for favorite people and things, and words or phrases for common events and routines.
- Play audio recordings of family members’ voices in their own language for infants and toddlers to hear. This will help infants and toddlers feel connected to their families.
- Use a variety of words when you talk, including labels for things, action words, and many descriptive words. (“Look at the squirrel with the long, fluffy tail! It is running and jumping all over the yard.”)

- Describe what you are doing, and what infants and toddlers are doing. (“I’m putting lunch in the oven right now. I can see you are all ready because you are waiting for me at the table.”)
- Label infants’ and toddlers’ emotions without judging them as good or bad. (“Oh, you are crying. You seem to be sad because Daddy has gone to work.”)

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- When you speak, make your tone and facial expression match what you are saying. (For example, use a serious tone and don’t smile when saying, “We don’t hit our friends. Hitting hurts.”)
- Share positive stories about your childhood experiences. Talk about other family memories and experiences.
- Read and talk about books with infants and toddlers. Comment about the things that interest them in the books and ask simple questions about what they see.

Expressive Language (Talking/Communicating)

Infants and toddlers express their wants, needs, and feelings in many ways including speech, gestures, sign language, pointing to pictures and using communication devices. As they practice communicating with others, they begin using more words and longer sentences to express more complex ideas.

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What to Look For

Infants may begin to:

- ☑ Make different sounds for different purposes (whimper when wet, cry loudly when hungry).
- ☑ Smile, coo, wiggle, squeal or laugh to show pleasure when they see a familiar person.
- ☑ Look toward adults for attention and look away when they are tired or over-stimulated.
- ☑ Engage in vocal play such as babbling and turn-taking with adults and other children.
- ☑ Imitate sounds, words, and gestures.
- ☑ Use gestures, sounds, signs and assistive technology to express wants and needs.
- ☑ Make specific sounds for certain people and objects.
- ☑ Repeat actions that mean something specific (lift arms to be picked up, point at desired toys).

Young Toddlers may begin to:

- ☑ Look, point, talk, or bring objects to caregivers to communicate.
- ☑ Establish joint attention by looking at an object, at their caregiver, and back at the object.
- ☑ Express emotions through facial expressions and body movements.
- ☑ Wave “hi” and “bye.”
- ☑ Use a few words to talk about themselves, name family members and pets, say simple sentences, make requests and ask questions.
- ☑ Try to have a conversation.
- ☑ Use many different consonant sounds at the beginning of words.
- ☑ “Jabber” and pretend to talk using adult-like speech patterns and tones like their family’s language.
- ☑ Attempt to sing along with music.

Older Toddlers may begin to:

- ☑ Acquire and use many new words each day and have a word for almost everything.
- ☑ Use two or three word “sentences” to talk about themselves.
- ☑ Use two or three words to talk to themselves and others about things they are “working on,” things they are doing, routines and events of the day.
- ☑ Use two or three words to ask for people, actions, objects, and pets.
- ☑ Answer simple questions.
- ☑ Use gestures and some words to express emotions (“Me do it” to show confidence, hugging and laughing to show affection, “No! mine!” when other child grabs toy).
- ☑ Use speech that is understood most of the time by familiar listeners; show frustration, often through their behavior, if not understood.
- ☑ Use “no” to mean they do not want to do something or they do not want something.
- ☑ Use language for simple pretend play (“He eat.” when feeding a toy baby with a spoon, “Now go work.” after putting on shoes and necktie).
- ☑ Carry on conversations about the same topic for three or four turns.
- ☑ Show interest in talking about past events, especially when the caregiver uses familiar words, objects and gestures.
- ☑ Sing simple phrases of songs.

What to Do

- ☑ Imitate and repeat the child’s motions, sounds, and attempts at words in different languages and in a positive and encouraging manner.
- ☑ Recognize that young infants do not cry or act out in order to be naughty or to make you angry. They are simply learning to communicate their wants and needs.
- ☑ Realize that toddler behaviors such as biting or tantrums may happen because they do not yet have the words to communicate. They may be overwhelmed by learning so many new things. Help toddlers to calm down and give them words for their feelings. (“You seem to be mad that Joe has the toy you want. Let’s find another toy.”)
- ☑ Take turns with infants and toddlers through talking, actions, and playing games like “peek-a-boo” or other communication games from their culture.

- ☑ Encourage children to try out new sounds and words, including words in different languages.
- ☑ Encourage conversations while playing or looking at books by using the strategy known as the CAR (Comment-Ask-Respond, Notari-Syverson, Maddox & Cole, 1999).

* **Comment** on what an infant or toddler is interested in, such as a picture he may be looking at or a toy she may be playing with. WAIT at least five seconds before continuing with the next step.

* **Ask** a question about whatever the infant or toddler is interested in. WAIT at least five seconds. Ask a variety of questions at different times

about what the child is interested in. Include questions that require a simple one-word answer (such as “What does a doggy say?”) and questions that require a longer answer (such as “What do you think might happen?”)

* **Respond** by adding a little more information about the child’s interest. For example, if a child says, “Doggy bark,” a caregiver might say, “Yes, a doggy barks and wags its tail.”

- ☑ Talk with all infants and toddlers in positive ways about what they are hearing, seeing, feeling, smelling, and tasting. Talk about printed words they see related to these experiences. Talk with them about their experiences both indoors and outdoors.
- ☑ Encourage older toddlers to talk about, “draw” or “scribble”, and act out what they see.
- ☑ Be an appropriate language model by using correct grammar and a variety of different words. Show infants and toddlers how to participate in conversations by having many conversations with them and with other children and adults.
- ☑ Sing songs, say rhymes, and do finger plays with infants and toddlers in different languages.

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Real World Stories

Jae-Yoon and Sam, like all of their classmates in the young toddler room, love drums. It all started with a favorite book, *Pots and Pans*. First, the toddlers enjoyed pounding and tapping on the pots and pans in the home center. Then, the sturdy drums on the music shelf became popular. The toddlers bang on one drum or pot and then another with their hands or with blocks, listening to the different sounds. The teachers have hung pictures of drums all around the room at the toddlers' eye level. The pictures show adults and children from around the world playing all kinds of drums. Sam likes the picture of the goblet-shaped Djembe drum from West Africa.

Today is a special day because several family members have brought drums from home. The visitors arrive and sit on the rug in the middle of the room. Jae-Yoon is the first to notice the new drums. She hurries over to try the bongo drums. Eduardo's father shows her how to tap one drum and then the other. She copies him, listening to the high and low pitches. There is a Bera drum from Sri Lanka, a Native American drum with a deerskin top, and to Sam's delight, a big Djembe drum. He moves back and forth between the Djembe drum and the picture, pointing and jabbering with excitement. "Yes, that's a real Djembe drum, just like the one in the picture!" exclaims the teacher.


Each visitor has a chance to play his or her drum. Most of the toddlers cluster around to listen, and some move in time to the beat. The teachers allow the toddlers to join the drumming activity or to play in other parts of the room. The teachers also take many pictures. These pictures will be made into laminated books for the toddlers to look at later.

A book was the starting point for these toddlers' interest in drums. Teachers followed up on this interest by adding new musical instruments

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and pictures to the classroom. These materials encourage toddlers to recognize and label things, communicate, and express themselves creatively. Sam communicates his excitement upon seeing a drum like the one in the picture. The teacher shares his enthusiasm and adds words for what is happening. This encourages Sam to communicate further.

The visit from families takes the toddlers' exploration of drums to a new level. Family members get to share something that interests them and this helps them feel connected to their child's classroom. The visit from family members, like the pictures on the wall, introduces cultural diversity in a natural way. Toddlers develop positive feelings about a variety of people who play different kinds of drums. The teachers help the toddlers remember and learn even more by making books about this special event.

-  EXPRESSIVE LANGUAGE (TALKING AND COMMUNICATING) and EARLY LITERACY
-  IMAGINATION, CREATIVITY AND INVENTION, WONDER AND DELIGHT
-  CREATIVE EXPRESSION

Early Literacy

The foundations of reading and writing – literacy – begin in infancy. Infants and toddlers explore books, listen to songs and nursery rhymes, hear stories, draw and scribble as they build their early literacy abilities.

(b)(6)

What to Look For

Infants may begin to:

- ☑ Explore books and paper by tasting, mouthing, crumpling, banging, and patting.
- ☑ Listen to simple and repetitive books, stories, and songs in different languages.
- ☑ Take turns with caregivers making facial expressions and sounds in different languages.
- ☑ Look at pictures of faces and other simple objects.
- ☑ Make appropriate sounds when looking at pictures. (“Ack, ack” when looking at a duck, “Vrrrrooom” when looking at car.)

Young toddlers may begin to:

- ☑ Show an increasing interest in books.
- ☑ Turn pages, point to, and label pictures in books. They may treat pictures as real (licking a picture of ice cream, rubbing “fur” of a cat in a book).
- ☑ Listen to and repeat simple and repetitive books, stories, songs, and finger plays in different languages.
- ☑ Carry books around, “name” them, and select books for adults to read out loud.
- ☑ Recognize some environmental print and logos (the golden arches for McDonald’s, their favorite cereal box, a sign for a store they go to often).

- ☐ Make marks, meaningful marks, “draw” and scribble (cover easel paper with big crayon marks, hold phone to ear and make marks with pencil, scribble on paper while sitting with caregiver who is writing).

Older toddlers may begin to:

- ☐ Listen for longer periods of time to books, stories, songs and finger plays in different languages.
- ☐ Participate in rhyming games and notice sounds that are the same and different.
- ☐ Hold a book upright, turn pages appropriately most of the time, shut book and say “done” or “the end.”
- ☐ Chime in on a repeated line in a book while being read to by adult.
- ☐ Pretend to read familiar books from memory; repeat familiar phrases while looking at a book.
- ☐ Answer simple questions about stories.
- ☐ Show they understand the need for and the uses of print (scribble a “grocery list” during play, say “There what they have” when looking at a menu).
- ☐ Enjoy storybooks and storytelling in different languages.
- ☐ Understand the meaning of realistic symbols such as photographs, and later abstract symbols such as signs and print (know which pictures stand for which activities on a daily schedule, says “Sign say railroad tracks.”).

What to Do

- ☑ Provide daily lap reading time.
- ☑ Read and share books with small groups of infants and toddlers every day. Look at and talk about pictures and read simple stories. Choose books about things infants and toddlers are interested in (families, pets, trees, flowers).
- ☑ Include books that show children with disabilities in a natural way as part of the stories and pictures.
- ☑ Give infants and toddlers access to books throughout the day. Provide books that children can put in their mouths and books with pages that turn easily, such as cloth and board books.
- ☑ Place clear pictures of children and everyday objects throughout the room. Talk and sing about pictures in books and in the room.

- ☑ Make books using pictures of family members and other familiar objects found in magazines, catalogs and environmental print (such as pictures from catalog cut-outs and labels from favorite foods). Make books of trips, events you have shared, and children’s art.
- ☑ Share nursery rhymes, sing songs, and read simple poems in different languages.
- ☑ Make stories come alive by using different voices and body movements.
- ☑ Ask simple questions and make comments about books to start conversations with children. Talk about similar things that young children may have experienced. (“Do you have a pet?” “What did you see at the zoo?”). Welcome and encourage children’s questions too!
- ☑ Help children tell stories and act out parts of stories they have heard using words, pictures, movement, puppets, and toys.
- ☑ Place appealing books, signs, and posters in all interest areas indoors and outdoors at children’s eye level.
- ☑ Point out words in books and in the environment (street signs, toy boxes, words on pictures in room).
- ☑ Model respect for books and help children care for books.
- ☑ Provide crayons and other art materials for infants and toddlers to explore. Adapt art materials if needed so children with disabilities can use them.
- ☑ Model the use of reading, writing and drawing in everyday activities.
- ☑ Bring books, paper, and writing/drawing tools outside for children to use and enjoy.
- ☑ Make sure that children often see their name in writing, such as on their cubby/personal space, on all personal belongings, and on their artwork or other creations if they wish.
- ☑ For older toddlers, point out a few familiar letters such as the first letter in a child’s name and call attention to them occasionally. If a child asks for a letter name, provide it. DO NOT drill toddlers on reciting the alphabet or naming letters.

Real World Stories

It is a busy morning in Mr. McDowell's two-year-old classroom. Springtime is approaching. Most of the children in this group are close to three years old. Mr. McDowell takes out a book he has made using pictures of their class's first field trip. Their visit to a Mexican restaurant was a big success.

Miguel and Diana, whose parents work at the restaurant, ask to look at the book. "Let's read it together," suggests Mr. McDowell. He sits down on the rug with the toddlers. Several other toddlers hurry over to join them.

Each page of the book shows an event from the field trip. A simple sentence is written in both English and Spanish under each picture. Diana's mother helped translate the sentences into Spanish. Mr. McDowell reads each page and pauses for the children to talk about the pictures. Soon they reach a page showing Miguel's mother working in the restaurant kitchen. Miguel exclaims, "Mi mama!"

"Yes, there is your mother. Tu madre," agrees Mr. McDowell. He pauses to see if Miguel will say more. After a few moments, he asks, "What is your mother doing? ¿Que esta haciendo tu mama?"

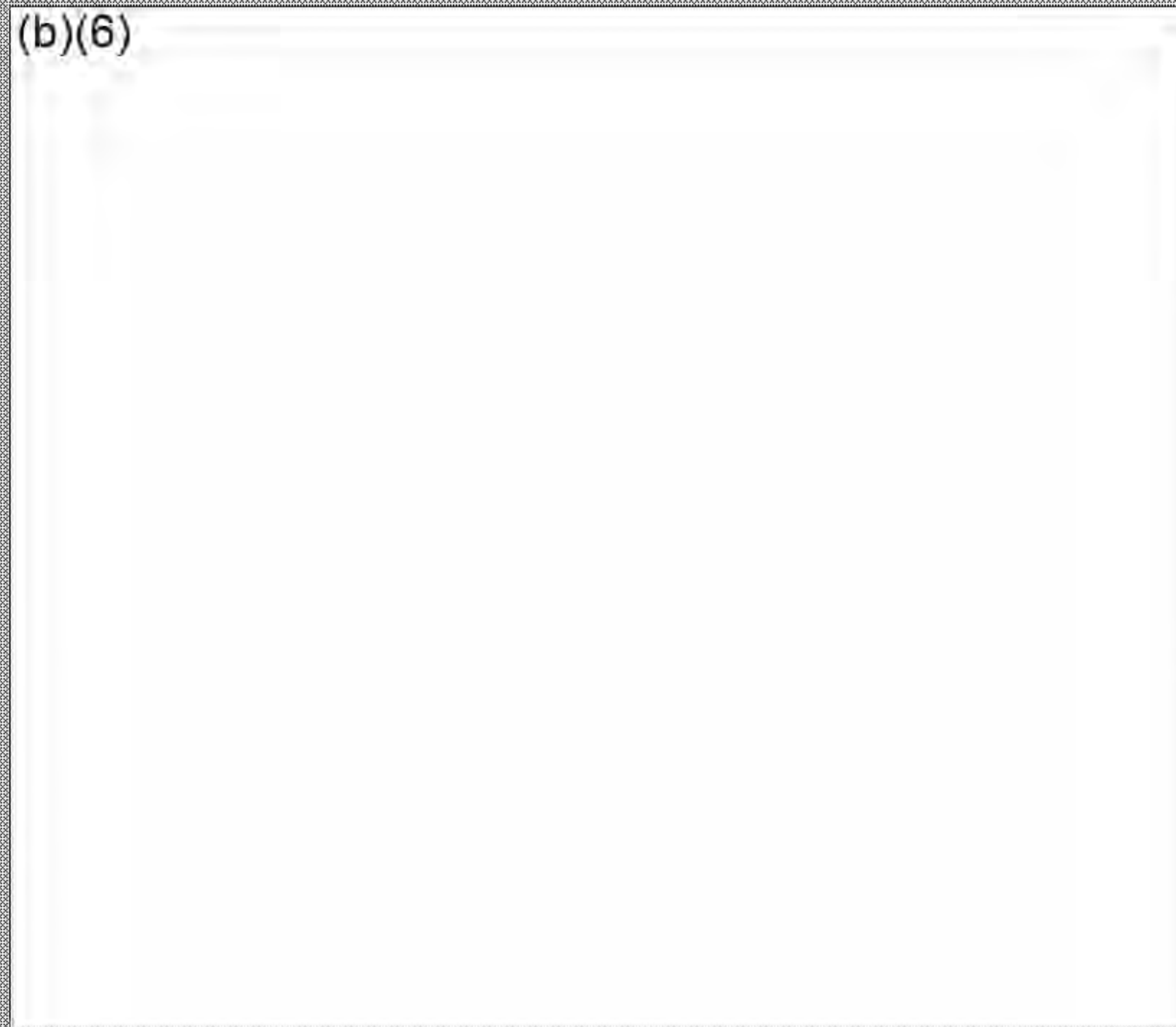
"¡Cocinando!" says Miguel.

Mr. McDowell again waits for Miguel to say more. When he does not, the teacher adds, "Si, cocinando. She cooked tacos and burritos for all of us. And then we ate them! Los comimos." The children point excitedly at the next page. It shows the class eating together at the restaurant with several family members. "There me and Tyler!" "¡Estamos comiendo!" "There my daddy!"

Later in the morning, the dramatic play center becomes a restaurant kitchen. The field trip book is displayed on a shelf. It is open to the page showing Miguel's mother. Several children are patting play dough into flat round shapes, and a large empty box serves as an oven. "Yo hago tortillas como mama," explains Diana proudly. ("I make tortillas like Mama.")

In this example, Mr. McDowell uses experiences from everyday life to help older toddlers learn. He worked with

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the families to arrange a field trip that was fun for children and showed the work parents do. The teacher-made book helps the children remember the trip. It also increases their interest in books because it is about them and their families. By using both Spanish and English words, Mr. McDowell builds the early literacy of all children in the class.

The toddlers are obviously very interested in the book. They show what they have learned by talking about it and pretending to cook tortillas in a restaurant.

Mr. McDowell also promotes early literacy and learning when he reads the book and talks about it with the toddlers. He reads with a small group of toddlers and stops to let them talk about the words and pictures.

The teacher uses the CAR strategy – Comment, Ask, Respond – (Notari-Syverson, Maddox, & Cole, 1999) to encourage Miguel to talk more about the book and help him learn. Mr. McDowell has learned enough Spanish to speak key words and phrases in the children's language. This helps them develop strong language skills in both English and Spanish.

- EARLY LITERACY and EXPRESSIVE LANGUAGE (TALKING AND COMMUNICATING)**
- DEVELOPING A SENSE OF SELF WITH OTHERS**
- SOCIAL CONNECTIONS and CONCEPT DEVELOPMENT AND MEMORY**

Cognitive Development

During their first three years of life, children learn faster than they will ever learn again. They are busy gathering and organizing information about their world.

Infants and toddlers learn about the social world through their interactions with other people. They begin to understand simple concepts through seeing, touching, hearing, smelling, tasting, and moving. Toddlers begin to notice more details and differences in their surroundings and become interested in more purposeful play. They use learned information to solve new problems. Children's growing creativity is seen in their art, music, movement, language, and pretend play.

Consistent, organized daily routines are the curriculum from which infants learn. They begin to understand and appreciate order in their world and predict what will happen next. All of children's play with toys and their indoor and outdoor activities, contribute to cognitive development.

Infants and toddlers develop creativity when they are free to explore musical instruments, art materials, and building materials without being judged. When adults include materials and activities that are familiar to the child's culture, learning becomes more meaningful. Recent research shows the connection between interaction, positive early experiences and brain development.

Infants and toddlers who have disabilities or other special circumstances may need additional support and stimulation to help them learn. They may need to repeat experiences more often or require adaptations to help them remember concepts or solve problems. Caregivers can add or modify learning materials and activities indoors and outdoors to meet their needs. This ensures that all children have the opportunity to explore, discover, participate and create.

Sensory Exploration and Discovery

Social Connections

Concept Development and Memory

Problem-Solving

Creative Expression



Sensory Exploration & Discovery

Infants and toddlers discover and understand their world using their senses. Over time, they learn to plan and control their movements so they can explore with purpose. Toddlers' ability to move about their environment allows for more varied experiences.

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Young Toddlers may begin to:

- Examine new experiences carefully (reach out to touch rain, stop playing to watch shadows, listen to and stare at musician).
- Use toys and other objects to make things happen (kick a ball, push a button on a toy).
- Notice differences in familiar objects, places, or events (frown at parent with a new haircut, look for furniture that was moved).
- Actively explore objects by handling them in many ways (moving, carrying, filling, dumping, smelling, and putting in mouth).

Older Toddlers may begin to:

- Use their whole body to learn (get mud or paint on themselves from head to toe, fit themselves into a big, empty box).
- Express clear likes and dislikes and reject things they do not like (insist on favorite shoes, search for particular doll and refuse others).
- Discover nature and changes in nature (notice and interact with small insects, smell flowers, catch falling snow, shuffle through leaves).
- Explore the qualities of different materials (sand, water, sink and float, goop, clay).
- Participate in mixing and notice changes in material (paint, play dough, food ingredients).
- Watch and listen carefully to understand new situations and experiences.

What to Do

- ✓ Provide a variety of sensory experiences for infants and toddlers. Include fresh air, a range of smells, sounds and temperatures, materials to touch and feel, and movement activities.
- ✓ Encourage infants and toddlers to use all senses--hearing, seeing, tasting, smelling, and touching--to explore indoors and outdoors.
- ✓ Help children who have sensory impairments to participate fully in all activities and enjoy a wide range of sensory experiences. For example, play music with a bass beat that children who are deaf can feel through their bare feet. Make sure they can also see others moving in time to the music. Remember, some children are overly sensitive to sound, light or touch. Expose them to new sensory experiences gradually.
- ✓ Comfort premature infants when they become over-stimulated. Premature infants may look away, fuss, or cry when there is

What to Look For

Infants may begin to:

- Respond to what they see, hear, taste, smell, and touch.
- Observe objects, displays, or events intently.
- Reach for or move toward interesting items, people, sounds, or movements.
- Explore objects with mouth and hands.
- Respond to familiar objects, people, and events.
- React to likes & dislikes (hold out arms for something they want, shake head "no", throw unwanted food or objects).
- Imitate familiar sounds.

too much light, sound, or interaction with people. Turn lights low, keep noise down, swaddle them gently, and stop interacting with them when needed. Provide private space for all children to calm themselves when they are over-stimulated.

- ☑ Be aware that infants and toddlers explore their environment by placing things in their mouths. Provide safe toys and supervise children closely to prevent choking and the spread of germs.
- ☑ Place non-mobile children where they have opportunities to see and hear new things, see familiar things from different views and watch or join in with other children.
- ☑ Hang clear, simple pictures, mobiles, and unbreakable mirrors where infants and toddlers can see and/or hear them.
- ☑ Read to children. Tiny infants like to hear the sound of your voice. Toddlers like to see the pictures and turn the pages.
- ☑ Allow infants and toddlers to explore and experience different surfaces, such as vinyl floors, carpet, grass, concrete, sand, and mud.
- ☑ Give toddlers choices to allow them to communicate likes and dislikes, such as deciding between two toys or choosing which color shirt to wear. For children who cannot point or talk, look for gazes or other gestures that show their likes and dislikes.
- ☑ Take walks around the neighborhood to experience changes in nature. Point out flowers, colored leaves, wind, water, animals and other items in nature.
- ☑ Prepare an environment indoors and outdoors that is safe for children to explore. Cover electrical outlets, place breakable objects out of reach, pick up trash. Remove other dangerous objects from indoor and outdoor-play area.
- ☑ Observe what children are interested in, watch where they play, and provide materials and books to follow their interests.
- ☑ Provide sensory materials that allow children to make a mess (sand, water, paint, clay). They learn from these experiences.
- ☑ Make large objects available to toddlers to play with such as empty appliance boxes, beanbag chairs, or pillows.
- ☑ Learn how to adapt your environment to meet the needs of all children. Find out about community resources available to you and the children and families in your care.

Real World Stories

Yesterday, Miss Luo saw several one-year-olds watching maple tree seeds whirl to the ground on their "wings". Today she has collected maple seeds, dry leaves, and fluffy milkweed seeds. When they go outside, several toddlers cluster around Miss Luo. She shows them the maple seeds she has collected.

"Do you remember these?" she asks. Sarah smashes some seeds between her hands. Jamal examines one carefully, and Chutima tosses a handful into the air. "The whirlflops are twirling down," says Miss Luo. "Whugigyl!" echoes Chutima. When Adam begins crunching a seed with his teeth, Miss Luo gently tells him to spit it out and shows him how to toss it in the air.

Some toddlers begin searching the ground for more maple seeds. Later, Miss Luo shows them the leaves and the milkweed seeds and encourages the toddlers to toss them into the air.

While one toddler is standing at the top of a climber, Miss Luo shows him how to drop first one kind of seed and then another from this height. Several more toddlers climb up with items to drop. They start with the leaves and seeds and add other items such as twigs and small toys.

Miss Luo and her co-teacher watch carefully. They gently interrupt toddlers if they are about to drop something on another child. They use many different words to describe children's experiences: "fluffy", "floating", "heavy", "light", "soft", and "brittle."

In this example, these toddlers are exploring new objects and the properties of familiar objects. They explore by throwing, dropping, carrying, and squeezing. One child puts an unfamiliar object in his mouth. The teachers know that young toddlers continue to explore in this way. They also know that most children in their particular group are not likely to do it often. They decide they can keep the children safe during the activity.

Miss Luo chose this activity because toddlers were interested in the maple seeds. She helps them add to what they know by showing them other things that float down through the air. She gives them words to describe what they see. But she does not force toddlers to follow her agenda. She allows them to crush the seeds or drop other items from the climber.

She continues to encourage toddlers and talk about what they are doing. Toddlers begin to learn about natural objects from all of these actions. Their experiences form a foundation for scientific thinking and understanding.

● SENSORY EXPLORATION AND DISCOVERY and
● CONCEPT DEVELOPMENT AND MEMORY

♥ SENSE OF SELF WITH OTHERS

● CURIOSITY AND ENGAGEMENT

☑ RECEPTIVE LANGUAGE and EXPRESSIVE LANGUAGE

Social Connections

In this area, infants and toddlers learn about social relationships and the people around them. As they watch and interact with other people, children begin to understand their own role and others' roles in the social world.

What to Look For

Infants may begin to:

- Become connected to primary caregivers.
- Look toward people and follow them with their eyes.
- Show a clear preference for familiar people.
- Intently observe actions of children, adults, pets, and objects nearby.
- Imitate facial expressions and sounds.
- Reach to explore caregiver's face and clothes.
- Seek parents, siblings, caregivers, and teachers for play and meeting needs

Young Toddlers may begin to:

- Imitate routine actions of their caregivers (rock a baby doll, push a lawnmower, "read" a magazine).
- Participate in daily routines (wash hands, come to table for snack).
- Remember people they have seen before.
- Show they understand others' emotions by offering comfort or help (pat crying child, offer soft toy).
- Know whom they can go to for help (regular caregiver versus visitor, parent versus neighbor).
- Recognize other children (make sounds, say name, move toward or away from child).
- Compare their own physical features and emotions with those of others by looking and touching.

Learn as much as you can about the cultures of the families in your program. Provide books, pictures, toys, music, and other materials that are familiar to children and bring their cultures into the play area in positive ways.

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Older Toddlers may begin to:

- Help with daily routines (put cups out for lunch, feed pets, wash tables).
- Engage in make-believe play about things they see others do every day.
- Tell the difference between “mine” and “yours.”
- Select which children they want to be with.
- Talk about what others do during the day (“Mommy at work.” “Mimi at home.”).
- Show they know what others want by talking about it or trying to help (reach toward light switch when an adult says “It’s dark in here,” says “He get away” when looking at a picture of a man running).
- Put self and others in categories based on age, gender and physical characteristics using language and play. (Say, “I’m a girl.” Point to a picture, puppet or doll and say: “That looks like me.”)
- Use play to communicate what they know about their community.

What to Do

- ☑ Hold and hug infants and toddlers throughout the day to help each child feel safe and secure.
- ☑ Learn from families how they hold, calm and soothe their infant so you can do the same.
- ☑ Tell infants and toddlers what you are going to do before you perform caregiving tasks. (“I’m going to wash your face and then we can play.”)
- ☑ Make playful interactions part of caregiving routines. (Play peek-a-boo, imitate facial expressions, or make the same sounds infants make while dressing or changing them.)
- ☑ Learn as much as you can about the cultures of the families in your program. Provide books, pictures, toys, music, and other materials that are familiar to children and bring their cultures into the play area in positive ways.
- ☑ Bring other cultures into the program in positive ways so children can see and experience how diverse the human race is.
- ☑ Learn to say a few important words in the home language of infants and toddlers whose families speak a different language.
- ☑ Cuddle with a child or a few children while you read a book to them. Very young children may prefer to look at the pictures. Talk to them about what they are seeing and hearing.
- ☑ Keep television to a minimum! Play with infants and toddlers using real objects and real human interactions.
- ☑ Model pleasant, polite interactions with family members and other adults. Infants and toddlers will imitate you.
- ☑ Allow children to discover “what is me” and “what is not me.” Toddlers begin to recognize and explore differences among people, including skin color, clothes, and physical appearance. Talk about these differences in a positive way.
- ☑ Allow and support children’s choice of playmates. Help children play together, including children who are different from each other. Model and encourage gentle touch while playing.
- ☑ Toddlers frequently claim people and objects as “mine.” This is a normal part of learning the concepts of “yours” and “mine.” Children must learn these concepts before they can learn to share. Provide several of the same toys and help children understand these concepts. (“This is your truck and that is Eduardo’s truck. Both of you have a truck.”)
- ☑ Take children to community events and places such as parks, playgrounds, petting zoo, farmer’s market, and library to learn about the world.
- ☑ Allow toddlers to help with daily routines such as putting out napkins, folding laundry, feeding pets, and watering plants. Adapt tasks so children with special needs can participate. (Keep in mind children with health conditions such as asthma, allergies and chronic cough may need to avoid animals.)
- ☑ Share children’s pleasure in learning and discovering new things through their play, both indoors and outdoors.
- ☑ Make scrapbooks or memory books and revisit them with the children.

Concept Development & Memory

Infants and toddlers acquire and remember basic concepts such as names of objects and people, colors, sizes, and shapes. Children relate what they learn to previous experiences and use their knowledge in new and different situations.

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What to Look For

Infants may begin to:

- Look in the direction where objects disappeared or turn head towards sounds.
- Respond in simple ways to people and objects (smile and focus on familiar face, soothe at smell of mother, bat at a toy).
- Anticipate routine events (smile, wave arms and legs, make excited sounds, move toward adult holding bottle).
- Expect and try to repeat actions and events (make sounds when music stops, bounce up and down to get adult to continue "horsie ride").
- Discover different shapes and sizes by exploring (put toys in mouth, crawl over pillows, pick up large objects).

Young Toddlers may begin to:

- Seek objects that are hidden or partly hidden.
- Observe and imitate others (children, adults, pets).
- Recognize where familiar objects belong.
- Identify objects and people in pictures by pointing.
- Use familiar objects in appropriate ways (comb hair, talk on phone, "water" plants with pitcher).
- Participate in routine events (carry clean diaper to changing table, go to sink to wash hands, sit at table for snack).
- Explore space with their bodies (fit self into large box, crawl under table, climb over low walls).
- Try to fit shapes into holes.

- Try to take simple objects apart and put them together (snap beads, pots with lids, containers that open and close).
- Indicate they want “more” (food, songs, “catch me” games).

Older Toddlers may begin to:

- Experiment with safe tools to learn how they work (wooden hammer with pegs, sifter, funnel).
- Investigate the world of nature (care for classroom pets and plants, pick up rocks and bugs, ask questions about things seen outdoors).
- Search for objects in different places, even when not seen recently.
- Remember more about events (tell what happens next in favorite book, repeat finger play, talk about recent trip).
- Recall the order in which things happen (finish line in story or song, remember that outdoor play comes after snack).
- Use an object to represent something else during play (block for a cell phone, a large box for a fort).
- Put objects together that are alike in some way (cars with cars and airplanes with airplanes, plates separated from cups, all long blocks together on shelf).
- Ask for “more” or “one more” (toy, snack, story).
- Try to count and use some number words.

What to Do

- ☑ Provide toys and materials that vary in color, texture, shape, size, and other characteristics.
- ☑ Keep toys and materials where infants and toddlers can reach them. Choose playthings that present some challenges to the children in your group.
- ☑ Talk often about what is happening around infants and toddlers. Name people and objects and describe events. Use a wide variety of words.
- ☑ Use self-talk (describe what you are doing) and parallel talk (describe what the child is doing) to provide new information. (“I am washing my hands-oooh, the water is warm.” “You are pushing the big dump truck. I am rolling the shiny, blue car.”)
- ☑ Make extra efforts to help infants and toddlers with disabilities connect concepts and words to their experiences. For example, for an infant who is blind, provide many things to touch, hear, feel and smell. Describe these things as the infant explores them. Make sure a child with hearing loss is looking at you and at the object you are communicating about before speaking or signing clearly about it.
- ☑ Use routines and real-life situations to help infants and toddlers learn. For example, talk about body parts during diapering or “hot” and “cold” while eating. Toddlers learn about things that go together and the concepts of “same” and “different” while sorting laundry and picking up toys.
- ☑ Allow infants and toddlers to play for long periods of time and repeat activities over and over.
- ☑ Observe each child carefully to determine what they enjoy, where they are comfortable, and how they learn best. Offer activities to match each child’s interests and temperament.
- ☑ Hide toys while infants are watching and encourage them to find them (under a blanket, in your hand, behind the chair).
- ☑ Give toddlers a chance to collect, sort and organize objects and materials both indoors and outdoors. Make sure children with disabilities have access to the same wide variety of materials.
- ☑ Encourage and help children to think about, name, and talk about what they are seeing and doing.
- ☑ Read stories that repeat the same words or lines over and over. Read favorite books many times. Talk about books after you read them. Read books on a variety of topics and place books in all learning centers.
- ☑ Invite children to tell or retell stories and talk about recent events.
- ☑ Provide materials for children to use in make-believe play. Play with them without taking over.
- ☑ Provide opportunities to play with materials in ways that change them, such as cutting play dough and squishing it back together or mixing two colors of finger paint.

Problem-solving

Infants and toddlers use what they have learned from past experience to meet challenges and solve problems. They show flexibility, creativity, and persistence.

What to Look For

Infants may begin to:

- Make random movements with various parts of their body.
- Notice the results of an action and do it again (shake rattle to make noise, kick legs to make crib mobile bounce).
- Meet their needs in simple ways (cry, kick, spit food out).

Young Toddlers may begin to:

- Use trial and error to make things happen (bang, then shake, then pull to get a lid off).
- Use what they know in other situations (try to get same reaction from different adults, look for buttons to push on new toys).

- Use body, objects, or others to get what they want (point to refrigerator for a drink, crawl over objects to get to toy, pull a string to bring toy closer).
- Use familiar objects in inventive ways (use spoon to feed self, doll, or other person; hand toy phone to parent to “talk”).
- Solve simple problems using tools (use stick to reach toy, catch bug with net, wave wand to make bubbles).

Older Toddlers may begin to:

- Find solutions by thinking (stop play to think about what to do; try idea not suggested or demonstrated by others).
- Think about more than one way to solve a problem and choose one.
- Find creative solutions to problems (put chairs together for a train, use hollow block for a doll bed).

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What to Do

- ✓ Move toys closer when an infant is reaching for, but cannot touch, a desired object.
- ✓ Encourage infants when their random movements make something interesting happen. Talk about what is happening. (“You waved your arm and the bell jingled!”)
- ✓ Play a game of hiding favorite toys and encouraging children to find them with you.
- ✓ Provide toys and household items that pose problems for infants and toddlers to solve, such as empty containers with matching lids, measuring cups, pots and pans, sorters, busy boxes, simple puzzles, and large Duplo® blocks.
- ✓ Allow time for infants and toddlers to try to solve problems on their own. Know each child’s signs of frustration. Offer help only when the child seems unable to master the problem alone.
- ✓ When you help infants and toddlers, provide just enough help so they can finish independently and feel successful. For example, open a snack or zipper half way and let the child finish.
- ✓ Praise children for their effort by using words like, “Keep trying, you almost have it!” “You worked for a long time and you got it done!”
- ✓ Explore other solutions to problems by asking questions such as “what would happen if....”
- ✓ Be aware that children might be solving problems silently. Allow them time to do so. Invite a child to use words to state, or show you, what the problem is if you believe this will lead them to a solution, but do not require them to explain the problem to you.
- ✓ Support children and help them to feel secure. When children feel secure, they are willing to keep trying until they solve a problem, even if they fail sometimes.
- ✓ Welcome questions from children about why things happen. If possible, show them while you explain. (For example, if a child asks “Where did the ice go?” in a pitcher of water, put out a bowl of ice and invite children to watch what happens.)
- ✓ Ask questions that have many possible answers (open-ended questions) while reading books to toddlers, such as “What do you think might happen?” or “Where do you think the bird is going?”

Real World Stories

Mrs. Juarez has placed a pile of scarves and homemade streamers in her outdoor play area. She hopes the children in her family child care home will enjoy them on this windy day.

Chelsea, who is two-and-a-half, selects two orange scarves and flutters about the yard. “See, I a butterfly!” she calls. Perhaps she is thinking of the monarch butterflies she has seen in the yard lately. Carlos, who is almost one, watches Chelsea and then crawls over to the scarves. With one scarf in each hand, he flaps his arms wildly and squeals with delight.

David, who is almost three, sorts through the streamers and separates the colors. He chooses a bright green one, saying, “That my snake, like the book.” Mrs. Juarez remembers that David liked the green tree python in a book from the science center. He runs as fast as he can with the streamer sailing behind him.

Suddenly, David stops and asks, “Can I put eyes on my snake?” “How will you do that?” asks Mrs. Juarez. David thinks for a moment, then points to the paint on the outdoor easel. Mrs. Juarez smiles and nods her head. David’s snake with eyes is soon flying behind him as he chants, “Snake fly, up high, snake fly, up high!” The two younger toddlers in the group run around the yard, fluttering scarves of their own.

The scarves and streamers in this example are ideal for promoting creativity and helping children learn concepts. They are materials the children can use in many ways. Children at all age levels enjoy and learn from these materials, which encourage active play.

For younger toddlers, scarves make running and flapping their arms a new experience. The older children in the group use them to pretend. Scarves become butterfly wings and a streamer becomes a snake.

David and Chelsea make connections with what they know about snakes and butterflies. The younger children imitate the actions of the older ones. This increases their learning as well. Mrs. Juarez lets David figure out how to put eyes on the streamer to make a snake that flies. This encourages his creative thinking and shows that she values it.

- CONCEPT DEVELOPMENT AND MEMORY: PROBLEM SOLVING and CREATIVE EXPRESSION
- ✋ PHYSICAL ACTIVITY
- IMAGINATION, CREATIVITY AND INVENTION

Creative Expression

Infants and toddlers begin to explore music, drama, dance, art and building. They become more able to express their ideas and feelings using imagination and artistic materials.

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What to Look For

Infants may begin to:

- Show interest and respond to sounds, tones, and voices.
- Listen to music and be calmed by it.
- Use everyday household objects for play (spoons, pots and pans, plastic bowls).
- Attend to bright or contrasting colors (primary colors, black and white).
- Gaze at pictures, photographs and mirror images.
- Show preferences for favorite colors.
- Hold, touch, and experience different textures (fuzzy blanket, smooth skin, rough carpet).

Young Toddlers may begin to:

- Use hats and clothes for dress-up make-believe.

- Respond to and participate in music, rhythm, and songs (sway, clap, stomp, vocalize).
- Explore and use musical instruments.
- Use materials to create sounds (bang blocks together, run wheels over rough floor, shake metal can to make contents jingle).
- Observe and imitate hand movements to music and finger-plays.
- Explore sensory materials and use them to create visual effects (smear finger paint, tear paper, roll and squash play dough).

Older Toddlers may begin to:

- Request preferred songs, music and rhymes.
- Express ideas and feelings through music and dance.
- Use props to recreate a familiar event (birthday party, going to the store).
- Experiment and create art with clay, crayons, markers, paint, and collage materials.

- Create familiar scenes using play materials (blocks, animals, people, cars).
- Pretend to be somebody other than themselves.

What to Do

- ☑ Provide musical mobiles for infants to watch and listen to.
- ☑ Place pictures and photographs at eye level for infants and toddlers and talk about them. Laminate pictures and attach them to the wall with Velcro® so children can handle them without damage.
- ☑ Listen and dance to many types of music. Play soft, soothing music during nap and lively music for children to dance. Talk with the children about the variations in music, such as loud, soft, fast, or slow. Point out the sounds of different instruments.
- ☑ Ask families to share recordings of music they enjoy. Play songs and dances from different places in the world.
- ☑ Provide safe musical instruments that make all kinds of sounds. Use household items as rhythm instruments and make musical instruments with materials that are easy to find (empty boxes, plastic bottles, paper tubes).
- ☑ Sing nursery rhymes and do finger plays. Let toddlers choose songs by pointing to pictures. Provide board books with illustrations of favorite repetitive song lyrics so children can “read” them.
- ☑ Encourage children to move and dance to music in many different ways (march, clap, stomp, gallop, jump, sway). Offer dance props such as scarves, streamers, and shakers for toddlers to twirl and shake.
- ☑ Provide a wide variety of sensory materials both indoors and outdoors, such as play-dough, goop (cornstarch and water), clay, finger paint, chalk, sand, mud and wood pieces.
- ☑ Provide materials for drawing, painting, building, molding and collage. Choose materials that are suitable for the age and development of the children. For example, use contact paper for collages with children who cannot handle glue.
- ☑ Invite children to talk about the art they create. Recognize that they may not have words for their creations or may not want to describe them. Make specific

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comments about what they have done (“You put a lot of feathers in this corner”).

- ☑ Display children’s artwork at their eye level and go back often to talk about it. Help young children respect their artwork by encouraging them to keep the art on the walls.
- ☑ Provide toys that create life scenes like a farm, parking lot, bus station, or school. Use puppets and stuffed animals to act out songs, rhymes, and stories. Encourage children to pretend using these materials.
- ☑ Provide dress-up materials to encourage pretend play about a variety of themes (gowns and top hats for a night on the town; hardhats, big boots and tools for builders; dresses, ties, shoes and watches for house and office play).
- ☑ Offer creative play activities both indoors and outdoors. For example, children might use chalk on a blackboard indoors or on the sidewalk outdoors. Play music outdoors where children can make large dance movements.
- ☑ Take pictures of the children doing creative activities. Display these pictures to help children recall what they have done and to help families appreciate the creative process.

Appendix A Important Milestones

Deciding When to Refer a Child for Evaluation of His or Her Development

Infants and toddlers develop at their own pace. Each child has a unique heredity, unique experiences in the womb, unique experiences at birth, and in everyday life. Two children of the same age may have very different abilities, even though they are both developing in a way that is typical for their age.

Sometimes, however, a child who is “behind” does have a delay or disability. Adults who care for young children must be alert for signs that a child is not developing as expected. It is best to discover a delay or disability early in a child’s life so the child can receive special services as soon as possible. These services will help a child learn and develop as fully as possible.

This list of important milestones can help parents, teachers and caregivers decide whether a child’s development needs assessing and to find out if there is a delay or disability. Each milestone describes a behavior or skill that most children show by the age listed.

If you are worried about a child’s development, use the list below as a starting point to decide whether a child is reaching important milestones. Look at the milestones for the child’s current age and also look at earlier ages. It is often helpful to ask the child’s parents or guardians what they have noticed about the child. Tell them what you have observed. Use clear language to describe what you have seen or what the child does. If family members agree that a child is not reaching some important milestones as expected, suggest a developmental screening. Encourage families to talk to their child’s health care provider or to contact the Children’s Developmental Services Agency (CDSA) in their area.

Visit www.ncei.org/ei/itp/cdsa.html or call 919-707-5520 to locate the CDSA for your area.

Obtaining a developmental screening for a child will help you determine if the child’s development is in the typical range. Highly trained professionals can also perform in-depth evaluations. They can measure a child’s strengths and needs, and recommend services that would benefit the child.

NOTE: Use this list ONLY to help you decide whether a child may need screening. It is NOT possible to diagnose a delay or disability from this list.

Infants

At three months, infant...

- ✧ Looks at faces.
- ✧ Is not unduly frightened by new faces or surroundings.
- ✧ Sucks and swallows easily.
- ✧ Follows moving objects with eyes.
- ✧ Lifts head off floor while lying on tummy.
- ✧ Grasps objects in fist.
- ✧ Responds to loud noises.

At four to five months, infant...

- ✧ Reaches for familiar persons.
- ✧ Opens and closes hands (versus keeping them fistled).
- ✧ Brings hands together in the middle of body.
- ✧ Brings objects to his or her mouth.
- ✧ Turns head to locate sounds.
- ✧ Rolls from front to back OR from back to front.

At six to seven months, infant...

- ✧ Smiles and shows other joyful facial expressions.
- ✧ Sits up with help.
- ✧ Reaches for objects with either hand (versus reaching with only one hand).
- ✧ Cuddles and shows affection for people who take care of him or her.
- ✧ Holds head up when in a sitting position.
- ✧ Responds to sounds around him or her.

At eight to nine months, infant...

- ✧ Begins to eat some solid foods.
- ✧ Explores objects placed in hands.
- ✧ Sits alone for extended periods of time.
- ✧ Has developed some way of moving about the room (crawling, rolling, “commando crawl”, etc.).
- ✧ Plays games like peek-a-boo or pat-a-cake.
- ✧ Shares sounds, smiles, or other facial expressions back and forth with others.

At all ages, infant...

- ✧ Has a rounded head (versus a flattened area on the back of the head).
- ✧ Shows steady growth (neither too slow nor too fast) in weight, height, and head size.
- ✧ Has normal muscle tone (not too stiff and not too floppy).
- ✧ Uses both sides of the body when crawling (versus dragging one side).
- ✧ Keeps skills and develops new ones (versus losing skills and not regaining ones he or she once had).

Young Toddlers

At 12 months, child...

- ✧ Seeks others' attention using sounds and gestures.
- ✧ Participates in "back and forth" social interactions.
- ✧ Seems attached to the adults who take care of him or her most often.
- ✧ Responds to his or her name.
- ✧ Moves into and out of a sitting position.
- ✧ Creeps or crawls on hands and knees.
- ✧ Stands with support and pulls self to standing position.
- ✧ Switches objects from one hand to the other.
- ✧ Tries to finger-feed and hold own bottle or cup.
- ✧ Understands some words.
- ✧ Babbles ("ba-ba-ba", "da-da-da", etc.).
- ✧ Imitates simple sounds.
- ✧ Communicates with gestures such as showing, reaching, or waving.
- ✧ Points to objects or pictures.
- ✧ Looks for objects when he or she saw where they were hidden.

At 14 – 15 months, child...

- ✧ Stands alone.
- ✧ Picks up small objects with thumb and index finger (pincer grasp).
- ✧ Stacks a few blocks.
- ✧ Knows how some familiar household objects are used (e.g., spoon, phone, brush).

At 16 – 18 months, child...

- ✧ Says some words.
- ✧ Walks without help.

At any age, child...

- ✧ Plays with toys that other children his or her age can play with.
- ✧ Walks with a typical "heel to toe" motion (versus mostly on toes).
- ✧ Keeps skills and develops new ones (versus losing skills and not regaining ones he or she once had).

Older Toddlers

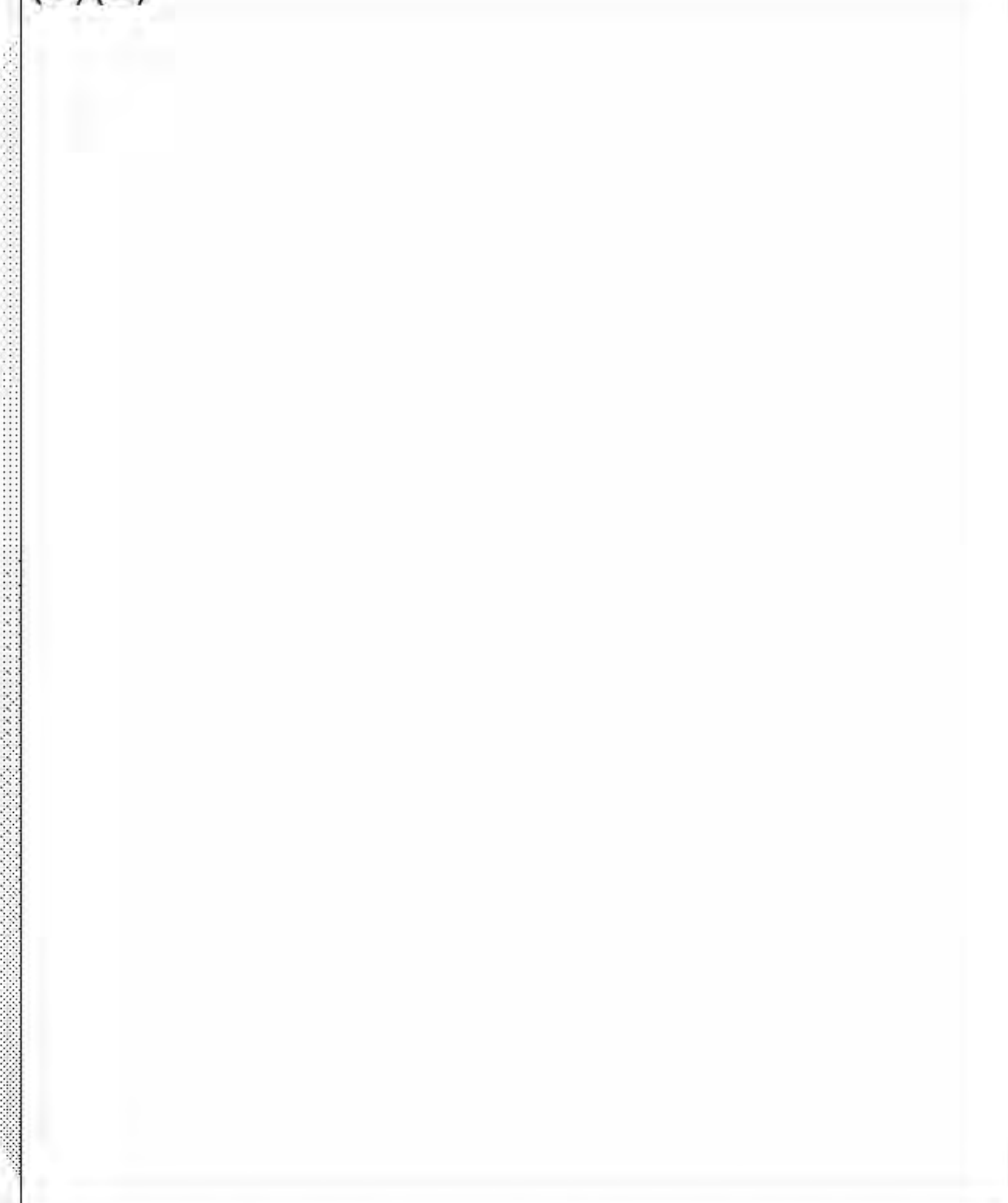
At 24 months, child...

- ✧ Recognizes herself or himself in mirror (points, says "me" or name).
- ✧ Shows a variety of emotions, such as anger, sadness, delight, and fear.
- ✧ Pushes a wheeled toy.
- ✧ Responds to simple questions with "yes" or "no."
- ✧ Follows simple one-step instructions.
- ✧ Uses two-word phrases that are meaningful.
- ✧ Says at least 15 words.
- ✧ Imitates some actions or words.

At 36 months, child...

- ✧ Separates from mother or other caregiver without becoming unduly upset.
- ✧ Shows interest in watching, imitating, and playing with other children.
- ✧ Eats a fairly well-rounded diet. (It is normal for toddlers to eat small amounts at times and to have food preferences.)
- ✧ Begins to show interest in toilet training.
- ✧ Walks and climbs stairs without falling often.
- ✧ Moves about without bumping into objects.
- ✧ Manipulates small objects easily with his or her hands.
- ✧ Follows simple two-step directions.
- ✧ Has speech that can be understood by most people.

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- ✧ Points to and names familiar objects.
- ✧ Communicates in 2- or 3-word phrases or sentences.
- ✧ Enjoys being read to.
- ✧ Shows interest in toys.
- ✧ Engages in pretend play.

At any age, child...

- ✧ Plays with toys that other children his or her age can play with.
- ✧ Tolerates most textures of food or clothing.
- ✧ Moves smoothly and can complete new motor tasks with more than one step.
- ✧ Keeps skills and develops new ones (versus losing skills and not regaining ones he or she once had).

Appendix B Resource Information

Educational and Informational Resources for Early Childhood Educators, Parents and Others who work with Infants and Toddlers

Here is a sample of websites where you can learn more about infant and toddler care, development and learning, health and safety, child advocacy, child care, and professional development. There are many resources available and this is not intended to be a complete list.

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Child Advocacy

Action for Children

An independent, non-profit, non-partisan, multi-issue organization in NC that works to influence public policy that affects children less than eighteen years of age. 919-834-6623. www.ncchild.org

Children's Defense Fund

Advocates for the health and well-being of all children, with particular emphasis on children who are poor, who are minorities, or who have disabilities. www.childrensdefense.org

Covenant for North Carolina's Children

A NC statewide nonprofit organization that advocates for children at the NC General Assembly. 919-649-2449. www.nccovenant.org

Faith Partnerships INC.

Works to assist impoverished families through collaboration with other faith-based organizations. www.faithpartnerships.org

Find Your State Legislators: North Carolina

Provides easy access to NC State Legislators' contact information. www.ncga.state.nc.us

Find Your U.S. Legislators: U.S. Congress

Provides easy access to contact information for US Senators and Congressional Representatives. www.house.gov or www.senate.gov

National Center for Children in Poverty

Provides national research and advocacy information on the status of children in poverty. www.nccp.org

Child Care Quality

Child Care Bureau, Division of the Administration for Families and Children

Supports low-income working families through child care financial assistance; promotes children's learning by improving the quality of early care and education for preschool aged

children and children attending afterschool programs. www.acf.hhs.gov/programs/ccb

Child Care Resource and Referral

Technical assistance programs designed to help providers develop quality child care programs.

In NC: Child Care Resources, INC.

www.childcareresourcesinc.org

Child Care Services Association.

www.childcareservices.org/index.html

Southwestern Child Development.

www.swcdcinc.org/html/home_page.html

National Association of Child Care Resource and Referral Agencies.

www.naccrra.org

More @ Four Pre-Kindergarten Program, Office of School Readiness

NC's pre-kindergarten initiative is designed to prepare at-risk 4 year olds for success in kindergarten. 919-733-0040. www.governor.state.nc.us/Office/Education/Home.asp

NC Association for the Education of Young Children (NCAEYC)

Promotes excellence in child care, teacher education and services for children in NC, birth through age 8. 1-800-982-4406. www.ncaeYC.org

National Association for the Education of Young Children (NAEYC)

A national organization dedicated to improving the quality of child care programs for children from birth through grade three. www.naeyc.org

National Child Care Information Center (NCCIC)

A national clearinghouse and technical assistance center that links parents, providers, policy-makers, researchers, and the public to early care and education information. www.nccic.org

National Network for Child Care

Practical information and resources about children and child care for parents, professionals, and the general public. www.nncc.org

National Program for Playground Safety

Assists the public in creating safe and developmentally appropriate play environments for children. www.playgroundsafety.org

North Carolina Division of Child Development

Regulates North Carolina's child care industry and supervises the subsidy services program serving low-income families. It also promotes

high quality child care through quality activities. Main web site. <http://ncchildcare.net>

Choosing Quality Childcare.

http://ncchildcare.dhhs.state.nc.us/parents/pr_sn2_ov.asp

Subsidized Child Care Program.

http://ncchildcare.dhhs.state.nc.us/providers/pv_sn2_cfsc.asp

North Carolina Office of School Readiness.

Administers a number of early education programs including More @ Four, Early Head Start, Head Start, Even Start, Preschool Exceptional Children and Title I Programs. www.osr.nc.gov.

North Carolina Outdoor Learning Environments Alliance, NC Office of School Readiness, NC Partnership for Children

A statewide collaboration that works to improve the quality of outdoor environments for all children. www.osr.nc.gov/ole

Child Health and Safety

California Childcare Health Program

Resources to promote health and safety in the child care environment. www.ucsfchildcarehealth.org

Carolinas Health Care System – Carolinas Poison Center

Certified as a Regional Poison Control Center by the American Association of Poison Control Centers (AAPCC). 1-800-222-1222. www.carolinas.org/services/poison

Children's Environmental Health Network

Works to protect the fetus and the child from environmental health hazards and to promote a healthy environment. www.cehn.org

Consumer Product Safety Commission

Lists all recalled consumer products. Describes hazards in products such as baby gates and trampolines. www.cpsc.gov

Creating Healthy Environments for Children/Healthy Child, Healthy World

Dedicated to protecting the health and well being of children from harmful environmental exposures. <http://healthychild.org>

First Candle

Research and advocacy organization dedicated to helping babies survive and thrive. www.sidsalliance.org or www.firstcandle.org

Healthy Child Care America, American Academy of Pediatrics

Health professionals, child care providers and

families working together to improve the health and well being of children in child care settings. www.healthychildcare.org

NC Child Care Health and Safety Resource Center

Promotes safe and healthy environments in child care settings. Look for information, resources, and a Directory of Child Care Health Consultants. 1-800-367-2229. www.healthychildcarenc.org

National Institutes of Child Health and Human Development

Web site dedicated to safe sleep practices to prevent the incidence of Sudden Infant Death Syndrome. www.nichd.nih.gov/sids/sids.cfm

National Resource Center for Health and Safety in Child Care

Provides access to the National Health and Safety Performance Standards for Out-of-Home Child Care, the NC Child Care Rules and Sanitation of Child Care Centers Rules. <http://nrc.uchsc.edu>

Natural Learning Initiative: An initiative of North Carolina State's College of Design;

promotes the importance of the natural environment in the daily experiences of all children; services include environmental design, action research and dissemination of information. <http://www.naturalllearning.org>

SIDS - North Carolina Back to Sleep Campaign

Works to increase the public's understanding of SIDS and how to reduce risks. ITS-SIDS Project is the Infant-Toddler Safe Sleep and SIDS Reduction in Child Care Project. 1-800-367-2229. www.nchealthystart.org/backtosleep/index.htm

Child Health and Nutrition

Child and Adult Care Food Program (CACFP)

Reimburses licensed caregivers for meals and snacks served to children. 919-707-5799. www.nutritionnc.com/snp/cacfp.htm

Center for Disease Control and Prevention (CDC)

At the forefront of US public health efforts to prevent and control infectious and chronic diseases, injuries, workplace hazards, disabilities, and environmental health threats. www.cdc.gov

Eat Smart, Move More

A NC statewide initiative that promotes increased physical activity and healthy eating

through policy and environmental changes. www.eatsmartmovemorenc.com

KidsHealth

Provides doctor-approved health information about children from before birth through adolescence. www.kidshealth.org

NC Family Health Resource Line

A bilingual telephone service that answers health related questions and links NC families to health and social service resources in their communities. 1-800-367-2229. www.nchealthystart.org/services_resourceline.html

NC Oral Health Section

A statewide dental program providing prevention and education services on dental health for children. Their goal is to prevent dental disease in children. www.communityhealth.dhhs.state.nc.us/dental

Nutrition NC

The Nutrition Services Branch of the NC Women and Children's Health Section promotes sound nutrition habits for infants, children and women in their childbearing years. 919-707-5799. www.nutritionnc.com/index.htm

Early Childhood Professional Development and Support

Center for the Social and Emotional Foundations for Early Learning

National center focused on helping child care programs improve children's social and emotional health and meet the needs of children with challenging behaviors and mental health challenges. www.csefel.uiuc.edu

Child Care WAGE\$® Project

Provides education-based salary supplements to low paid child care teachers, directors and family child care providers who work with children between the ages of 0-5. www.childcareservices.org/ps/wage.html

National Center for Early Development and Learning

Focuses on enhancing the cognitive, social, and physical development of children from birth through age eight. www.fpg.unc.edu/~ncedl

North Carolina Community College System

Provides information and education to early childhood professionals who are seeking to increase their training and education in the field early childhood development; campuses located throughout North Carolina. www.ncccs.cc.nc.us



Educational and Informational Resources (continued)

NC Institute for Early Childhood Professional Development

Advisory group to the NC Division of Child Development. Offers information and resources, and advocates for early childhood professional development. 1-800-859-0829. www.ncchildcare.org

Professional Development for Child Care Teachers and Administrators

Provides information and planning tools for early childhood professionals who are interested in increasing their education in early childhood. www.ncchildcare.org

Self-Help Credit Union

Provides loans to child care providers to open or expand their business, buy needed equipment and real estate, and/or upgrade the quality of their child care programs. Providers serving subsidized children may qualify for a special low-interest loan program. 1-800-476-7428. www.self-help.org

T.E.A.C.H. Early Childhood® Health Insurance Program

In participating counties, this program helps reduce the cost of health insurance to early childhood educators through collaboration with local Smart Start Partnerships, the Division of Child Development and child care businesses. www.childcareservices.org/ps/teach.html

T.E.A.C.H. Early Childhood® Project

Salary supplements and scholarships available to child care employees for educational programs. 919-967-3272. www.childcareservices.org/ps/teach.html

Zero to Three: National Center for Infants, Toddlers and Families

Provides information and resources that support and promote the healthy development of babies and toddlers. www.zerotothree.org

Infant and Toddler Development and Learning

Bright Futures at Georgetown University

Promotes relationships of trust between health professionals, children, families and communities. www.brightfutures.org.

Center on the Social and Emotional Foundations for Early Learning

Promotes positive social emotional outcomes for children birth to age 5. Serves as a national resource center for disseminating research and evidence-based practices. www.vanderbilt.edu/csefel

Child Trends: Social Science Research for Those Who Serve Children and Youth

An independent, nonpartisan research center focused on promoting positive outcomes for young children. www.childtrends.org

Frank Porter Graham Child Development Institute

One of the nation's largest multidisciplinary research centers for studying young children and their families. www.fpg.unc.edu

National Infant and Toddler Child Care Initiative

A project of the Child Care Bureau, Administration for Children and Families, Department of Health and Human Services that works collaboratively with Child Care and Development Fund (CCDF) administrators and other partners to improve the quality and supply of infant and toddler child care. www.nccic.org/itcc

National Scientific Council on the Developing Child

Works to build strong, informed, bipartisan leadership in the public and private sectors by promoting interdisciplinary knowledge of early childhood development. Promotes successful learning, adaptive behavior, and sound physical and mental health for all young children. www.developingchild.net

Office of Head Start/Early Childhood Learning and Knowledge Center

Information for parents and early childhood educators who participate in Head Start programs. <http://eclkc.ohs.acf.hhs.gov/hslc>

PITC: The Program for Infant/Toddler Care

Seeks to ensure that infants receive a healthy, emotionally secure and intellectually rich start in life by increasing the quality and availability of child care for children under age three, disseminates information about relationship-based infant and toddler care, and promotes good public policy. www.pitc.org

Talaris Research Institute

Supports parents and caregivers' efforts to raise socially and emotionally healthy children through ongoing education and research. www.talaris.org/index.htm

Tufts University Child & Family Web Guide

Evaluates the effectiveness of web sites that contain child development research and practical advice. Topics are chosen by parents and cover early child development through adolescence. www.cfw.tufts.edu

Zero to Three National Center for Infants, Toddlers, and Families.

Promotes infant and toddler development through professional development, parent support and education, and the promotion of good public policy for young children and families. For general information go to www.zerotothree.org. For specific information about the impact of TV/Video viewing on children under age three go to: http://www.zerotothree.org/site/DocServer/media_research_doc_5-24.pdf?docID=281

Parent Resources

American Academy of Pediatrics-Safety Net

Provides resources to parents and early childhood educators on the impact of TV, video viewing, and electronic media on young children. <http://safetynet.aap.org> and <http://www.aap.org/family/tv1.htm>

Born Learning

A public engagement campaign that helps parents, grandparents and caregivers explore ways to turn everyday moments into fun learning opportunities. www.bornlearning.org

Center for Inquiry Based Learning, Duke University

Provides teacher resources to promote inquiry-based learning for children of all ages. www.ciblearning.org/index.php

Early Childhood and Parenting Collaborative (ECAP)

ECAP, at the University of Illinois, is home to more than a dozen projects focused on the education, care, and parenting of young children. <http://ecap.crc.uiuc.edu>

Early Head Start National Resource Center @ Zero to Three

Promotes the creation of new knowledge in early childhood development and the sharing of this information to Head Start participants and educators. www.ehsnrc.org/index.htm

East Coast Migrant Head Start

Provides holistic, high quality early childhood services for the children of migrant seasonal farm workers. www.ecmhsp.org

Even Start

Creates family literacy projects that integrate early childhood education, adult literacy, parenting education, and interactive parent and child literacy activities for low-income families, including teen parents. www.ed.gov/programs/evenstartformula/index.html

NC Health Check/NC Health Choice

Health Check and NC Health Choice, provides free or low cost health insurance to children and teens in families that meet financial qualifications. 1-800-367-2229. www.nchealthystart.org

NC Smart Start

North Carolina's early childhood initiative designed to ensure that young children enter school healthy and ready to succeed and located in all 100 counties in the state. www.ncsmartstart.org/index.htm

Parents as Teachers

Provides parents with child development knowledge and parenting support through four programs: Born to Learn, Professional Development, MELD and Advocacy. www.parentsasteachers.org

WUNC-TV

Provides educational information and outreach services for parents, teachers and caregivers of children age 2-12. www.unctv.org/education/teachers_childcare/index.shtml

Professional Organizations and Resources for Early Childhood Educators

National Association for Family Child Care (NAFCC)

Supports family child care professionals, encourages high-quality child care, and is the accrediting agency for family child care homes. www.nafcc.org

National Association for the Education of Young Children

Dedicated to improving the well-being of all young children, with particular focus on the quality of educational and developmental services for all children from birth through age eight. www.naeyc.org

National Even Start Association

A membership organization that promotes the professional development of Even Start's educators and collaboration with other family literacy programs to ensure consistent quality of Even Start programs. www.evenstart.org

North Carolina Association for the Education of Young Children (NCAeyc)

Promotes excellence in child care, education and services for all children, birth through age eight by providing education and support to professionals serving young children and their families. 800-982-4406 or 919-510-5034. www.generalinfo@ncaeyc.org

North Carolina Licensed Child Care Association

Member organization for licensed child care providers. Contact P. O. Box 7118, Wilson NC 27895. (252) 299-1063. E-mail: linda@nclcca.org

Special Needs

American Speech-Language-Hearing Association

A professional, scientific and credentialing organization for speech-language pathologists, audiologists; contains a link to locate specialists nationwide. www.asha.org/findpro

Family Support Network of NC

Provides family support for children with special needs through community-based programs, training; provides a statewide resource directory. 1-800-852-0042. www.fsnn.org

First Signs

A national non-profit organization that is dedicated to the early identification of children with developmental delays and disorders; educates parents and pediatric professionals about the early signs of autism and other developmental disorders. www.firstsigns.org

NICHY National Dissemination Center for Children with Disabilities

Provides information on IDEA, effective educational practices, and disabilities in infants, toddlers, children, and youth. www.nichcy.org

North Carolina Early Intervention Services/Together We Grow

A variety of NC agencies who work together to provide early intervention services for children ages birth to three who have special needs, and their families. www.ncei.org/ei/itp.html

Partnerships for Inclusion

Provides technical assistance to support the inclusion of children with disabilities, from birth through age five. 919-962-7356. www.fpg.unc.edu/~pfi

TelAbility

Using real time video-conferencing and internet technologies, TelAbility provides comprehensive, coordinated, family centered care to children with disabilities across North Carolina and offers education, training, and peer support for people who care for them. Offers caregivers education, training, and peer support. 919-843-0427. www.telability.org/index.pl

Appendix C Glossary of Important Terms

The following definitions apply to the meanings of specific words contained within *Infant-Toddler Foundations*.

Abilities – Competence, aptitude or skill

Acquire – To learn something through effort and practice

Active exploration – Activities that promote and encourage child development and learning

Active learners – Children who learn by “doing,” “participating,” and “playing”

Accommodate – To make changes in materials, activities, interactions or environments so a child can participate fully

Acknowledge – Show positive recognition or interest with facial expression or words

Activities – Experiences planned by the child care provider that create opportunities for children to explore and learn about their world

Adaptive equipment – Devices or equipment designed to be used by children with disabilities to support their development and learning by helping them participate in play, learning, and caregiving routines

Advocate – (1) A person who acts in support of young children, their families and caregivers; (2) to plead in favor of support of children

Age levels – Overlapping ages of young children described in three broad categories: infants, young toddlers and older toddlers

Alignment – An arrangement of information that shows the relationship between two or more programs or sets of standards

ALL children – Used to emphasize that the guidelines apply to all infants and toddlers in North Carolina, whatever their circumstances and needs

Anticipate – To expect

Appropriate – What is usually expected for a child’s age and ability

Area – Refers to one of the categories within domains, such as “Developing a Sense of Self” in the Emotional and Social Development domain

Artistic materials – Loose parts and materials used to create new objects

Assessment – The act of gathering information about a child’s level of development and learning for purposes of making decisions that will benefit the child

Assistive technology – Devices used by children with disabilities to help them play, learn, and interact with their world

“At risk” – Phrase used to describe children who are in environments or situations that could impair their normal development

Attach/Attachment – The strong emotional tie children feel with special people in their lives (family members and other caregivers)

Attempt – To make an effort to do something with or without success

Attitude – Positive or negative feelings

Background – The total of a person’s experience, knowledge, education and culture

Barrier – Anything in a child’s life that limits healthy growth and development

Behavior – The manner of acting or responding to events, people, or environments

Caregivers – Adults who care for infants and toddlers in homes, child care centers, family child care homes; adults who are kith and kin or family, friend and neighbor care providers; and adults who are early intervention professionals or technical assistance experts

Caregiving routines/care routines – Everyday experiences that meet young children’s needs such as diapering, feeding, and dressing

Challenges – (1) Perceived obstacles to the typical development of a child; (2) activities that stretch a child’s current abilities, knowledge or awareness

Characteristics – Individual traits or qualities

Checklist – A list of characteristics used to indicate mastery of specific areas and used to evaluate a child’s progress

Child abuse – Non-accidental injury or pattern of injuries to a child including physical, emotional and sexual abuse

Child care health consultants – Specially trained health professionals, employed

by various organizations in North Carolina who work with child care programs to help create environments that best support the healthy growth and development of young children

Child-directed play – Allowing children to choose their own play in an environment that includes several options or choices

Child neglect – An ongoing pattern of inadequate care or a serious disregard for the physical, educational, emotional and medical needs of a child

Child size equipment – Furniture, materials, toys, dinnerware that is equal in scale to the body size of a young child

Communication – The act of understanding and/or expressing wants, needs, feelings and thoughts with others. Forms of communication may include crying, vocalizing, facial expressions, speech, gestures, sign language, pictures and/or objects.

Community – A group of people who care for and support one another

Consistent – Steady, harmonious, and free from contradiction

Consistent relationships – Relationships that develop when a child experiences predictable care from a primary caregiver(s) such as a parent or child care provider

Coo – Production of vowel sounds, often in response to a human face or voice, usually beginning around the second month of life expressing happiness or contentment

Cooperate – To work or act with others willingly and agreeably

Coordination – Various parts of the body working together in a smooth purposeful way

Creativity – The ability to move beyond the usual ideas, rules, patterns, or relationships

Cuddle – To hold close for comfort, warmth, safety and affection

Defiant – An unwillingness to cooperate

Delay – Slow to progress in one or more domains of learning

Demonstrate – To show clearly

Developmental delay – When children's development in one or more domains lags behind what is typical for their age

Dexterity – Skill and grace in physical movements

Domain – One of the five broad categories in which guidelines and strategies are grouped, such as Emotional-Social Development.

Drill – A method of instruction that requires memorization and repetition

Early literacy – Describes the foundations of reading and writing which begin in infancy

Engage – To become involved or to be attentive

Enthusiasm – Great excitement and interest

Examine – To observe, test or investigate

Experiment – An action used to discover something unknown, to test a principle or idea, or to learn cause and effect

Extend – (1) To make a longer sentence or add a thought to what the child has said; (2) to allow for more play by adding new ideas or materials to the setting; (3) to lengthen or stretch the human body, torso, arm, or leg

Explore – To investigate or study

Eye contact – To actively engage with others by looking at each other's eyes

Family – Refers to the closest relationships that a child has, customarily thought of as a mother and father, but often includes foster or adoptive parents, grandparents and others who are the primary caregivers in a child's life.

“Feeling” words – Words used by adults to name the common feelings experienced by people (happiness, anger, fear and sadness) to help young children learn to connect specific feelings with words

Flexibility – The ability to change or alter plans in response to the needs of a child

Focus group – A specific group who reviews material and then comments on the strengths and weaknesses of a product, and who may make recommendations for changes and improvements

Follow children's signals – Responding to a child by interpreting verbal and nonverbal cues

Frustration – Feelings of dissatisfaction resulting from unfulfilled needs or unresolved problems

Gaze – To look steadily and intently with curiosity, interest, pleasure, or wonder

“Gentle touches” – Appropriate touching

Gestures – Moving the limbs or body as an expression of thought or emphasis

“Get involved in their play” – Adults taking an active interest in play chosen by a child

Health Care Plan – A system of care that is developed by a physician or other medical staff to identify the specific needs, routines, medicines, activities in different environments for a child with special health care needs

Imagination – Forming mental images or concepts of things that are not actually present to the senses

Imitate – To copy, pretend or practice the activity of another individual

Impulsive – A sudden spontaneous action based on needs or wants

Inclusion – The environment, attitude and knowledge that encourages the enrollment and participation of all children, including children with disabilities

Independent choices – Choosing freely between developmentally appropriate alternatives

Initiate – To start or begin

Interest areas – Areas in a child care environment where similar materials, such as dramatic play materials, are grouped together to capture children's interest and engage them in play

Inventive – Creating with one's imagination

Intervene – (1) To step in to a situation to help; (2) to alter or hinder an action

Investigate – To study the details, to examine, or to observe in order to gain knowledge

Invite – To request participation in an activity event, or communication

Jabber – Rapid sounds or vocalizations made by infants and young children that sound like sentences or conversations but do not yet include words

Label – To attach a word to a picture, object, action, or event, either verbally or in writing

Language – Words, signs and symbols used by a group of people to communicate

Materials – Resources that caregivers add to the environment to enhance development and learning, including toys, pictures, and other things children can explore

Glossary of Important Terms (continued)

Medical home – A doctor’s office, a community clinic or a health department that parents can take their children to for all their health care needs: immunizations, well-child check-ups, vision, hearing, dental, and developmental screenings and referrals for early intervention services

Model – The act of teaching others (children) through the example of doing the desired behavior

Natural moments – Common, routine and everyday occurrences in a child’s life

Natural reflexes – The body’s automatic response to specific stimuli (leg kicks upward when knee is tapped)

Negative experiences – Any experience in a child’s life that prevents or diminishes healthy growth, development, and learning

“Next Steps” – The abilities, characteristics, knowledge, or skills that are likely to emerge next in a child’s development; often used by caregivers to help them choose the kinds of play that will support a child’s development and learning

Nutritional needs – The food and sustenance required for a child to grow and develop

Observe – Taking notice of the unique characteristics of each child

Parallel talk – Adults talking to a child, describing what the child is doing

Passive – Not active; tending not to respond or participate

Persistence – Continued effort

Pilot – To practice doing an activity

Pincer grasp – Putting the index finger and the thumb together

Play – Spontaneous actions chosen by children and considered by them to be fun and meaningful

Policymaker – An individual who works to create laws, rules and/or guidelines that can affect children and families

Poverty – Living without the necessities of life due to a lack of money or resources

Predictable steps or stages of development – One skill or ability precedes the development of another skill and the earlier achievement forms the foundation of the later one

Premature infants – Infants born before the 37th week of pregnancy. Premature infants are born before their organs are fully developed and they may need special medical care while their bodies develop enough to survive without specialized care.

Prenatal care – The health care, education and counseling a woman receives during pregnancy. Receiving prenatal care supports the health of the woman and increases the chances of having a healthy, fully developed baby.

Primary caregiver – The adult caregiver who is responsible for developing an emotional connection with a specific infant or toddler and who is usually first to respond to the child when needs arise

Problem-solving – Behaviors practiced by young children that allow them to explore questions or situations and try different solutions

Prompt – To encourage an action or behavior

Prop – Any object used by children during play

Raking motion – The movement of extending one’s arms and then pulling it towards one’s body

Random movements – Unexpected and unplanned body movements in a young child

Recall – The act of remembering; to bring back from memory

Reinforce – To strengthen a response with some type of physical, emotional or verbal reward

Repetitive books – Books that repeat the same words or phrases over and over again

Represent – To use something to stand for or symbolize something else

Respect – To show esteem for another person; to communicate that his or her ideas, feelings and needs are worthy of consideration

Responsive – Warm, sensitive, well-timed, and appropriate to the child’s needs; used to describe caregiver-child interactions that promote healthy development

Role – Behaviors exhibited by a person that identifies their work, status or responsibilities

Routines – A pattern of events or interactions planned and occurring on a regular basis

Safe Environments – Environments where children can be actively involved in things that interest them and are appropriate for them to use, without getting hurt

Security – Freedom from care, anxiety, or doubt; feelings of safety and trust

Self-talk – Words or dialogue adults use to describe what they are doing

Sensitive adults – Adults who accept that each child is different, interact with children in ways that match their individual needs, and show warmth and caring for all children.

Sensory – Related to the senses: hearing, seeing, touching, tasting and smelling

Sensory impairments – Vision or hearing losses or other sensory disabilities that may require specialized assistance or early intervention

Sensory materials – Materials and experiences that stimulate at least one of the five senses of hearing, seeing, touching, tasting and smelling

Separation anxiety – The stress experienced by a child when separated from a parent or primary caregiver

Setting – Any place where children receive care

Stimulation – Any number of sounds, textures, temperatures, tastes, sights that impact a child's senses or development

Sleep routine – The process by which a child settles down, with or without the assistance of an adult, and allows sleep to occur

Soothe – To bring comfort, solace and reassurance

Specialized care – Care routines or services needed to ensure the successful development of children with special needs or special health care needs

Special circumstances – Situations in a child's life that may call for additional care or nurturing from the caregiver

Special health care needs – Chronic health conditions that may require specialized care (allergies, asthma, diabetes, seizure disorders)

Special needs – Developmental disabilities that may require specialized care

Spontaneous play – A child's inclination to act naturally without pre-planning

(b)(6)

Strategies – Suggested activities, materials, and ways of interacting that promote development and learning

Substance abuse – Excessive use of substances such as drugs or alcohol that results in impaired judgment and interferes with the adult's ability to nurture, care for and provide a safe environment for young children

Sudden Infant Death Syndrome (SIDS)
–The sudden, unexplained death of an infant younger than one year old

Swaddle – To wrap a baby snugly to give comfort and security

Symbol – Something that represents something else by association

Tantrum – A violent demonstration of anger or frustration

Teachers – Adults who care for infants and toddlers in homes, child care centers, family child care homes; adults who are kith and kin or family, friend and neighbor care providers; and adults who are early intervention professionals or technical assistance experts

Tempo – The rate of speed of a musical piece or lyrical passage

Temperament – The unique way a child responds to the world

Themes – Activities, materials, or interest areas in the child care environment that center around a certain concept or topic

Therapy – The treatment of disease or disorders using remedial services, rehabilitation, or curative processes

Thrive – To grow and develop with vigor and health

Tools – Anything used or created to accomplish a task or purpose

Trial and error – Attempting to solve a problem by randomly trying different approaches

Trust – Feelings of reliance and confidence in the good will of others

Transition – To move or change from one activity or location to another activity or location

Turn-taking games – Games between adults and young children where an adult makes a sound or action and waits for the child to mimic or copy them. Once the child responds, the adult makes a sound or action

Visual effects – Results of a child's artistic efforts that can be seen by others

Vocabulary – The collection of words that a child understands or uses to communicate

Appendix D Selected Bibliography

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The theories and research presented in these resources help to show why the guidelines included in *Infant–Toddler Foundations* are important for young children’s development and learning.

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History and Background

These resources help to explain why these guidelines were developed and how they will be useful.

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**Research Validation Study for the
Infant-toddler *Foundations***

**Prepared by
Dr. Edna Collins
East Carolina University**

**Submitted to the
Infant-Toddler *Foundations* Development Committee
North Carolina Division of Child Development**

October, 2006

Note Regarding This Document

This document was developed to inform the work of the committee writing North Carolina's Infant-toddler *Foundations*. Research was collected to determine if the near final draft of the document was consistent with research and theory on infant-toddler development. Areas of development and specific skills and knowledge addressed in the document were examined. Results suggest that there is, for the most part, research available to support the proposed *Foundations*. The committee has addressed all areas of development and learning that are important at the infant-toddler age and the age-specific expectations are appropriate based on this review of research and theory.

Emotional and Social Development Review of Research

Emotional and Social - involves a child's feelings about themselves and their relationships with others. Key elements of emotional and social development are the extent to which they become aware of their own uniqueness as an individual, are able to regulate their own emotions, and can form positive relationships with adults and peers. Development in this domain is influenced by a child's temperament, cultural expectations, and early experiences. Temperament needs to be considered for each child as a constant that does not change significantly during the infant and toddler period. The child's unique temperament can impact the process of socialization and establishing relationships with others. Attachment to adults who are consistent in their lives such as family members and caregivers is essential to healthy emotional and social development. Emotional support and secure relationships foster the child's sense of self and others. Many experts believe that the emotional and social developmental domain is one of the most fundamental areas for infants' and toddlers' development and learning.

General note: Erikson's theory and research are relevant to all three areas of Emotional and Social Development. The development of trust vs. mistrust, and autonomy vs. shame and doubt, are key accomplishments in his theory that are consistent with the broad areas we have selected in this domain. Research support for the long-term consequences of successful vs. unsuccessful resolution at these stages needs to be further investigated.

I. Developing a Sense of Self – describes a child's learning about their own unique awareness of themselves through their interactions with the world around them. Some infants and toddlers with sensory impairments (e.g., visually impaired) may need assistance with developing their sense of self.

In her introduction to the chapter on Emotional and Social development, Berk (2005) states that the two aspects of personality that develop during the first two years are close ties to others and a **sense of self**. (p. 250).

Bandura's theory and research (1999, 2001) are relevant to multiple domains. Imitation, and the contribution of children's ability to "listen, remember, and abstract general rules from complex sets of observed behavior" (Berk, 2005) affect further learning and development in his theory. He holds that children become more selective in what they imitate, based on observing **others' attitudes** about their own actions as well as feedback. They develop **personal standards, and self-efficacy**.

The ability to shift attention from one stimulus to another is important for the development of **self-control** (Putnam, Spritz, & Stifter, 2002; cited in Berk, 2005). "Early, large individual differences in self-control remain modestly stable into middle childhood and adolescence" (Shoda, Mischel, & Peake, 1990). Children who are more advanced in sustained attention and language development are more self-controlled... (Cournoyer, et al.,

1998)... As self-control improves, mothers increase the rules they require toddlers to follow...(Gralinski & Kopp, 1993).” (Quotes, from Berk, 2005, p. 280)

Berk (2005, p. 337-338) cites a variety of cognitive and social skills and approaches to learning included in our standards as foundational to preschoolers’ theory of mind. These include “the ability to inhibit inappropriate responses [**self-control**], think flexibly, and plan...(Carlson & Moses, 2001; Hughes, 1998).”

“A firmer **sense of self** also permits children to cooperate in resolving disputes over objects, playing games, and solving simple problems (Brownell & Carringer, 1990; Caplan et al, 1991).” (Quote from Berk, 2005, p. 359)

http://www.zerotothree.org/ztt_professionals.html

“Kindergarten teachers report that a child’s social and emotional “literacy”—the development of **self-control**, respect for others, **a sense of confidence and competence**—is vital for success in kindergarten. Without these skills, children are at a greater disadvantage in school.” (No reference cited on website, but probably exists and could be located.)

http://www.zerotothree.org/ztt_professionals.html

“**School Readiness:** To become eager learners, children need to develop skills in four key areas [two listed here]:

Self-Control

Self-control—the ability to express and manage emotions in appropriate ways—is essential for success in school and healthy development overall. It enables children to cooperate with others, to cope with frustration, and to resolve conflicts.

Self-Confidence

When children feel competent and believe in themselves, they are more willing to take on new challenges, a key ingredient for school success. Self-confidence is also crucial for getting along with others and working out the many social challenges—such as sharing, competition, and making friends—that children face in school settings. Self-confident children see that other people like them and expect relationships to be satisfying and fun.” (No references listed on website here.)

II. Developing a Sense of Self with Others – describes children demonstrating the beginnings of effective social and interpersonal skills while interacting with others. Some infants and toddlers with exceptionalities may need assistance with forming relationships with others.

In her introduction to the chapter on Emotional and Social development, Berk (2005) states that the two aspects of personality that develop during the first two years are **close ties to others** and a sense of self. (p. 250).

“Children who are relaxed, **socially responsive**, and able to deal with change are easier to rear and more likely to enjoy positive relationship with parents and other people (Conger & Conger, 2002).” (From Berk, 2005, p. 11)

Bandura's theory and research (1999, 2001) are relevant to multiple domains. **Imitation**, and the contribution of children's ability to "listen, remember, and abstract general rules from complex sets of observed behavior" (Berk, 2005) affect further learning and development in his theory. He holds that children become more selective in what they imitate, based on observing others' attitudes about their own actions as well as feedback. They develop **personal standards**, and self-efficacy.

According to Berk (2005), "Vygotsky believed that complex mental activities, such as voluntary attention, deliberate memory, categorization, and problem solving, have their origins in **social interaction**. Through **joint activities** with more mature members of their society, children master activities and think in ways that have meaning in their culture" (p. 227). Being able to interact well with others is a developmental outcome that is in turn significant for future cognitive development.

The importance of the **ability to interact with others socially** for future development is illustrated by the developmental delays often observed in children who are blind, summarized in Berk (2005, pp. 196-197). "Infants who see poorly have great difficulty evoking stimulating caregiver interaction. They cannot make eye contact, imitate, or pick up on nonverbal social cues. Their emotional expressions are muted; for example, their smile is fleeting and unpredictable. Consequently, these infants may receive little adult attention, play, and other stimulation vital for all aspects of development (Troster & Brambring, 1992)." Problems persist in the preschool years, including fewer initiations of contact with peers, and problems interpreting and responding to others reactions (Preisler, 1991, 1993; cited in Berk, 2005).

http://www.zerotothree.org/ztt_professionals.html

"A child's relationships and experiences during the early years greatly influence how her brain grows." (No reference cited on website, but references definitely exist and can be located.)

"Kindergarten teachers report that a child's social and emotional "literacy"—the development of self-control, **respect for others**, a sense of confidence and competence—is vital for success in kindergarten. Without these skills, children are at a greater disadvantage in school." (No reference cited on website, but probably exists and could be located.)

http://www.zerotothree.org/ztt_professionals.html

"School Readiness: To become eager learners, children need to develop skills in four key areas [two listed here]:

Self-Control

Self-control—the ability to express and manage emotions in appropriate ways—is essential for success in school and healthy development overall. It enables children to **cooperate with others**, to cope with frustration, and to **resolve conflicts**.

Self-Confidence

When children feel competent and believe in themselves, they are more willing to take on new challenges, a key ingredient for school success. Self-confidence is also crucial for

getting along with others and working out the many social challenges—such as **sharing**, **competition**, and **making friends**—that children face in school settings. Self-confident children see that other people like them and expect relationships to be satisfying and fun.” (No references listed on website here.)

Egeland & Erickson (1999) summarize research linking secure **attachment** with a wide range of social and emotional outcomes in early childhood through adolescence, including high self-esteem, self-reliance but also effectiveness at seeking adult help when appropriate, positive engagement and responsiveness with peers, greater empathy, acceptance by classmates, and capacity for intimacy and self-disclosure in adolescence. Children with anxious attachment were more likely to have behavioral and emotional problems later. They also note that infants in the disorganized attachment category in particular have higher cortisol levels during the Strange Situation.

From Berk (2005): “[**I**]mitation is a powerful means of learning. Using imitation, young infants begin to explore their social world, getting to know people by matching behavioral states with them. In the process, babies notice similarities between their own actions and those of others and start to find out about themselves. Furthermore, by tapping into infants’ ability to imitate, adults can get infants to exhibit desirable behaviors, and once they do, adults can encourage these further. Finally, caregivers take great pleasure in a baby who imitates their facial gestures and actions.” (p. 186)

Research indicates that **attachment** is a protective factor that may insulate children from the negative effects of poverty, violence, parental substance abuse, and other stressors. (Garbarino, Dubrow, Kostelny, & Pardo, 1992; Hamilton, 2000; Weinfeld, Sroufe, & Egeland, 2000; all cited in Trawick-Smith, 2006).

Attachment and brain development: “Babies who are securely attached to caregivers... are less likely to produce cortisol under stressful conditions (Hertsgaard, Gunnar, Erickson, & Nachmias, 1995; Nachmias, Gunner, Mangelsdorf, Parritz, & Buss, 1996). When they do, the levels of this hormone are far lower than in children who are not securely attached... The findings of one study suggest that it is the long-term, emotional bond of babies to their parents that reduces cortisol and nurtures the brain, not any specific parenting behavior (M. Lewis & Ramsey, 1999)” (Quote from Trawick-Smith, 2006, p. 118)

Berk (2005) cites references showing that irritable mood and **attachment** difficulties in infants are associated with maternal depression (Martins & Gaffen, 2000), which in turn is associated with long term negative effects on child development and the parent-child relationship. This includes a more negative view of the infant by the parent (Hart, Field, & Roitfarb, 1999), impulsive and antisocial behavior (Conger, Patterson, & Ge, 1995; Murray, et al., 1999), and difficulty maintaining control in the face of challenges (Cummings & Davies, 1994). (p. 159)

From Berk (2005): “[**J**]oint attention, in which the child attends to the same object of event as the caregiver, who offers verbal information, contributes greatly to early language

development. Infants and toddlers who often experience it sustain attention longer, talk earlier, and show faster vocabulary development” (Carpenter, Nagel, & Tomasello, 1998; Flom & Pick, 2003; Silven, 2001). (p. 239). Also, with regard to participation in turn-taking games like peekaboo: “Infants’ play maturity and vocalizations during games predict advanced language progress between 1 and 2 years of age” (Rome-Flanders & Cronk, 1995). This line of research indicates a link between the **ability to engage in social interaction**, especially with reference to objects, and language development.

Skill at establishing **joint attention** serves as a foundation for **social referencing**, as children realize that the adult’s facial expression can guide them about how to react to a situation. (Moses, et al., 2001; others) (cited in Berk, 2005, p. 255)

Securely attached babies, and babies with disorganized/disoriented attachment, are more likely to remain in the same category over time (Barnett, Ganiban, & Cichetti, 1999; Hesse & Main, 2000; cited in Berk, 2005, p. 268). These findings point to the importance of the establishment of **secure relationships** with adult caregivers for future developmental outcomes.

Conflict with siblings is likely to be higher when one child is emotionally intense or highly active (Brody, Stoneman, & McCoy, 1994; Dunn, 1994). Also, **secure attachment** is related to positive sibling interaction and support of a distressed younger sibling (Volling, 2001). (cited in Berk, 2005, p. 276)

“... [I]nfants with a **warm parental relationship** engage in more extended peer exchanges. These children, in turn, display more socially competent behavior as preschoolers (Howes, 1988; Howes & Matheson, 1992). And for toddlers in child care, a **secure attachment to a stable professional caregiver** predicts advanced peer and play behavior (Howes & Hamilton, 1993).” (Quote from Berk, 2005, p. 277)

On p. 277, Berk (2005) cites Sroufe (2002) regarding correlates with secure **attachment** in infancy observed in the preschool and later years. These include self-esteem, social competence, cooperativeness, popularity, closer friendships, better social skills, as observed by adults teaching or working with the children. She also emphasizes that continuity of caregiving plays a big role in the stability of attachment security and its correlates.

“Research suggests that... **attachment** patterns can be quite stable through adulthood. (Waters & Cummings, 2000).” (Quote from Trawick-Smith, 2006, p. 176). But there is evidence that they are also “open to revision.”

“The emotions that children learn and express may be influenced by **attachment** (Kochanska, 2001).” (Quote from Trawick-Smith, 2006, p. 190)

From Trawick-Smith (2006): Preschool children who are well liked by peers (high sociometric status) are **active socially** (Trawick-Smith, 1992), use language effectively in social situations (Hart, Olsen, Robinson, & Mandelco, 1997), are **friendly and positive in their interactions with peers, giving positive attention, feedback, and affection** (Crick,

Casas, & Mosher, 1997), and can accurately read social situations (Dodge & Price, 1994; Lemerise & Arsenio, 2000).

Research supports the assertion that **attachment** leads to altruism and empathy (Cassidy, Kirsh, Scolton, & Parke, 1996; cited in Trawick-Smith, 2006).

NICHD Early Child Care Research Network (2004). Trajectories of Physical Aggression from Toddlerhood to Middle Childhood. *Monographs of the Society for Research in Child Development*, 69 (4), Serial No. 278. This study found small clusters of toddlers who were moderately or unusually aggressive at age 2 and continued to be so through age 9. Most children demonstrated low levels of aggression across this age range; and another small cluster showed declining levels across the period. Trawick-Smith (2006) cites research indicating that aggressive preschoolers are more likely to be aggressive later (Bierman, et al., 1993; Crick & Dodge, 1996; Eron & Huesmann, 1990). The relative stability of aggressive behavior from age 2 onward indicates the importance of developing **positive social skills** during the toddler years. (Berk, 2005, also cites Brame, Nagin, & Tremblay, 2001, as a study showing a correlation between unusual aggressiveness in kindergarten and violent behavior in adolescence.)

“Hollich and colleagues (2000) believe that a cluster of factors, including object naming by adults, **social interactions**, and a baby’s ability to study and understand objects, all contribute, in concert, to word learning.” (Quote from Trawick-Smith, 2006, p. 152)

Research demonstrates that **sociodramatic play** contributes to children’s development in many ways (Frost, Wortham, & Reifel, 2001; J.E. Johnson, Christie, & Yawkey, 1999; C. Shore, 1998; all cited in Trawick-Smith, 2006). “A number of studies have found that children who frequently engage in sociodramatic play...score higher on IQ tests and perform more competently on Piagetian tasks (Christie, 1983; Fisher, 1992; Rubin Fein, & Vandenberg, 1983). Others have found relationships between sociodramatic play and problem-solving (Pepler & Ross, 1981) and creativity (Dansky, 1980)” (quote from Trawick-Smith, 2006). (Although true sociodramatic play typically emerges in the preschool years, **pretend play** emerges during the toddler years; hence this research seems significant.)

From Berk (2005, pp. 317-318): “...[M]any studies reveal that **make-believe** strengthens a wide variety of mental abilities, including sustained attention, memory, logical reasoning, language & literacy, imagination, creativity, and the ability to reflect on one’s own thinking and take another’s perspective (Bergen & Mauer, 2000; Berk, 2001; Kavanaugh & Engel, 1998; Newman, 1990; Ruff & Capozzoli, 2003).”

Research shows that induction as a form of discipline (pointing out another child’s feelings as a result of a child’s misbehavior) is effective with children as young as 2, and that preschoolers who are exposed to it engage in more prosocial behavior (Zahn-Waxler, Radke-Yarrow, & King, 1979, cited in Berk, 2005, p. 372). By implication, toddlers’ developing **awareness of the effects of their behavior** is significant. Also, “...**empathy and social concern**...motivate prosocial behavior (Krevans & Gibbs, 1996)...A more

empathic child requires less power assertion and is more responsive to induction (Zahn-Waxler et al., 2001).”

III. To Learn About Their Feelings – describes a child’s growing competence to express feelings, wants, and needs. As children grow older their emotional expressions change as they gain control over some of their feelings and learn new ways to express them. Some infants and toddlers with exceptionalities may need assistance with expression of feelings.

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“**School Readiness:** To become eager learners, children need to develop skills in four key areas [one listed here]:

Self-Control

Self-control—the ability to express and manage emotions in appropriate ways—is essential for success in school and healthy development overall. It enables children to cooperate with others, to **cope with frustration**, and to resolve conflicts.” (No references listed on website here.)

When infants begin to crawl, they can seek out interactions with others, which changes the nature of their social relationships (Campos, et al., 1992). (Cited in Berk, 2006, p. 187). Also, when children **express pleasure and delight** at their motor accomplishments, this triggers pleasurable reactions from others, which further encourages their efforts (Mayes & Zigler, 1992; cited in Berk, 2006).

The importance of **emotional expressiveness** for future development is illustrated by the developmental delays often observed in children who are blind, summarized in Berk (2005, pp. 196-197). [Visually impaired infants’] emotional expressions are muted; for example, their smile is fleeting and unpredictable. Consequently, these infants may receive little adult attention, play, and other stimulation vital for all aspects of development (Troster & Brambring, 1992).” Problems persist in the preschool years, including fewer initiations of contact with peers, and problems interpreting and responding to others reactions (Preisler, 1991, 1993; cited in Berk, 2005).

Berk (2005) cites references showing that **irritable mood (relates to emotional self-regulation)** and attachment difficulties in infants are associated with maternal depression (Martins & Gaffen, 2000), which in turn is associated with long term negative effects on child development and the parent-child relationship. This includes a more negative view of the infant by the parent (Hart, Field, & Roitfarb, 1999), impulsive and antisocial behavior (Conger, Patterson, & Ge, 1995; Murray, et al., 1999), and difficulty maintaining control in the face of challenges (Cummings & Davies, 1994). (p. 159)

From Berk (2005): “[Researchers] have found that emotions play powerful roles in organizing the attainments that Erikson regarded as so important: social relationships, exploration of the environment, and discovery of the self” (Frijda, 2000; Izard, 1991; Saarni, Mumme, & Campos, 1998). (p. 252). The dynamic systems perspective is mentioned as applicable to the development of emotions, which is consistent with the view

that the child's **emotional expressiveness and self-regulation** play a significant role in interactions and hence further development.

Berk (2005) states on p. 253 that **expressions of happiness and delight** encourage further expressions of affection and stimulation from caregivers, but no specific research is cited here to back this up.

According to Berk (2005), all **basic emotions (happiness, sadness, anger, fear) are adaptive**; hence their development is significant. For example, "The rise in fear after 6 months of age keeps newly crawling and walking babies' enthusiasm for exploration in check..." (p. 255). No specific research is cited to support the assertion that the emotions are adaptive, though logical support is offered.

"A good start in **regulating emotion** during the first 2 years contributes greatly to autonomy and mastery of cognitive and social skills, whereas early difficulties in regulation predict later adjustment problems (Crockenberg & Leerkes, 2000)." (Quote from Berk, 2005, p. 256)

"By 4 months, the **ability to shift their attention helps infants control emotion**. Babies who more readily turn away from unpleasant events are less prone to distress" (Axia, Bonichini, & Benini, 1999). "...And further gains in attention permit toddlers to sustain interest in their surroundings and in play activities for a longer time (Rothbart & Bates, 1998)." (Quote from Berk, 2005, p. 257)

Berk's (2005) discussion of temperament, starting on p. 258, makes clear that, while somewhat stable particularly at the extremes, it is malleable. Possibly less than a third of children retain the same temperamental style. "...[L]ong-term prediction from early temperament is best achieved in the **second year of life** and after, **when the child's system of emotion, attention, and action is better established**" (Caspi, 1998; Lemery, et al., 1999). This also suggests that developmental accomplishments in the areas of **emotional regulation** ("difficultness") and social interaction ("shyness/sociability") during the first couple of years are particularly influential, because stability of "temperament" increases after that. (Wachs & Bates, 2001).

Difficult infants [that is, infants who have more difficulty with **emotional self-regulation**] receive less sensitive caregiving (van den Boom & Hoeksma, 1994; Calkins, 2002; cited in Berk, 2005).

On p. 271, Berk (2005) concludes from the research that temperament and other infant characteristics do not show a strong relationship with attachment security. She argues that a "goodness of fit" explanation is more plausible. It is when more **difficult characteristics** combine with parental inability to respond sensitively that secure attachment is threatened (Seifer & Schiller, 1995). This seems to point to the importance of **emotional self-regulation** as a developmental outcome.

Conflict with siblings is likely to be higher when one child is **emotionally intense** or highly active (Brody, Stoneman, & McCoy, 1994; Dunn, 1994). Also, secure attachment is related to positive sibling interaction and support of a distressed younger sibling (Volling, 2001). (cited in Berk, 2005, p. 276)

The ability to **regulate emotion** by focusing on something else may be developmentally significant. “In one study, babies who were able to control their emotions by focusing their attention in this way were found to be more competent socially in the preschool years (Belsky, Friedman, & Hsieh, 2001).” (Quote from Trawick-Smith, 2006, p. 191)

“Most child psychologists agree that alert and waking states are most critical for infant development... [I]n **calmer, waking states** they are able to learn more about their new world and the people in it (Columbo, 1993). To spend useful time in alert and waking states, then, **babies must be able to soothe themselves or be soothed by parents** when they are upset.” (Quote from Trawick-Smith, 2006, p. 89)

Berk (2005) cites a number of studies showing the importance of parental conversations about and **labeling of emotions** for future social and emotional development (e.g. Denham & Kochanoff, 2002) on p. 362. This points to the importance of toddlers’ abilities to recognize and name emotions. “...[E]**motional knowledge** helps children greatly in their efforts to get along with others... [I]t is related to friendly, considerate behavior and willingness to make amends after harming another (Brown & Dunn, 1996; Dunn, Brown, & Maguire, 1995). Also, the more **preschoolers refer to feelings when interacting with playmates**, the better liked they are by their peers (Fabes, et al., 2001).” (Quote on p. 363)

“Children who experience negative emotion intensely [i.e. poor **emotional self-regulation**] have greater difficulty inhibiting their feelings and shifting their focus of attention away from disturbing events. Beginning in early childhood, these children are more likely to respond with irritation to others’ distress, to get along poorly with teachers and peers, and to have difficulty adjusting to classroom routines (Denham, et al., 2002; Shields et al, 2001; Walden, Lemerise, & Smith, 1999).” (Quote from Berk, 2005, p. 363)

From Berk (2005): The development of **self-conscious emotions** (in moderation, in appropriate situations) is important because it helps them resist harmful impulses and motivates them to repair damage they have done and behave better in the future. (Ferguson, et al., 1999; Tangney, 2001). This points to the importance of those emotions that typically emerge during toddlerhood.

“Children who are sociable, assertive, and **good at regulating emotion** are more likely to help, share, and comfort others in distress. In contrast, poor emotion regulators less often display sympathetic concern and prosocial behavior (Eisenberg, et al., 1996, 1998).” Instead, they show both facial and physiological distress (Miller, et al., 1996; Pickens, Field, & Nawrocki, 2001). (quotes and citations from Berk, 2005, p. 365).

Bloom & Tinker (2001) present evidence that learning to speak, **emotional expression**, and cognitive development as demonstrated in play are all intertwined and influence each

other. This is due to the effort expended in all of these activities/accomplishments, which must be drawn from a common “resource pool”. Results lead the authors to conclude that the child is the agent of his or her own development. “The three conclusions that follow from the results of the research are that (a) expression and interpretation are the acts of performance in which language is learned,...; (b) language is not an independent object but is acquired by a child in relation to other kinds of behaviors and their development; and (c) acquiring language in coordination with other behaviors in acts of expression and interpretation takes work, so that acquiring language is not easy” (pp. vii – viii). This points to the importance of previous developmental accomplishments as a foundation for future development. A number of specific findings, some cited from earlier studies, are of interest:

- When children were first learning to say words, frequent emotional expression interfered with language learning (e.g. Bloom & Capatides, 1987b). Another interpretation is that the effort of speaking dampened emotional expression. When children had learned more words (at vocabulary spurt), they were more likely to express emotion and speak at the same time, suggesting that the two systems had become coordinated and also suggesting a high level of interest and engagement. However, children were more likely to be expressing positive emotion than negative emotion during speech. **Negative emotion still appeared to interfere due to “arousal effects” and the “cognitive cost” associated with expressing negative emotion** (p. 40). Children who made the transition to using sentences later, who were assumed to be having more difficulty learning language, tended to express more emotion overall (perhaps suggesting interference) but less emotion during speech (suggesting that effort dampened emotion and/or the absence of interference).
- Children also express less emotion while they are engaged in more complex object play at the time of the vocabulary spurt, suggesting the same kind of competition for cognitive resources described above. They do express more emotion immediately after the play episode. This is particularly significant given that language and emotional expression have become more coordinated by then.

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Health & Physical Development Review of Research

Health & Physical Development focuses on how young children learn about their bodies: what their bodies need, what they can do and what makes them feel safe physically and emotionally. Infants and young children behave in response to their biological cues for food, rest, movement, and their need for stimulation or exploration. Depending on their abilities young children communicate their needs with facial expressions, sounds, and movements. As caregivers respond to and meet these needs, young children begin to trust and feel free to explore and develop behaviors that support their growth and development.

During the first three years of life, young children develop at a pace that is unique to them. Infants begin to gain control over their bodies, and over time they begin to make movements for specific reasons. As caregivers expose them to the indoor and outdoor world, these environments become the stage for noticing and learning. Infants begin to look and see, reach, touch and feel, taste, smell and hear, sit up, grasp and hold, roll over, scoot and crawl through their world. Many toddlers learn to scribble, manipulate objects and feed themselves. Through observation, play and practice they begin to navigate their world: taking first steps, walking, and mastering more advanced skills such as kicking, throwing and catching, running, jumping, and climbing. Children with disabilities and special health care needs may need equipment or devices that make every day living easier and allow a child greater independence.

Physical development for a young child begins before the birth. A mother's access to prenatal care contributes to the well being of the mother and the baby, as does the well being of the family. If a family member has a substance use problem, is experiencing domestic violence, or depression it can interfere with the healthy development of the child. The health of all family members is supported by early treatment. After birth, regular check-ups, immunizations, health and developmental screenings assure the well being of a child. Children who have identified developmental or health needs, or who are at risk for them, benefit from early intervention services that can support their health and development.

I. Gross (Large) Motor - Gross motor refers to the use of the large muscles including those that control the trunk, head, neck, arms and legs. This muscle control allows infants and toddlers to interact with the environment and other people. Infants and toddlers with physical limitations may require more time to develop gross motor abilities. Children with disabilities may need adaptive equipment that has been adapted for them such as walkers, wheelchairs and supportive seats and standers.

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Young children are on the move! And it's a good thing, because movement is not just important for helping children grow physically strong and healthy. It is also a key factor in their overall development. Through movement, children develop good thinking and communication skills as they explore and interact with their world. Movement also builds self-confidence. Children feel competent, physically and emotionally, when they use their bodies to communicate and solve problems. Most importantly, children develop a close

bond with you through movement. In fact, your child's desire to be close to and connect with you is what motivates her to move. (No references cited.)

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“Rocking and Rolling

Birth to 12 months

As a newborn, she will turn her head when she hears your voice. By 4 months, she will be reaching and grasping to explore and learn how objects work. She will also "talk" to you with her body as she wiggles, bends, and reaches. For example, she'll kick her arms and legs to tell you that she wants you to keep singing to her.

By the end of this first year, your baby will learn to roll, sit up, crawl, pull himself to stand, "cruise" around holding onto objects for support, and perhaps even start to walk. As he experiences his body moving, he will be strengthening his muscles. His new physical abilities will also allow him to master important concepts like *cause and effect*.

“Ready, Set, Go!

12 to 24 months

Toddlers' sense of independence and self-confidence grow as they progress from standing to walking and running. The more they move, the more they learn.

She learns about *size* and *shape* as she sees that she can fit her body into one cardboard box but not another. She learns about *up* and *down* on the swing. By imitating activities they see going on around them, toddlers expand their understanding of the world. Toddlers also use their bodies as a tool for communicating with and relating to you.

“Look at Me Now!

24 to 36 months

Between ages 2 and 3, children begin to gain more and more control of their bodies. Climbing, swinging, crawling, spinning, sliding, bouncing, and jumping are endless sources of fun that help children build strong bodies and develop an understanding about what they can do by putting their bodies to work. Through their explorations, they continue to learn all sorts of concepts -- *up* and *down*, *in* and *out*, *over* and *under*.”

My note: Though no research is cited, this information points to a variety of reasons why movement and gross motor development are significant for development in other areas.

From Trawick-Smith (2006, p. 201): There is a description of how the development of foundational skills contributes to the eventual ability to throw a ball well. These sequences, documented by observation (e.g. on developmental assessments) might be seen as evidence of the importance of the forerunner abilities and skills. “Jumping is a complex action that develops gradually in stages” (Haywood & Getchell, 2001). (p. 205)

“Experience in crawling has been found to contribute to an ability to visualize depth and distance (Bertenthal & Campos, 1990). A baby who has an opportunity to crawl in an unrestricted environment may have many practical experiences with height...” (Quote from Trawick-Smith, 2006).

When infants begin to crawl, they can seek out interactions with others, which changes the nature of their social relationships (Campos, et al., 1992). (Cited in Berk, 2006, p. 187). Also, when children express pleasure and delight at their motor accomplishments, this triggers pleasurable reactions from others, which further encourages their efforts (Mayes & Zigler, 1992; cited in Berk, 2006).

Berk's (2005) discussion of motor development from a dynamic systems perspective, starting on p. 188, illustrates how environment and infant capacities interact in ongoing development. For example, as infants begin to crawl and walk, one accomplishment builds on the previous one (Adolph, Vereijken, & Denny, 1998; Adolph, Vereijken, & Shrout, 2003). "Each new skill is a joint product of the following factors: (1) central nervous system development, (2) movement capacities of the body, (3) the goal the child has in mind, and (4) environmental supports for the skill.

Berk (2005) summarizes research suggesting that motor development appears to be involved in perceptual development (e.g., depth perception). For example, "...around 5 or 6 months, the ability to turn, poke, and feel the surface of objects may promote perception of pictorial cues" (Bushnell & Boudreau, 1993). (p. 195) Also, infants with more crawling experience are less likely to cross over to the deep side of the visual cliff (Bertenthal, Campos, and Barrett, 1984). But depth perception appears to be position-specific at first – infants have to learn it for the new position. Infants who were sitting but just beginning to crawl demonstrated fear of the visual cliff when reaching for objects, but not when crawling (Adolph, 2000). "[S]easoned crawlers are better...at remembering object locations and finding hidden objects" (Bai & Bertenthal, 1992; Campos, et al., 2000). (pp. 196-197) "In fact, crawling promotes a new level of brain organization, as indicated by more organized EEG brain-wave activity in the cerebral cortex. Perhaps crawling strengthens certain neural connections, especially those involved in vision and understanding of space" (Bell & Fox, 1996). (p. 197)

From Berk (2005): "Acting on the environment plays a major role in perceptual differentiation. According to the Gibsons, perception is guided by the discovery of affordances – the action possibilities that a situation offers an organism with certain motor capacities (Gibson, 2000). By moving about and exploring the environment, babies figure out which objects can be grasped, squeezed, bounced, or stroked and whether a surface is safe to cross or presents the possibility of falling...Each skill leads infants to perceive surfaces in new ways that guide their movements. As a result, they act more competently" (Adolph & Eppler, 1998, 1999). (p. 202).

From Berk (2005): Research on the development of visually impaired infants, summarized on pp. 196-197, also highlights the importance of motor and perceptual accomplishments for future development. Until children accomplish moving and reaching, perceptual and cognitive development are delayed.

From Berk (2005, pp. 309-310): There is evidence that practice (and by implication the development of earlier abilities) contributes to gender differences in motor skills that

develop over the preschool and elementary years. For example, “boys can throw a ball much farther than girls only when using their dominant hand... (Williams, Haywood, & Painter, 1996)”. This points to the importance of both accomplishment of gross motor milestones and development of the disposition to engage in physical activity.

Pellegrini and Smith (1998) discuss the functions of “physical activity play”, which they define as moderate to vigorous physical activity, resulting in an elevated metabolic rate, in a playful context. They review play deprivation studies, which suggest that “If children are deprived of opportunities for physical activity play, they will, when given the opportunity to play, engage in more intense and sustained bouts of physical activity play than they would have done if not so deprived. This generalization, in turn, suggests that physical activity play is serving some developmental function(s) such that a lack of it leads to compensation” (p. 582).” Two kinds of physical activity play occur during the infant-toddler years: rhythmic stereotypies (repetitive gross motor movements) in infancy, and exercise play, which begins in toddlerhood and peaks during the preschool years. The authors conclude from their review of research that rhythmic stereotypies have a short-term beneficial influence on the development of particular motor patterns, which with further cognitive organization can be used in goal-directed ways. They conclude that exercise play is associated with muscle differentiation, strength, and endurance. Most research is on either animals or older children, but the authors conclude from descriptive research that preschool children typically engage in enough of this kind of play that similar benefits would be found. Animal studies also suggest that exercise play is important for fat reduction and thermoregulation (regulation of body temperature), and again the authors argue that these results are probably applicable to young children. In the cognitive domain, research about the effects of physical activity has been conducted on adults and older children. Academic performance of elementary school children who had a longer physical activity period was found to be better than that of a control group. This may be due to heightened arousal and increased ability to focus, or to “spaced practice” – classwork being broken up by the physical activity period. The authors tend to think it’s the latter.

Adolph (1997) studied how infants acquire “adaptive locomotion” when faced with a slope that they must crawl or walk down. From the abstract: “Over weeks of crawling, infants’ judgments became increasingly accurate, and exploration became increasingly efficient. There was not transfer over the transition from crawling to walking. Instead, infants learned, all over again, how to cope with slopes from an upright position... Moreover, learning was not the result of simple associations between a particular locomotor response and a particular slope. Rather, infants learned to gauge their abilities on-line as they encountered each hill at the start of the trial. Change in locomotor responses and exploratory movements revealed a process of differentiation and selection spurred by changes in infants’ everyday experience, body dimensions, and locomotor proficiency on flat ground.” This study and many others like it, conducted from a dynamic systems perspective, show the importance of existing and emerging gross motor skills and experience for continuing and future gross motor development and the solution of gross motor problems by the child.

Shonkoff & Phillips (2000) summarize Campos's research about the importance of locomotion for the development of understanding of heights. "...[C]rawling experience predicts wariness of heights, controlling for age; lack of locomotor experience (due to physical disability) yields lack of wariness of heights; and regardless of the age when infants began to crawl, it is the duration of locomotor experience and not age that predicts avoidance of heights (Campos, et al, 1992a)" (p. 151).

II. Fine Motor - refers to the small body muscles of the hand, arm, legs and feet that control the ability to manipulate or control objects. These abilities require finger, hand and eye coordination. Infants and toddlers with fine motor limitations may require more time to develop these abilities. Children with disabilities may need equipment that has been modified to support their development such as a curved spoon or oversized crayons. For both gross and fine motor skills, infants through toddlers are gaining control of their bodies, moving from random to purposeful movements as their abilities allow.

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In her discussion of the development of children's artistic representations, Berk (2005, p. 306) notes the importance of cognitive development: "...[T]he realization that pictures can serve as symbols and improved planning and spatial understanding...allow the child to take a broader visual perspective rather than focusing on separate objects (Golomb, 2004)." When an adult shows 3-year-olds (who typically don't understand this) how pictures can be used to represent objects, they are more likely to draw recognizable forms (Callaghan, 1999; Callaghan & Rankin, 2002). This points not only to the importance of adult scaffolding, but to the developmental outcome of understanding symbols. Perception, language, memory, and **fine motor skills** all contribute to the development of realistic drawing (Toomela, 2002).

III. Self Care - refers to awareness and communication of biological needs. Self care represents those behaviors that make up the process a child goes through as they learn to care for themselves. They start with a growing awareness of and interest in their own needs and begin to participate in taking care of themselves. Infants and toddlers with developmental disabilities may require more time and support as they become aware of and begin to participate in their care.

Marotz, et al. (2005, p. 35): "A daily routine of good oral hygiene is...essential for the promotion of good dental health." Self-care skills related to oral hygiene are thus an important developmental accomplishment.

Bandura's theory and research (1999, 2001) are relevant to multiple domains. Imitation, and the contribution of children's ability to "listen, remember, and abstract general rules from complex sets of observed behavior" (Berk, 2005) affect further learning and development in his theory. He holds that children become more selective in what they imitate, based on observing others' attitudes about their own actions as well as feedback. They develop personal standards, and self-efficacy. My note: Imitation is probably an important general ability for the development of self-care skills.

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"Kindergarten teachers report that a child's social and emotional "literacy"—the development of **self-control**, respect for others, **a sense of confidence and competence**—is vital for success in kindergarten. Without these skills, children are at a greater disadvantage in school." My note: To the extent that the development of independent self-care skills contribute to a child's sense of self-efficacy and self-confidence, they will contribute to eventual success in school. Thus, research supporting the importance of these things, cited in reviews for Confidence, Risk-Taking, and Problem-Solving in the Approaches to Learning Domain, and Developing a Sense of Self with Others in the Emotional and Social Domain, is generally relevant to this area.

My note: To the extent that self-care skills contribute to the child's ability to take in adequate nutrition, research related to the Nutrition sub-area is also relevant to this area.

IV. Safety Awareness - Safety awareness is the ability to identify potential risks and use safe practices to protect oneself. It begins with natural instincts to protect oneself and it

develops over time. It requires a consciousness, an understanding and an appreciation of one's own body. It continues with behaviors that are responses to trusted caregivers' safety warnings. Later children develop behaviors and skills to protect themselves as they learn from their experiences.

“Unintentional injuries...are the leading cause of childhood mortality in industrialized nations (Agran et al., 2001).” (Quote from Berk, 2005, p. 300). Berk goes on to cite research linking child characteristics with injuries, including irritability, inattentiveness, and negative mood (e.g. Matheny, 1991). This points to the importance of helping children learn to respond to direction from others and gain self-control over their impulses.

“Preschoolers spontaneously recall only about half the safety rules their parents teach them. They need prompting to remember the other rules and supervision to ensure that they comply with even well-learned rules (Morongiello, Midgett, & Shields, 2001).” (Quote from Berk, 2005, p. 302) This points to the importance of toddler experience and ability to identify unsafe situations.

Marotz, et al. (2005, p. 32): Children's skills are seldom as well developed as their determination, and in their zealous approach to life, they often fail to recognize inherent dangers. Their inability to judge time, distance, and speed accurately contributes to many injuries, including those resulting from falls, as a pedestrian, or riding toys out into the street (Crowley-Coha, 2002; Marotz, 2000). Limited experience also makes it difficult for children to always anticipate the consequences of their actions.”

- V. Physical Health** - Physical health refers to the behaviors that support the growth and development of infants and toddlers. These behaviors promote well-being and a healthy active life. This section is subdivided into three areas: Nutrition, Sleep, and Physical Activity. Children with disabilities may need to have equipment and routine care modified to meet their needs. Children with special health care needs should have a health care plan that explains how to manage the child's condition on a daily basis and in an emergency situation. Daily care routines are influenced by a family's culture.

Marotz, et al. (2005, p. 298): “Many of the health behaviors, attitudes and values formed during the early years will be carried over into adulthood (Berg, Buechner, & Parham, 2003).”

Nutrition

Poor nutrition has negative impacts on cognitive development (Pollitt, 1994; Pollitt, et al., 1993, cited in Trawick-Smith, 2006). Thus, the ability to take in adequate nutrition is developmentally significant. Pollitt, et al. (1993) also found that providing nutritional supplements resulted in enhanced cognitive abilities that persisted into adolescence.

“...[P]ersistent nutritional and emotional deprivation profoundly alters temperament, resulting in maladaptive emotional styles (Wachs & Bates, 2001).” (Quote from Berk, 2005, p. 262)

Berk (2005) cites references on p. 181 showing the importance of good nutrition for brain development, cognitive development, and emotional development (Galler, Ramsey, & Solimano, 1985; Stoch, et al, 1982; Galler, et al, 1990; Fernald & Grantham-McGregor, 1998.) These findings relate to children who are severely malnourished (marasmus). But negative effects have been documented for children who have less severe malnutrition, such as iron-deficiency anemia. "...[T]he passivity and irritability of malnourished children worsen the impact of poor diet. These behaviors may appear even when protein-calorie deprivation is only mild to moderate... Withdrawal and listlessness reduce the...child's ability to pay attention, explore, and evoke sensitive caregiving from parents (Grantham-McGregor & Ani, 2001; Lozoff, et al., 1998).

Berk (2005) discusses nonorganic failure to thrive on pp. 181-182. Though this is primarily a result of parenting problems, "...abnormal feeding behaviors, such as poor sucking or vomiting,...stress the parent-child relationship further" (Wooster, 1999).

Toddler exploration of new foods may contribute to the establishment of food preferences over time. Sullivan and Birch (1990), (cited in Berk, 2005) introduced children repeatedly to either plain, sweet, or salty tofu, and children ate it after repeated exposure. But they preferred the kind they had first, whichever it was.

"...[T]oo much parental control over children's eating limits their opportunities to develop self-control, thereby promoting overeating. (Birch, Fisher, & Davidson, 2003)." (quote from Berk, 2005, p. 297). This suggests the importance of toddlers' ability to control food intake, even when it's inconsistent.

Marotz, Cross, & Rush (2005, p. 12): "Health, safety, and nutrition are closely related and dependent on one another...For example, a child whose diet contains inadequate iron or who has medical problems that interfere with iron absorption may develop anemia. Children who are anemic typically experience loss of appetite, fatigue, and a diminished alertness that may affect their safety. At a time when it becomes even more important for children to increase their intake of iron, they may not find food appealing. In other words, nutritional status affects the quality of children's health, while the condition of their health influences nutritional requirements needed to restore and maintain good health, and also challenges their safety...Children and adults who are overweight are also more likely to experience accidental injury. Excess weight can restrict their physical activity slow reaction times, and cause them to tire more quickly."

Marotz, et al. (2005, p. 35): "Diet has an unquestionable effect on children's dental health (Satter, 2000)."

Marotz, et al. (2005, p. 404): "At approximately five months of age...the baby is able to chew, to sit with some comfort, and to lean forward toward the spoon. At four to five months, the infant shows interest in touching, holding, and tasking objects – food and otherwise...the baby can turn his head away from food when satisfied, signaling a desire to stop eating." These are milestones, but they also suggest important abilities for active participation in the process of eating and obtaining sufficient (but not too much) nutrition.

The development of fine motor skills and the ability to mimic motions and activities are mentioned as important. On p. 410: “Some authorities believe that continuously ignoring these signs [of fullness] may cause the infant to stop such signaling, thus ending a means of regulating food intake. This could have serious consequences later for the toddler, the preschooler, and the adult who does not know when to stop eating.”

Marotz, et al. (2005, p. 421-423): “...establishing a food-emotion link...can lead to long-lasting feeding problems...During the preschool years, attitudes about food and eating patterns are formed that will be carried throughout adult life...Life-long eating habits are formed between the ages of one to five years... One of the most important goals in developing good eating habits is to gain the toddler’s and preschooler’s acceptance of a variety of foods from each of the various food groups...Children quickly pick up on negative reactions to foods and imitate them.” On p. 424, the authors list health problems that are directly or indirectly related to foods eaten, including dental caries, obesity, hypertension, heart disease, and diabetes.

Marotz, et al. (2005): On p. 491, the authors discuss the rationale for nutrition education in terms of benefits in other areas of child development. These connections might also suggest areas to be covered in the guidelines. They include promotion of language development – learning the names of foods, talking about food and nutrition concepts; promotion of cognitive development – math concepts in recipes [plus the connection between what you eat and your growth and health – my note]; promotion of sensorimotor development, including both fine motor skills and understanding of shapes, textures, and colors; and promotion of social/emotional development, including cooperation and acceptance of cultural differences.

Meyers and Chawla (2000): “Children who suffer serious undernutrition during early life have smaller head circumference and brain weight than normally nourished children.” (p. 5). Animal research suggests that “...the long-lasting impact of undernutrition in childhood might relate more to the way children respond emotionally to stressful situations, and the effects such patterns of response have on cognition and behavior, than to intelligence per se.” (p. 6) On the effects of breastfeeding, some of the benefits are believed to be a result of the experience of mother and child in the act of breastfeeding, which suggests that the child’s ability to participate is important. They cite Chavez (1975), who found that the activity level of better nourished infants and toddlers appeared to facilitate “a more dynamic feedback system of parent-child interaction.” (p. 8). The authors also review research showing the effects of iron and other micronutrients on child development, which supports the idea that eating a variety of foods, not just enough food, is important.

Roberts and Heyman (2000): “U.S. national nutrition surveys show that more than half of the children under 3 years fail to get recommended intakes of the essential nutrients, and the problem is not just confined to poor families... Another concern is that many of today’s young children are extremely sedentary.” Citing multiple studies, the authors state that early childhood feeding affects school performance, adult intelligence, bone strength, height, and risk of obesity. The foods consumed have an effect on the types of cells that

predominate in different kinds of tissue. The authors also emphasize enjoyment of different kinds of foods. “What we really want is for children to like healthy foods, because food only counts if it is eaten, and in the long run children only eat what they enjoy.” (p. 25). They emphasize giving children control of portion size, pointing to the importance of the child being able to recognize hunger and fullness and to signal these things to adults. They encourage adults to take advantage of young toddlers’ interest in putting everything in their mouths, pointing to the importance of interest in this kind of sensory exploration for nutrition. Noticing appearance, taste and texture helps babies and toddlers to make decisions about food – based on preferences for either novelty or familiarity. They also cite imitation of adult behavior as something that can be exploited, and they advise getting young children involved with food. Though not necessarily research-based, these strategies and the abilities the child brings to the situation suggest content that may be important in this area.

Shonkoff and Phillips (2000) emphasize self-regulation as a cornerstone of development. Appropriate control of food intake, and the ability to accomplish this, can be seen as an aspect of self-regulation.

Shonkoff and Phillips (2000) also list a variety of nutrients on p. 199 that affect the developing brain and for which negative effects have been documented if they are deficient. This points again to the importance of learning to accept and eat a variety of foods. They go on to say that “The effects of generalized undernutrition... on the developing brain have been studied extensively over several decades,” and cite multiple references. The first two to three years of life are a vulnerable time, though considerable recovery is possible if nutrition is improved later. Effects of severe undernutrition (e.g. severe iron deficiency) persist, though.

Sleep

Berk (2005) cites references on p. 151 showing the importance of sleep organization for cognitive and social development, as well as avoidance of SIDS (Groome, et al., 1997; Halpern, MacLean, & Baumeister, 1995).

Persistently disturbed sleep can be a sign of emotional or neurological problems (Gregory & O’Connor, 2002). (Cited in Berk, 2005, p. 296)

“In one study, researchers found that infant stress is reduced during sleep (Larson, White, Cochran, Donzella & Gunnar, 1998).” (Quote from Trawick-Smith, 2006, p. 88)

From Trawick-Smith (2006): Tremendous individual variation in sleep patterns exists across individuals and cultures (p. 88). Not all infants of a particular age sleep through the night, for example. Some studies show that “...day-night rhythms can be identified in early infancy and remain constant through the first year of life” (Ingersoll & Thoman, 1999).

Anders, Goodlin-Jones, and Zelenko (1998); “REM sleep, NREM sleep and waking begin to become organized during the first 6 months of life... Within the first month following birth, sleep and waking patterns begin to adapt to the light-dark cycle and to parent

schedules. ” (p. 5) Over time, periods of sleep become longer at night and awake periods during the day become longer. By age 3, organization of REM and NREM sleep is similar to that of adults, though the cycles are shorter. Based on videotaping, their research showed that the majority, but not all, of 8-month-olds can self-soothe and go back to sleep if they wake up during the night. Toddlers rarely sleep through the night, but they vary in the extent to which they need adult assistance to go back to sleep. Overall, children switch from signaling for help to self-soothing over time. The authors emphasize that sleeping patterns develop in the context of a relationship and that both the child’s abilities and the caregiver’s behavior, expectations, cultural values, etc. must also be considered. Effects are bi-directional. Problems are categorized as getting into bed and falling asleep (which both involve separating from caregiver) and night waking problems. They note that children who awake at night often expect the same routine they had at bedtime in order to go back to sleep.

Shonkoff and Phillips (2000) emphasize self-regulation as a cornerstone of development. The ability to settle into sleep-wake cycles that are appropriate to the cultural context can be seen as an aspect of self-regulation. The role of culture is strongly evident here, because the extent to which parents identify “sleep problems” is associated with cultural views about whether or not children should learn to fall asleep separately from parents. “...[T]here is very little evidence that early sleep and crying problems strongly predict later physiological or behavioral problems for otherwise healthy, full-term babies.” (p. 96; multiple references cited). However, “...early sleep and crying problems can pose serious challenges to parents, which create tension among family members, fuel negative perceptions of the infant, and undermine the parents’ confidence in their caregiving abilities. These detrimental repercussions remain measurable, at least in some families, later in infancy after the precipitating behavior has largely passed.” (p. 96, multiple references cited). Problems are heightened for premature and medically fragile infants. They also cite Anders’ research, and say, “There is some evidence that babies who fall asleep in their cribs establish a pattern of self-settling, while those who fall asleep in contact with a parent signal when they wake to circumstances that are different from those when they fell asleep.” (p. 98). Sleep organization may help to facilitate organization of other systems: “Because the rhythms of other systems, like growth hormone, cortisol, body temperature, and so on, are orchestrated in relation to sleep, many suspect that the development and organization of sleep helps orchestrate the day-night rhythms in these other systems.” (p. 99, multiple references cited).

Physical activity

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“Young children are on the move! And it’s a good thing, because movement is not just important for helping children grow physically strong and healthy. It is also a key factor in their overall development. Through movement, children develop good thinking and communication skills as they explore and interact with their world. Movement also builds self-confidence. Children feel competent, physically and emotionally, when they use their bodies to communicate and solve problems. Most importantly, children develop a close bond with you through movement. In fact, your child’s desire to be close to and connect with you is what motivates her to move.” (No references cited.)

“Acting on the environment plays a major role in perceptual differentiation. According to the Gibsons, perception is guided by the discovery of affordances – the action possibilities that a situation offers an organism with certain motor capacities (Gibson, 2000). By moving about and exploring the environment, babies figure out which objects can be grasped, squeezed, bounced, or stroked and whether a surface is safe to cross or presents the possibility of falling... Each skill leads infants to perceive surfaces in new ways that guide their movements. As a result, they act more competently” (Adolph & Eppler, 1998, 1999).” (Quote from Berk, 2005, p. 202)

When infants begin to crawl, they can seek out interactions with others, which changes the nature of their social relationships (Campos, et al., 1992). (Cited in Berk, 2006, p. 187). Also, when children express pleasure and delight at their motor accomplishments, this triggers pleasurable reactions from others, which further encourages their efforts (Mayes & Zigler, 1992; cited in Berk, 2006).

“...[H]abituation greatly underestimates infants’ memory when compared with methods that rely on their active exploration of objects” (Wilk, Klein, & Rovee-Collier, 2001). (Quote from Berk, 2005, p. 222) This suggests the importance of active exploration for bringing about a higher level of cognitive functioning.

Berk’s (2005) discussion of motor development from a dynamic systems perspective, starting on p. 188, illustrates how environment and infant capacities interact in ongoing development. For example, as infants begin to crawl and walk, one accomplishment builds on the previous one (Adolph, Vereijken, & Denny, 1998; Adolph, Vereijken, & Shrout, 2003). “Each new skill is a joint product of the following factors: (1) central nervous system development, (2) movement capacities of the body, (3) the goal the child has in mind, and (4) environmental supports for the skill.

Berk (2005) summarizes research suggesting that motor development appears to be involved in perceptual development (e.g., depth perception). For example, “...around 5 or 6 months, the ability to turn, poke, and feel the surface of objects may promote perception of pictorial cues” (Bushnell & Boudreau, 1993). (p. 195) Also, infants with more crawling experience are less likely to cross over to the deep side of the visual cliff (Bertenthal, Campos, and Barrett, 1984). But depth perception appears to be position-specific at first – infants have to learn it for the new position. Infants who were sitting but just beginning to crawl demonstrated fear of the visual cliff when reaching for objects, but not when crawling (Adolph, 2000). “[S]easoned crawlers are better... at remembering object locations and finding hidden objects” (Bai & Bertenthal, 1992; Campos, et al., 2000). (pp. 196-197) “In fact, crawling promotes a new level of brain organization, as indicated by more organized EEG brain-wave activity in the cerebral cortex. Perhaps crawling strengthens certain neural connections, especially those involved in vision and understanding of space” (Bell & Fox, 1996). (p. 197)

From Berk (2005): “Acting on the environment plays a major role in perceptual differentiation. According to the Gibsons, perception is guided by the discovery of

affordances – the action possibilities that a situation offers an organism with certain motor capacities (Gibson, 2000). By moving about and exploring the environment, babies figure out which objects can be grasped, squeezed, bounced, or stroked and whether a surface is safe to cross or presents the possibility of falling... Each skill leads infants to perceive surfaces in new ways that guide their movements. As a result, they act more competently” (Adolph & Eppler, 1998, 1999). (p. 202)

Marotz, et al. (2005) emphasizes posture as well as physical activity as necessary for long-term physical development. (p. 32). On p. 34: “Evidence continues to establish a strong correlation between declining rates of physical activity, especially among children, and increasing obesity (Belfield, 2003; Berg, Buechner, & Parham, 2003; Kimm & Obarzanek, 2002). Because lifelong habits are being established throughout childhood, this is an ideal time to help children develop ones that will promote good health.”

Pellegrini and Smith (1998) discuss the functions of “physical activity play”, which they define as moderate to vigorous physical activity, resulting in an elevated metabolic rate, in a playful context. They review play deprivation studies, which suggest that “If children are deprived of opportunities for physical activity play, they will, when given the opportunity to play, engage in more intense and sustained bouts of physical activity play than they would have done if not so deprived. This generalization, in turn, suggests that physical activity play is serving some developmental function(s) such that a lack of it leads to compensation” (p. 582). Two kinds of physical activity play occur during the infant-toddler years: rhythmic stereotypies (repetitive gross motor movements) in infancy, and exercise play, which begins in toddlerhood and peaks during the preschool years. The authors conclude from their review of research that rhythmic stereotypies have a short-term beneficial influence on the development of particular motor patterns, which with further cognitive organization can be used in goal-directed ways. They conclude that exercise play is associated with muscle differentiation, strength, and endurance. Most research is on either animals or older children, but the authors conclude from descriptive research that preschool children typically engage in enough of this kind of play that similar benefits would be found. Animal studies also suggest that exercise play is important for fat reduction and thermoregulation (regulation of body temperature), and again the authors argue that these results are probably applicable to young children. In the cognitive domain, research about the effects of physical activity has been conducted on adults and older children. Academic performance of elementary school children who had a longer physical activity period was found to be better than that of a control group. This may be due to heightened arousal or to “spaced practice” – classwork being broken up by the physical activity period. The authors tend to think it’s the latter.

From Berk (2005): A classic study of the development of reaching (White & Held, 1996) found that infants who received moderate visual stimulation in their cribs reached earlier than infants who received no stimulation and infants that received heavy stimulation. The infants who received the most stimulation looked away and cried more. (p. 191) This research suggests that the disposition to engage in physical activity is in part based on the perception of interesting, but not overwhelming, stimuli in the environment.

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Zero to Three National Center for Infants, Toddlers, and Families. www.zerotothree.org
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Approaches to Learning Review of Research

Approaches to Learning focuses on how children go about learning new skills and concepts rather than what skills and concepts they need to learn. All children are born learners. Each child approaches learning in his or her own way, figuring out what “works”. For infants and toddlers, approaches to learning begin with their interest in the world around them and their desire to make things happen. They show curiosity and eagerness to interact with people and objects, and excitement about their discoveries. Young children may express wonder and delight with smiles, laughter, and later with language. They learn by doing and trying, through both their successes and their failures. They may try many different ways to get what they want, which is how they begin to solve problems. When infants and toddlers do the same things over and over, they learn new concepts and strengthen their skills. Toddlers may become more creative and begin to use their imaginations during play, music, and art.

When adults support their efforts, infants and toddlers become more willing to try new things and take risks. Adults encourage children’s enthusiasm for learning by valuing their curiosity and setting up safe, interesting environments that invite infants and toddlers to explore and “get into things.” Adults who nurture the development of these healthy approaches to learning help infants and toddlers to lay a strong foundation for all future learning, success, and enjoyment of life.

The areas listed below are all important aspects of approaches to learning

I. **Curiosity and Eagerness** – Infants and toddlers show an interest in the world, a desire to find out how things work and excitement at their discoveries.

When infants begin to crawl, they can **seek out interactions** with others, which changes the nature of their social relationships (Campos, et al., 1992). (Cited in Berk, 2006, p. 187). Also, when children **express pleasure** and delight at their motor accomplishments, this triggers pleasurable reactions from others, which further encourages their efforts (Mayes & Zigler, 1992; cited in Berk, 2006).

“... [H]abituation greatly underestimates infants’ memory when compared with methods that rely on their active exploration of objects” (Wilk, Klein, & Rovee-Collier, 2001). (Quote from Berk, p. 222) This suggests the importance of **active exploration** for bringing about a higher level of cognitive functioning.

“Babies who spend more time **alert** probably receive more social stimulation and opportunities to explore and, therefore, may be slightly advantaged in mental development” (Gertner et al., 2002). (Quoted from Berk, 2005, p. 150).

“The **level of engagement** that a child brings to a task is determined by the extent to which a child finds the task interesting (Renninger, 1990; Renninger & Wozniak, 1985);

important, and relevant or “worth knowing” (Sperber & Wilson, 1986).” (Quote from Bloom & Tinker, 2001, p. 27). Bloom and Tinker (2002) also report that children express more emotion during and after speech at the time of the vocabulary spurt, suggesting that they learn to talk about things they find interesting and important. This points to the importance of **curiosity and eagerness** as an approach to learning. Another finding from the same study: Children express more (presumably positive) emotion immediately after engaging in a complex play episode demonstrating a new understanding, and mothers talk more immediately after such an episode. Again, the expression of curiosity and eagerness seems to fuel the mother’s response, which in turn affects further development.

Bowman, Donovan, and Burns (2001) also cite Renninger (1992): “...[P]reschool children’s **interests** influence the quality of their play and social interaction... ‘[T]here seems to be an increased coordination of children’s friendship around objects of interest...’...[Children’s interest and follow-through are related to their problem-solving ability and knowledge, especially in free play contexts... This process is well described in Deci’s theory of self-determination, which holds that interest is a powerful motivator and has effects on subsequent learning and school achievement (Deci and Ryan, 1994)... Deci’s self-determination theory indicates the significance of interest in the development of intrinsic motivation and internalization of interest associated with particular activities.” These lines of research suggest that **curiosity and eagerness** influences play, peer interactions, and motivation, which are important for later development and school achievement.

Whitehurst & Lonigan (1998) summarize research to date about the components of emergent literacy and their relationship to reading skills. Print motivation, which includes **degree of engagement** during reading, predicts both emergent literacy skills and later reading skills. “A child who is interested in literacy is more likely to facilitate shared reading interactions, notice print in the environment, ask questions about the meaning of print, and spend more time reading once he or she is able” (p. 854).

Neuman & Roskos (1992), in a study that focuses primarily on the effects of literacy materials in the environment, found that object familiarity contributed to more meaningful and imaginative language in the context of literacy-related play. They cite additional studies suggesting that “...the more familiar the children are with play contexts and their corresponding objects, the more they tend to play in increasingly complex ways, using elaborated language in the process” (p. 204). This points to the importance of **curiosity** as well as sensory exploration and discovery to build familiarity with a wide variety of objects and settings, in support of eventual complex play and language.

Shonkoff and Phillips (2000) review the concept of achievement motivation, which relates to multiple aspects of Approaches to Learning. It “...encompasses a set of constructs, including: (1) mastery motivation, or the child’s **propensity to explore, manipulate, persist, and derive pleasure** in mastery-related behaviors and achievement (White, 1959); (2) intrinsic motivation, or the child’s **engagement in an activity without pressure or rewards** for doing so (Deci and Ryan, 1985; Lepper, 1981); and (3)

cognitive aspects of motivation, including expectations for success, challenge seeking, and self-perception of competence (Atkinson, 1964). Individual differences in behaviors related to these constructs can be seen as early as 6 months, but at the time of this publication there were no longitudinal studies about motivation following children from infancy to school age. They cite MacTurk and Morgan (1995), re: research showing that some infants persist in goal-directed behavior and show more pleasure at success than other infants. “These early differences, moreover, are closely tied to constructs assessed in the literature on temperament, such as inhibition around novel stimuli, persistence, and sustained attention (Fox, et al, in press; Kagan, et al., 1987)” (p. 153). They also cite Dweck and colleagues, who found evidence for learned helplessness as early as age 4, which seems to persist into elementary school.

Fein, G. C. (1995). Infants in group care: Patterns of despair and detachment. Early Childhood Research Quarterly, 10, 261-275. In child care, toddlers who were less active experienced a lower level of interaction from caregivers, suggesting that **level of engagement** influences responses from others, which in turn affects future development. Negative affect (different from curiosity and eagerness) seemed to evoke comforting but not play from caregivers.

MacTurk, R. H., McCarthy, M. E., Vietze, P. M., & Yarrow, L. J. (1987). Sequential analysis of mastery behavior in 6- and 12-month-old infants. Developmental Psychology, 23, 199-203. In the laboratory, looking and exploration of novel toys was most often followed by persistence at solving an adult-defined problem with the toys, pointing to the importance of **curiosity and interest** in facilitating activities that promote cognitive development. Persistence was most often followed by success, which was in turn followed by further persistence at repeating the activity. Pleasure was expressed most often during persistence rather than at the moment of success, suggesting that the anticipation of success was rewarding.

II. **Confidence, Risk-Taking and Problem-Solving** – Infants and toddlers become more willing to try new things and take risks. They become more confident that they can get the results they want.

Conger & Conger (2002); cited in Berk: Child characteristics such as **willingness to accept change** are factors associated with resilience in the face of poverty.

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“Kindergarten teachers report that a child’s social and emotional “literacy”—the development of self-control, respect for others, **a sense of confidence and competence**—is vital for success in kindergarten. Without these skills, children are at a greater disadvantage in school.” (No reference cited on website, but probably exists and could be located.)

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“School Readiness: To become eager learners, children need to develop skills in four key areas [one listed here]:

Self-Confidence

When children feel competent and believe in themselves, they are more willing to take on new challenges, a key ingredient for school success.” (No references cited here.)

Berk (2005, pp. 335-336) discusses “overlapping-waves” theory, which holds that children **try out many strategies** for solving problems, and that this process is essential for developing more effective problem-solving skills. This process has been observed in children as young as two (Chen & Siegler, 2000).

Shonkoff and Phillips (2000) cite several studies showing that infants prefer situations where they can control stimulation, both from objects and from people. This points to the importance of recognizing that one has the **ability to control the environment**, as well as accomplishing that control. In other words, recognition of one’s ability to affect events provides a foundation for confidence and risk-taking. “...[I]nfants’ need to be active agents in their own learning becomes abundantly evident when you take away their control over stimulation.”

Shonkoff and Phillips (2000) review the concept of achievement motivation, which relates to multiple aspects of Approaches to Learning. It “...encompasses a set of constructs, including: (1) mastery motivation, or the child’s propensity to explore, manipulate, persist, and derive pleasure in mastery-related behaviors and achievement (White, 1959); (2) intrinsic motivation, or the child’s engagement in an activity without pressure or rewards for doing so (Deci and Ryan, 1985; Lepper, 1981); and (3) cognitive aspects of motivation, including **expectations for success, challenge seeking, and self-perception of competence** (Atkinson, 1964). Individual differences in behaviors related to these constructs can be seen as early as 6 months, but at the time of this publication there were no longitudinal studies about motivation following children from infancy to school age. They cite MacTurk and Morgan (1995), re: research showing that some infants persist in goal-directed behavior and show more pleasure at success than other infants. “These early differences, moreover, are closely tied to constructs assessed in the literature on temperament, such as inhibition around novel stimuli, persistence, and sustained attention (Fox, et al, in press; Kagan, et al., 1987)” (p. 153). They also cite Dweck and colleagues, who found evidence for **learned helplessness** as early as age 4, which seems to persist into elementary school.

Messer, D. J., McCarthy, M. E., McQuiston, S., MacTurk, R. H., Yarrow, L. J., & Vietze, P. M. (1986). Relation between mastery behavior in infancy and competence in early childhood. Developmental Psychology, 22, 366-372. Behaviors indicative of **mastery motivation** at 12 months predicted cognitive development at 30 months.

Bronfenbrenner, U. (1993). The ecology of cognitive development: Research models and fugitive findings. In R. H. Wozniak & K. W. Fischer (Eds.), Development in context: Acting and thinking in specific environments (pp. 3-44). Hillsdale, NJ: Erlbaum. Engagement in activities that become progressively more complex (e.g. **challenging activities**) facilitates healthy development.

Frodi, A., Bridges, L., & Grolnick, W. (1985). Correlates of mastery-related behavior: A short-term longitudinal study of infants in their second year. Child Development, 56, 1291-1298. Persistence at age-appropriate challenging tasks, and competence at such tasks, predicted each other in a short-term longitudinal study. This suggests that not only is persistence important; success and by implication the **belief that one can succeed** is important for future efforts.

MacTurk, R. H., McCarthy, M. E., Vietze, P. M., & Yarrow, L. J. (1987). Sequential analysis of mastery behavior in 6- and 12-month-old infants. Developmental Psychology, 23, 199-203. In the laboratory, looking and exploration of novel toys was most often followed by persistence at solving an adult-defined problem with the toys, pointing to the importance of curiosity and interest in facilitating activities that promote cognitive development. Persistence was most often followed by **success**, which was in turn **followed by further persistence at repeating the activity**. Pleasure was expressed most often during persistence rather than at the moment of success, suggesting that the **anticipation of success** was rewarding.

From Trawick-Smith (2006): In Vygotsky's theory, the concept of the Zone of Proximal Development suggests the importance of **moderately challenging tasks**, and the development of children's **willingness to approach** them. It is in the context of these tasks, which require assistance from a more expert adult or peer, that Vygotsky felt the most learning occurred. (pp. 53-54). "Much research supports his perspective." (Rogoff, 1997) (p. 55 in T-S.)

III. Attention, Effort, and Persistence – Infants notice people, events, and things around them, and toddlers are able to focus for longer periods of time. They become more able to stick with an activity even as it becomes more difficult.

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"Kindergarten teachers report that a child's social and emotional "literacy"—the development of **self-control**, respect for others, a sense of confidence and competence—is vital for success in kindergarten. Without these skills, children are at a greater disadvantage in school." (No reference cited on website, but probably exists and could be located.)

http://www.zerotothree.org/ztt_professionals.html

"School Readiness: To become eager learners, children need to develop skills in four key areas [one listed here]:

Self-Control

Self-control—the ability to express and manage emotions in appropriate ways—is essential for success in school and healthy development overall. It enables children to cooperate with others, to **cope with frustration**, and to resolve conflicts." (No reference cited here.)

“...[R]epetition of familiar actions and words helps young children form and maintain neuronal connections in their nervous systems” (DeBoysson-Bardies, 1999). Repetition can be seen as an early form of persistence.

Citations from Berk (2005): The ability to **direct attention** from one stimulus to another, which develops by 4 to 6 months (Hood, Atkinson, & Braddick, 1998), is said to be significant. (p. 221). “As plans and activities gradually become more complex, so does the duration of attention” (Ruff & Lawson, 1990). (p. 221) “Consistently helping infants focus attention at 10 months predicts higher mental test scores at 18 months (Bono & Stifter, 2003)...Later we will see that...joint attention between caregiver and child is important for language development.” (p. 222)

Citations from Berk, 2005: “[J]oint attention, in which the child attends to the same object of event as the caregiver, who offers verbal information, contributes greatly to early language development. Infants and toddlers who often experience it **sustain attention longer**, talk earlier, and show faster vocabulary development” (Carpenter, Nagel, & Tomasello, 1998; Flom & Pick, 2003; Silven, 2001). (p. 239).

“Babies who spend more time **alert** [i.e., in a state where they can **pay attention**] probably receive more social stimulation and opportunities to explore and, therefore, may be slightly advantaged in mental development” (Gertner et al., 2002). (Quoted from Berk, 2005, p. 150).

“By 4 months, the ability to shift their **attention** helps infants control emotion. Babies who more readily turn away from unpleasant events are less prone to distress” (Axia, Bonichini, & Benini, 1999). ...”And further gains in attention permit toddlers to sustain interest in their surroundings and in play activities for a longer time (Rothbart & Bates, 1998).” (Quote from Berk, 2005, p. 257)

The ability to **shift attention** from one stimulus to another is important for the development of self-control (Putnam, Spritz, & Stifter, 2002; cited in Berk, 2005). “Early, large individual differences in self-control remain modestly stable into middle childhood and adolescence” (Shoda, Mischel, & Peake, 1990). Children who are more advanced in **sustained attention** and language development are more self-controlled... (Cournoyer, et al., 1998)

Berk (2005) discusses the importance of **attention and concentration** again in the preschool section on p. 333. The ability to sustain attention increases greatly in older toddlers, and the child’s capacity to generate more complex play goals is mentioned as one reason. Also, “Parents who help their 2- and 3-year-olds maintain a focus of attention – by offering suggestions, questions, and comments about the child’s current interest – have preschoolers who are more mature, cognitively and socially (Landry, et al., 2000).”

Bowman, et al. (2001): “**Attention** allows rapid amplification of blood flow in local brain areas performing computations in high-level skills (Corbetta, et al., 1993). By giving

priority to some computations, attention can serve to reprogram the circuits by which tasks are executed... [T]he orienting of attention appears to develop in the first year of life.”

Shonkoff and Phillips (2000): “The growth of self-regulation is a cornerstone of early childhood development that cuts across all domains of behavior” (p. 3). “The ability to think, retrieve, and remember information, solve problems, and engage in other complex symbolic activities involved in oral language, reading, writing, mathematics, and social behavior is dependent on the development of **attention**, memory, and **executive function** (Lyon, 1996)... [T]here is growing consensus among researchers as to what executive functions entail: self-regulation, sequencing of behavior, flexibility, response inhibition, planning, and organization of behavior (see Eslinger, 1996). Control and modulation of behavior are fostered by the abilities to initiate, shift, inhibit, sustain, plan, organize, and strategize (Denkla, 1989)” (p. 116). Precursors of executive function are now believed to be present in infancy. These include the abilities to orient to relevant features of the environment, anticipate events, and eventually mental representation. A related concept is “**effortful control**”, which appears to work in concert with close relationships with caregivers to help children comply with directives and social norms. By the time children reach kindergarten, deficits in executive functioning predict later problems in school.

Shonkoff and Phillips (2000) review the concept of achievement motivation, which relates to multiple aspects of Approaches to Learning. It “...encompasses a set of constructs, including: (1) mastery motivation, or the child’s propensity to explore, manipulate, **persist**, and derive pleasure in mastery-related behaviors and achievement (White, 1959); (2) intrinsic motivation, or the child’s engagement in an activity without pressure or rewards for doing so (Deci and Ryan, 1985; Lepper, 1981); and (3) cognitive aspects of motivation, including expectations for success, challenge seeking, and self-perception of competence (Atkinson, 1964). Individual differences in behaviors related to these constructs can be seen as early as 6 months, but at the time of this publication there were no longitudinal studies about motivation following children from infancy to school age. They cite MacTurk and Morgan (1995), re: research showing that some infants persist in goal-directed behavior and show more pleasure at success than other infants. “These early differences, moreover, are closely tied to constructs assessed in the literature on temperament, such as inhibition around novel stimuli, **persistence, and sustained attention** (Fox, et al, in press; Kagan, et al., 1987)” (p. 153). They also cite Dweck and colleagues, who found evidence for learned helplessness as early as age 4, which seems to persist into elementary school.

Messer, D. J., McCarthy, M. E., McQuiston, S., MacTurk, R. H., Yarrow, L. J., & Vietze, P. M. (1986). Relation between mastery behavior in infancy and competence in early childhood. *Developmental Psychology*, 22, 366-372. Behaviors indicative of **mastery motivation** at 12 months predicted cognitive development at 30 months.

Frodi, A., Bridges, L., & Grolnick, W. (1985). Correlates of mastery-related behavior: A short-term longitudinal study of infants in their second year. *Child Development*, 56,

1291-1298. **Persistence** at age-appropriate challenging tasks, and competence at such tasks, predicted each other in a short-term longitudinal study. This suggests that not only is persistence important; success and by implication the belief that one can succeed is important for future efforts.

Arend, Gove, and Sroufe (1979) found that two year olds who demonstrated greater “**effective autonomous functioning**” in a problem-solving situation at age 2 demonstrated greater ego-control and ego-resiliency at age 4-5 years.

IV. Imagination, Creativity, and Invention – Infants and toddlers watch what others do, begin to pretend, and use materials in new and different ways.

Research demonstrates that sociodramatic **play** contributes to children’s development in many ways (Frost, Wortham, & Reifel, 2001; J.E. Johnson, Christie, & Yawkey, 1999; C. Shore, 1998; all cited in Trawick-Smith, 2006). “A number of studies have found that children who frequently engage in sociodramatic play...score higher on IQ tests and perform more competently on Piagetian tasks (Christie, 1983; Fisher, 1992; Rubin Fein, & Vandenberg, 1983). Others have found relationships between sociodramatic play and problem-solving (Pepler & Ross, 1981) and creativity (Dansky, 1980)” (quote from Trawick-Smith, 2006).

From Berk (2005, pp. 317-318): “...[M]any studies reveal that **make-believe** strengthens a wide variety of mental abilities, including sustained attention, memory, logical reasoning, language & literacy, imagination, creativity, and the ability to reflect on one’s own thinking and take another’s perspective (Bergen & Mauer, 2000; Berk, 2001; Kavanaugh & Engel, 1998; Newman, 1990; Ruff & Capozzoli, 2003)...Children with...invisible playmates...display more complex pretend play, are advanced in understanding others’ viewpoints, and are more sociable with peers (Gleason, 2002; Taylor & Carlson, 1997).”

Whitehurst & Lonigan (2001) state that Whitehurst’s research indicates that “...the relatively advanced writing skill of invented spelling has developmental origins in acts such as **drawing pictures of objects** and writing one’s name” (p. 18).

V. Wonder and Delight – Infants and toddlers first develop likes and dislikes. With a growing sense of playfulness, they begin to see things as “funny” and enjoy surprising others.

When infants begin to crawl, they can seek out interactions with others, which changes the nature of their social relationships (Campos, et al., 1992). (Cited in Berk, 2006, p. 187). Also, when children **express pleasure and delight** at their motor accomplishments, this triggers pleasurable reactions from others, which further encourages their efforts (Mayes & Zigler, 1992; cited in Berk, 2006).

Berk (2005) states on p. 253 that **expressions of happiness and delight** encourage further expressions of affection and stimulation from caregivers, but no specific research is cited here to back this up.

Shonkoff & Phillips (2000) note that four-year-olds “understand . . . that individual tastes and preferences guide how people respond emotionally to rock music or a symphony” (p. 110). This suggests that the development of preferences related to aesthetic appreciation is occurring in the early years.

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Language and Communication Development

Review of Research

Language and Communication Development focuses on infants' and toddlers' ability to understand much more than they are able to express. Babies and toddlers express their needs, wants, and feelings through crying, gesturing, moving, looking, drawing, scribbling, and talking. Responding to infants and toddlers as they communicate in all these ways is essential to building nurturing relationships. These relationships are formed and maintained when caregivers talk and sing with babies and toddlers and consistently respond to the children's earliest attempts to communicate. Interactive relationships between infants and toddlers and their caregivers are necessary for children to learn the language(s) and culture(s) of the adults around them. (Side Bar: In order to preserve cultural and linguistic relationships with their families and to build overall language and communication abilities of young children, it is important to continue to use the language of their primary caregivers as much as possible.)

General research notes:

Berk (2005) summarizes research evidence for a sensitive period for language development early in life (e.g., Curtiss, 1977, 1989; Hakuta, Bialystok, & Wiley, 2003), but emphasizes that the age range for the sensitive period is not clear.

Much of the research cited below suggests that the first three years of life are a sensitive period for the development of receptive and expressive language skills that form the foundation for the development of literacy. This idea should be emphasized in the domain description/introduction.

I. Receptive Language (Hearing/Listening/Understanding) describes the way in which infants and toddlers learn the sounds of words and ways to use the words of their family's and caregiver's language(s) when adults talk and sing with them. Adults may need to also use sign language and gestures to help children to understand language. Some infants and toddlers may need assistive listening devices such as cochlear implants and hearing aids to help them to hear and learn the sounds and words that make up language.

(Add side bar: Some children need to use hearing aids, sign language and other types of assistance in order to hear and understand sounds and speech)

Research Support for Significant Developmental Outcomes

"...[R]epetition of familiar actions and words helps young children form and maintain neuronal connections in their nervous systems" (DeBoysson-Bardies, 1999)". (quote from Rosenkotter & Barton, 2002.) My note: These kinds of findings are often cited in support of the strategy of allowing and creating opportunities for children to repeat learning experiences. One might also argue that the infant's **ability to recognize and repeat familiar words** is a key developmental accomplishment that supports further development.

“**Conversational give-and-take** between parent and toddler is one of the best predictors of early language development and academic competence during the school years” (Hart & Risley, 1995; cited in Berk, 2005).

From Berk (2005): “Most researchers acknowledge that exploration of objects and expanding knowledge of the world contribute to older infants’ capacity to move beyond physical features and group objects by their functions and behaviors (Mandole & Oakes, 1999; Mandler, 1999). In addition, **language both builds on and facilitates categorization**. Adult labeling calls infants’ attention to commonalities among objects and also promotes vocabulary growth. Toddlers’ advancing **vocabulary**, in turn, is associated with advanced object-sorting behavior” (Gopnik & Meltzoff, 1992; Waxman, 2003). (p. 226)

From Berk (2005): “Some **early words** are linked to specific cognitive achievements. For example, about the time toddlers master advanced object permanence problems, they use disappearance words, such as ‘all gone.’ And success and failure expressions, such as ‘There!’ and ‘Uh-oh!’, appear when toddlers can solve problems suddenly rather than through trial and error. According to one pair of researchers, ‘Children seem to be motivated to acquire words that are relevant to the particular cognitive problems they are working on at the moment’ (Gopnik & Meltzoff, 1986, p. 1057).” (p. 240).

Berk (2005, p. 349) notes that children figure out the meanings of new words by comparing and contrasting them with words they already know (Clark, 1990). This suggests that subsequent **vocabulary development** depends on early word learning, such as that occurring during the toddler years. They also use “syntactic bootstrapping”, observing how a word is used in the context of a sentence (Gleitman, 1990; Hoff & Naigles, 2002). Being able to use this strategy effectively depends on exposure to and knowledge of the structure of language.

Strickland & Shanahan (2004) and NELP (2006) both summarize a meta-analysis of studies about Pre-K and K predictors of eventual decoding, reading comprehension, and spelling. NELP (2006) appears to have carried the analysis beyond zero-order correlations. Predictors that hold up in multivariate analyses at least some of the time are alphabet knowledge, phonological awareness, concepts about print, rapid automatic naming, writing/writing name, **oral language**, and **phonological short-term memory**. They conclude that vocabulary alone is not a good predictor of later decoding and comprehension, but that **more complex aspects of oral language** are strong predictors. This contrasts with Hart and Risley (1995), but most of the research may be on older preschoolers. The zero-order correlations that are stronger at Pre-K as opposed to K are phonological short-term memory and visual perceptual skills, but the latter does not hold up as a predictor in multivariate studies. This analysis points to the importance of general cognitive skills (memory, **attention**) as well as emergent literacy skills, for the development of literacy.

Lonigan, Burgess, & Anthony (2000) found that phonological sensitivity and letter knowledge in late preschool predicted decoding skills. There is a lot of stability in phonological sensitivity from 5 years on, but it is less stable from 41 months to late

preschool. **Receptive and expressive oral language predicted phonological sensitivity** in this study. The support is for general phonological sensitivity as a predictor.

Goswami (2001) reviews theoretical and empirical evidence that children's comparisons of similar-sounding words provide the basis for the emergence of **phonological awareness**. Early readers are more likely to be able to read words in "dense phonological neighborhoods", for example, words with lots of rhyming words that are also spelled similarly. There is a lot of evidence linking **awareness of rhyme** to the acquisition of literacy, starting at age 3.

Language contributes to the development of emotional self-regulation, in that children use a variety of strategies involving language to help them manage their feelings (Thompson, 1990a, cited in Berk, 2005, p. 363). This points to the importance of both understanding and using **language related to emotion**. Bloom & Tinker (2001) also demonstrated the links between language development and emotional development (see Expressive Language research). Although their research relates more to expressive language, understanding of language related to emotion must by implication precede the use of such language.

Language learning is enhanced during **joint attention** to whatever is of interest to the child (e.g., Tomasello & Akhtar, 1995; cited in Bloom & Tinker, 2001).

Whitehurst & Lonigan (1998) summarize research to date about the components of emergent literacy and their relationship to reading skills. Components that have effects on either other emergent literacy skills or on reading skills include the "outside-in" processes of **oral language**, narrative, and conventions of print, as well as the "inside-out" processes of knowledge of graphemes, **phonological awareness, syntactic awareness**, phoneme grapheme correspondence, and emergent writing. In addition, phonological memory, rapid naming, and print motivation predict future reading skills. Linguistic awareness, which is the metalinguistic understanding of the way language is constructed and used, must develop long with the ability to discriminate among the various units of language. Children become able to discriminate intrasyllabic units and rhymes before they become able to discriminate phonemes. In general, "Children who are better at detecting syllables, rhymes, or phonemes are quicker to learn to read..." (p. 852). Children with better phonological memory tend to acquire new vocabulary words at a faster rate. **Early knowledge of rhyme** may contribute to phonological sensitivity, which in turn predicts word identification skills. They highlight the child's contribution to his or her own literacy development when they say, "[T]he main effects of the literacy environment on children's emergent literacy skills are indirect through their effects on children's language skills" (p. 857). **Dialogic reading**, which results in more active child involvement with the child **responding to questions** and becoming the storyteller, produces larger effects on language skills.

Whitehurst & Lonigan (2001) discuss the same "outside-in" and "inside-out" processes identified above, and present the structural equation model reported in Lonigan, et al. (2000). This chapter focuses on **phonological processing**, print awareness, and **oral**

language, saying predictive evidence is strongest for these factors. Phonological processing includes phonological sensitivity, phonological memory, and phonological naming. Phonological sensitivity starts with sensitivity to the sound of words and syllables. Additional research suggests that, starting in the early preschool period, larger **vocabulary** is positively related to phonological sensitivity. The authors argue that vocabulary growth makes the development of phonological sensitivity necessary, in that segmented representations of words become more efficient. They further argue that the relationship between oral language and reading is mediated by phonological sensitivity. In their research, inside-out skills are stable after age 4, pointing to the importance of development before this time. These skills are also more predictive of early reading success than is vocabulary. Implication for us: What are appropriate ways to build the foundations for inside-out skills in the infant-toddler years? The authors state: “Interventions that hope to impact outside-in skills such as vocabulary and knowledge of narrative structure need to occur early in the preschool period if they are to have later effects during the decoding stages of learning to read” (p. 22).

Snow, et al. (1998) seems to refer to much of the same research and to reach many of the same conclusions as Whitehurst & Lonigan (1998). Pragmatics that children are said to learn in the preschool years are conventional speech acts such as requesting, getting attention, and describing; **conversational skills such as turn-taking and talking about a related topic**. The authors state that children do exhibit basic metalinguistic skills including **phonological awareness** by age 3 or possibly sooner. Early phonological awareness is evidenced by “playing” with sounds, **appreciating rhymes, and noticing that words “sound alike”**. But they cite a study in which only 26% of 3-year-olds could identify rhyming words, so we need to be careful here. Phonological awareness in preschoolers is highly correlated with general language ability, pointing again to the importance of a broad range of skills. Speech perception, the ability to distinguish different sounds that is present in infancy, is distinguished from phonological awareness, which is the ability to attend to the sounds of language as distinct from its meaning.

Shonkoff & Phillips (2000) summarize research showing the importance of **early exposure to and understanding of language** for the “development of reasoning about others’ mental states” (p. 151). Deaf 9-year-olds from hearing families, who had limited exposure to fluent signers, and autistic 9-year-olds, performed less well than typical 4-year-olds on a task requiring them to understand what another person would be thinking. “These results suggest that the **availability of discourse** about invisible mental states contributes to children’s capacity to make sophisticated inferences about these constructs” (p. 152).

- II. Expressive Language (Talking/Communicating)** – refers to infants and toddlers expressing their wants, needs, and feelings in many ways such as through speech, gestures, sign language, pointing to pictures and/or using a communication device. Watching, listening to, and responding to infants and toddlers helps to build the essential, nurturing relationship necessary for learning language and communication abilities.

(Add side bar: Some children may need to use gestures, sign language, pictures and/or communication devices in order to express all of their wants, needs, ideas, and feelings.)

Research Support for Significant Developmental Outcomes

http://www.zerotothree.org/ztt_professionals.html

“School Readiness: To become eager learners, children need to develop skills in four key areas [two listed here]:

Language and Literacy Skills

Language provides the foundation for the development of literacy skills. **Learning to communicate** through gestures, sounds, and words increases a child’s interest in—and later understanding of—books and reading.”

Self-Control

Self-control—the ability to **express and manage emotions in appropriate ways**—is essential for success in school and healthy development overall. It enables children to cooperate with others, to cope with frustration, and to resolve conflicts.

“...[R]epetition of familiar actions and words helps young children form and maintain neuronal connections in their nervous systems” (DeBoysse-Bardies, 1999)”. (quote from Rosenkotter & Barton, 2002.) My note: These kinds of findings are often cited in support of the strategy of allowing and creating opportunities for children to repeat learning experiences. One might also argue that the infant’s **ability to recognize and repeat familiar words** is a key developmental accomplishment that supports further development.

Nelson, Walkenfeld, & Goldstein (1996) review research indicating that **talking about personal experiences** enhances young children’s memories about them, which reinforces the developmental significance of expressive language. (Research may all be based on preschoolers, though.)

Engle (1996; in Zero to Three) found that mothers who talk a great deal about the past with their toddlers, in story form, have toddlers who are “more able to contribute new information to conversations about the past, keep a conversation going longer, and more likely to initiate conversations about the past” (p. 6). Engle sees this as significant because “story telling is the single strongest predictor of literacy...(Wells, 1986)” (p. 7)

The ability to shift attention from one stimulus to another is important for the development of self-control (Putnam, Spritz, & Stifter, 2002; cited in Berk, 2005). “Early, large individual differences in self-control remain modestly stable into middle childhood and adolescence” (Shoda, Mischel, & Peake, 1990). **Children who are more advanced in sustained attention and language development are more self-controlled**...(Cournoyer, et al., 1998)...As self-control improves, mothers increase the rules they require toddlers to follow...(Gralinksi & Kopp, 1993).” (Quotes, from Berk, 2005, p. 280)

From Trawick-Smith (2006): Preschool children who are well liked by peers (high sociometric status) **use language effectively in social situations** (Hart, Olsen, Robinson,

& Mandelco, 1997), and are **friendly and positive in their interactions with peers, giving positive attention, feedback, and affection** (Crick, Casas, & Mosher, 1997).

“...[C]hildren who are more competent in **manipulating the sounds and rhythms of language** become better and more fluent readers (Snow, et al., 1998).” (Quote from Rosenkotter & Barton, 2002)

From Berk (2005): “Some early words are linked to specific cognitive achievements. For example, about the time toddlers master advanced object permanence problems, they use disappearance words, such as ‘all gone.’ And success and failure expressions, such as ‘There!’ and ‘Uh-oh!’, appear when toddlers can solve problems suddenly rather than through trial and error. According to one pair of researchers, ‘Children seem to be motivated to acquire **words that are relevant to the particular cognitive problems they are working on** at the moment’ (Gopnik & Meltzoff, 1986, p. 1057).” (p. 240).

When toddlers **imitate** their parents’ frequent naming of objects, parents imitate back, which **supports further vocabulary learning** (Masur & Rodemaker, 1999). (cited in Berk, 2005, p. 242)

“**Conversational give-and-take** between parent and toddler is one of the best predictors of early language development and academic competence during the school years” (Hart & Risley, 1995; cited in Berk, 2005). (My note: This may be a little overstated based on reading of Hart & Risley. However, one of the things that predicted positive language outcomes was parental responsiveness to child initiations, so this finding is consistent with the importance of conversational give and take.)

Hart & Risley (1995) found that when parents talked more during the first three years of life, children got more experience with what they defined as “quality features” of language, including language diversity, feedback tone, symbolic emphasis, guidance style, and responsiveness. Parents who talked less also had a higher proportion of directives and “negative” expressions in the language they did use. “Quality features” predicted child outcomes at age three. Child outcome measures at age three were vocabulary use, vocabulary growth, and IQ (general accomplishment). In turn, both **vocabulary use and vocabulary growth** at age 3 predict PPVT-R and TOLD scores at age 9. The same was true for IQ score at age 3, but the relationship was not as strong. Vocabulary use at age 3 also predicts reading comprehension at age 9 as measured by the Comprehensive Test of Basic Skills. From this we can conclude that the acquisition of a large expressive vocabulary is a significant developmental outcome for the first three years of life.

Self-directed speech and verbal thought are important developments from Vygotsky’s point of view. “Verbal thought allows the acquisition of complex concepts... Self-directed speech ... shows that young children are using language to guide learning.” (Trawick-Smith, 2006, p. 53). Language in Vygotsky’s view is not merely a mode of expression but a tool for constructing knowledge.

On p. 155, Trawick-Smith (2006) addresses the question of whether **babbling** contributes to later language learning. “When a baby engages in **expressive jargon**, for example, a parent is likely to respond verbally. Often complex interchanges, involving turn taking and lively intonation, follow (Pine, Lieven, & Rowland, 1997)...One study found that babies who were slower in beginning to babble had smaller vocabularies at age 3 (Oller, et al., 1999).”

“Children with **general language delays in toddlerhood** or in the preschool years are more likely to have language and academic problems and to be identified as having learning disabilities later in life (Paul, 1999; Tallal, 1987).” (Quote from Trawick-Smith, 2006, p. 165)

Berk (2005, p. 329) asserts that research supports Vygotsky’s idea that **private speech** is significant for cognitive development. Children use more of it on difficult vs. easy tasks (Patrick & Abravanel, 2000), and “children who use private speech during a challenging activity are more attentive and involved and show better task performance than their less talkative age mates (Berk & Spuhl, 1995; Winsler, Diaz, & Montero, 1997).”

Language contributes to the development of emotional self-regulation, in that children use a variety of strategies involving language to help them manage their feelings (Thompson, 1990a, cited in Berk, 2005, p. 363). This points to the importance of both understanding and using **language related to emotion**.

Bloom & Tinker (2001) present evidence that **learning to speak, emotional expression, and cognitive development** as demonstrated in play are all intertwined and influence each other. This is due to the effort expended in all of these activities/accomplishments, which must be drawn from a common “resource pool”. Results lead the authors to conclude that the child is the agent of his or her own development. “The three conclusions that follow from the results of the research are that (a) expression and interpretation are the acts of performance in which language is learned,...; (b) language is not an independent object but is acquired by a child in relation to other kinds of behaviors and their development; and (c) acquiring language in coordination with other behaviors in acts of expression and interpretation takes work, so that acquiring language is not easy” (pp. vii – viii). This points to the importance of previous developmental accomplishments as a foundation for future development. A number of specific findings, some cited from earlier studies, are of interest:

- Language learning is enhanced during **joint attention** to whatever is of interest to the child (e.g., Tomasello & Akhtar, 1995).
- Children are more likely to start **talking about things they have in mind** than to build on what someone else just said (e.g. Bloom, et al., 1996). Mothers are more likely to talk after children talk, building on what they said (also found by Tamis-LeMonda, Bornstein, & Baumwell, 2001). Given the importance of the mother’s talk for future development (e.g. Hart & Risley, 1995), the child’s contribution must be important for further development.

- More complex play with toys is associated with the **vocabulary spurt** that occurs during the 2nd year of life. The development of more complex play is associated with the vocabulary spurt rather than with chronological age.
- When children were first learning to say words, frequent **emotional expression** interfered with language learning (e.g. Bloom & Capatides, 1987b). Another interpretation is that the effort of speaking dampened emotional expression. When children had learned more words (at vocabulary spurt), they were more likely to express emotion and speak at the same time, suggesting that the two systems had become coordinated and also suggesting a high level of interest and engagement. However, children were more likely to be expressing positive emotion than negative emotion during speech. Negative emotion still appeared to interfere due to “arousal effects” and the “cognitive cost” associated with expressing negative emotion (p. 40). Children who made the transition to using sentences later, who were assumed to be having more difficulty learning language, tended to express more emotion overall (perhaps suggesting interference) but less emotion during speech (suggesting that effort dampened emotion and/or the absence of interference).
- Children also express less emotion while they are engaged in more complex object play at the time of the vocabulary spurt, suggesting the same kind of competition for cognitive resources described above. They do express more emotion immediately after the play episode, again suggesting engagement. This is particularly significant given that **language and emotional expression** have become more coordinated by then.
- Children tended to talk more before the play episode and mothers after, but neither talked as much during the child’s actual manipulation of the objects. Mothers tended to talk more in response to more complex play. Again, this points to the importance of the **child’s contribution in eliciting the mother’s response**, which in turn contributes to further cognitive and language development.

Strickland & Shanahan (2004) and NELP (2006) both summarize a similar meta-analysis of studies about Pre-K and K predictors of eventual decoding, reading comprehension, and spelling. NELP (2006) appears to have carried the analysis beyond zero-order correlations. Predictors that hold up in multivariate analyses at least some of the time are alphabet knowledge, **phonological awareness**, concepts about print, rapid automatic naming, writing/writing name, **oral language, and phonological short-term memory**. They conclude that vocabulary alone is not a good predictor of later decoding and comprehension, but that **more complex aspects of oral language** are strong predictors. This contrasts with Hart and Risley (1995), but most of the research may be on older preschoolers. The zero-order correlations that are stronger at Pre-K as opposed to K are phonological short-term memory and visual perceptual skills, but the latter does not hold up as a predictor in multivariate studies. This analysis points to the importance of general cognitive skills (memory, **attention**) as well as emergent literacy skills, for the development of literacy.

Watson (2001) reports her own research suggesting that there is a relationship between certain kinds of **more complex (“decontextualized”) language** in parent-child book-reading discourse, and later print-related skills. These include the use of words about inner states, metalinguistic terms, generalizations about people and events, and talk about past and future.

Lonigan, Burgess, & Anthony (2000) found that phonological sensitivity and letter knowledge in late preschool predicted decoding skills. There is a lot of stability in phonological sensitivity from 5 years on, but it is less stable from 41 months to late preschool. Receptive and **expressive oral language predicted phonological sensitivity** in this study. The support is for general phonological sensitivity as a predictor. There were no findings in this study for print concepts or environmental print.

Scarborough (2001) identifies the following strands of early literacy development: background knowledge, **vocabulary, language structures, verbal reasoning**, literacy knowledge, **phonological awareness**, decoding, and sight recognition. The author summarizes research indicating that preschoolers with language impairments are at risk for developing reading disabilities; that reading disabilities tend to run in families; that verbal skills (but not nonverbal skills) predict later reading performance from infancy; that different kinds of verbal skills are correlated with each other concurrently and predictively; and that different variables predict future success at different ages. “At the youngest ages, **syntactic and speech production abilities** were most deficient, relative to those of the comparison group, in the group of youngsters who subsequently developed reading disabilities. Later in the preschool period, however, the groups differed instead in vocabulary and phonological awareness skills” (p. 102). Research indicates that risk is not destiny in the area of literacy development, as in other domains.

Whitehurst & Lonigan (1998) summarize research to date about the components of emergent literacy and their relationship to reading skills. Components that have effects on either other emergent literacy skills or on reading skills include the “outside-in” processes of **oral language, narrative**, and conventions of print, as well as the “inside-out” processes of knowledge of graphemes, **phonological awareness, syntactic awareness**, phoneme grapheme correspondence, and emergent writing. In addition, phonological memory, rapid naming, and print motivation predict future reading skills. **Decontextualized language skills**, which refer to the use of language to communicate about ideas or things that are not immediately present in concrete form, are especially predictive. They highlight the child’s contribution to his or her own literacy development when they say, “[T]he main effects of the literacy environment on children’s emergent literacy skills are indirect through their effects on children’s language skills” (p. 857). **Dialogic reading**, which results in more active child involvement with the child responding to questions and **becoming the storyteller**, produces larger effects on language skills.

Lonigan, Burgess, & Anthony (2000) found that phonological sensitivity and letter knowledge in late preschool predicted decoding skills. There is a lot of stability in phonological sensitivity from 5 years on, but it is less stable from 41 months to late

preschool. **Receptive** and expressive **oral language** predicted phonological sensitivity in this study. The support is for general phonological sensitivity as a predictor. There were no findings in this study for print concepts or environmental print.

Whitehurst & Lonigan (2001) discuss the same “outside-in” and “inside-out” processes identified above, and present the structural equation model reported in Lonigan, et al. (2000). This chapter focuses on **phonological processing, print awareness**, and oral language, saying predictive evidence is strongest for these factors. Phonological processing includes phonological sensitivity, phonological memory, and phonological naming. Phonological sensitivity starts with sensitivity to the sound of words and syllables. “Effective phonological memory enables children to maintain an accurate representation of the phonemes associated with the letters of a word while decoding and, therefore, devote more cognitive resources to decoding and comprehension processes” (p. 15). Phonological naming refers to the efficiency of retrieval, which again points to the importance of cognitive development for language development. It is measured by rapid automatic naming tasks (e.g., naming a set of pictures). There does not appear to be research on the latter two processes before Kindergarten, though. Additional research suggests that, starting in the early preschool period, larger **vocabulary** is positively related to phonological sensitivity. The authors argue that vocabulary growth makes the development of phonological sensitivity necessary, in that segmented representations of words become more efficient. They further argue that the relationship between oral language and reading is mediated by phonological sensitivity. In their research, inside-out skills are stable after age 4, pointing to the importance of development before this time. These skills are also more predictive of early reading success than is vocabulary. Implication for us: What are appropriate ways to build the foundations for inside-out skills in the infant-toddler years? The authors state: “Interventions that hope to impact outside-in skills such as vocabulary and knowledge of narrative structure need to occur early in the preschool period if they are to have later effects during the decoding stages of learning to read” (p. 22).

Snow, et al. (1998) seems to refer to much of the same research and to reach many of the same conclusions as Whitehurst & Lonigan (1998). **Pragmatics** that children are said to learn in the preschool years are conventional speech acts such as requesting, getting attention, and describing; **conversational skills such as turn-taking, talking about a related topic, developing a topic; and production of narratives, explanations, and definitions**. Early metalinguistic skills that seem to have relevance for the toddler period are **playing with language** and making judgments about correct vs. incorrect forms. The authors state that children do exhibit basic metalinguistic skills including **phonological awareness** by age 3 or possibly sooner. Early phonological awareness is evidenced by “playing” with sounds, appreciating rhymes, and noticing that words “sound alike”. But they cite a study in which only 26% of 3-year-olds could identify rhyming words, so we need to be careful here. Phonological awareness in preschoolers is highly correlated with general language ability, pointing again to the importance of a broad range of skills. With reference to prediction, they cite Scarborough (1991), who found a relationship between both **syntactic ability (length/complexity of sentences)** and **expressive phonological ability (pronunciation accuracy)** at 2.5 years; and later reading ability.

They also cite Shapiro (1990), who found that **expressive language** milestones in infancy predicted presence or absence of reading disability later. Also cited is Walker, et al. (1994), who found a relationship between **mean utterance length as well as vocabulary**, and later reading scores. These findings corroborate NELP (2006) re: the importance of language complexity, not just vocabulary.

- III. Early Literacy** - refers to children exploring books, listening to songs and nursery rhymes, hearing stories, drawing and scribbling—these are the early literacy abilities of infants and toddlers. The foundations of reading and writing (literacy) begin in infancy when babies and toddlers see adults reading and writing for real purposes (e.g., following a recipe, making a shopping list). Early literacy begins with nurturing, interactive relationships among infants and toddlers and their caregivers. (Add side bar: Some young children may need adapted books and drawing/writing tools to be able to fully explore and use early literacy materials.)

Research Support for Significant Developmental Outcomes

http://www.zerotothree.org/ztt_professionals.html

“School Readiness: To become eager learners, children need to develop skills in four key areas [one listed here]:

Language and Literacy Skills

Language provides the foundation for the development of literacy skills. Learning to communicate through gestures, sounds, and words increases a child’s interest in—and later understanding of—books and reading.” (No references cited on website here.)

Engle (1996) found that mothers who talk a great deal about the past with their toddlers, in story form, have toddlers who are “more able to contribute new information to conversations about the past, keep a conversation going longer, and more likely to initiate conversations about the past” (p. 6). Engle sees this as significant because “**story telling** is the single strongest predictor of literacy...(Wells, 1986)” (p. 7)

DeLoache (1996) discusses the importance of **understanding symbols**, the idea that one thing can represent another. Her research suggests that children must develop the expectation that symbolic relations are present before they will begin to look for them in new situations. She demonstrated considerable “transfer of training” effects from one task to another. Thus, symbolic sensitivity can be seen as a “mechanism for developmental change” (p. 15).

Berk (2005, p. 319) also discusses the development of **understanding of symbols**. “...[U]nderstanding one type of symbol helps preschoolers understand others...3-year-olds who can use a model of room to locate Big Snoopy readily transfer their understanding to a simple map (Marzolf & DeLoache, 1994).” This also points to the importance of learning that one thing can stand for another.

Development of **internalized scripts for stories** helps children to make sense of new stories (Rosenkotter & Barton, 2002)

“Conversational give-and-take between parent and toddler is one of the best predictors of early language development and academic competence during the school years” (Hart & Risley, 1995). ... **Dialogues about picture books** are especially effective... Two- and 3-year olds who experience daily reading at home or child care are greatly advanced in language skills, compared with those who do not” (Whitehurst & Lonigan, 1998; Whitehurst et al., 1994).

In her discussion of the development of children’s artistic representations, Berk (2005, p. 306) notes the importance of cognitive development: “...[T]he **realization that pictures can serve as symbols** and improved planning and spatial understanding... allow the child to take a broader visual perspective rather than focusing on separate objects (Golomb, 2004).” When an adult shows 3-year-olds (who typically don’t understand this) how pictures can be used to represent objects, they are more likely to draw recognizable forms (Callaghan, 1999; Callaghan & Rankin, 2002). This points not only to the importance of adult scaffolding, but to the importance of understanding symbols. Perception, language, memory, and fine motor skills all contribute to the development of realistic drawing (Toomela, 2002).

Whitehurst & Lonigan (1998) summarize research to date about the components of emergent literacy and their relationship to reading skills. Components that have effects on either other emergent literacy skills or on reading skills include the “outside-in” processes of oral language, narrative, and **conventions of print**, as well as the “inside-out” processes of **knowledge of graphemes, phonological awareness, syntactic awareness, phoneme grapheme correspondence, and emergent writing**. In addition, phonological memory, rapid naming, and **print motivation** predict future reading skills. **Decontextualized language skills**, which refer to the use of language to communicate about ideas or things that are not immediately present in concrete form, are especially predictive. **Alphabet knowledge** is the strongest single predictor, but this may be a proxy for more general literacy knowledge. In general, “Children who are better at detecting syllables, rhymes, or phonemes are quicker to learn to read...” (p. 852). Children with better phonological memory tend to acquire new vocabulary words at a faster rate. Rapid naming tasks also discriminate poor readers from good readers. Print motivation, which includes degree of engagement during reading, predicts both emergent literacy skills and later reading skills. “A child who is interested in literacy is more likely to facilitate shared reading interactions, notice print in the environment, ask questions about the meaning of print, and spend more time reading once he or she is able” (p. 854). Early knowledge of rhyme may contribute to phonological sensitivity, which in turn predicts word identification skills. They highlight the child’s contribution to his or her own literacy development when they say, “[T]he main effects of the literacy environment on children’s emergent literacy skills are indirect through their effects on children’s language skills” (p. 857). **Dialogic reading**, which results in more active child involvement with the child becoming the storyteller, produces larger effects on language skills.

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phonological sensitivity from 5 years on, but it is less stable from 41 months to late preschool. Receptive and **expressive oral language** predicted phonological sensitivity in this study. The support is for general phonological sensitivity as a predictor. There were no findings in this study for print concepts or environmental print.

Whitehurst & Lonigan (2001) discuss the same “outside-in” and “inside-out” processes identified above, and present the structural equation model reported in Lonigan, et al. (2000). This chapter focuses on phonological processing, **print awareness**, and oral language, saying predictive evidence is strongest for these factors. This article states that Whitehurst’s research indicates that “...the relatively advanced writing skill of invented spelling has developmental origins in acts such as **drawing** pictures of objects and writing one’s name” (p. 18). **Emergent writing** (drawing and scribbling in preschoolers) is said to promote alphabetic knowledge.

Strickland & Shanahan (2004) and NELP (2006) both summarize a meta-analysis of studies about Pre-K and K predictors of eventual decoding, reading comprehension, and spelling. NELP (2006) appears to have carried the analysis beyond zero-order correlations. Predictors that hold up in multivariate analyses at least some of the time are **alphabet knowledge, phonological awareness, concepts about print**, rapid automatic naming, **writing/writing name**, oral language, and phonological short-term memory. They conclude that vocabulary alone is not a good predictor of later decoding and comprehension, but that more complex aspects of oral language are strong predictors. This contrasts with Hart and Risley (1995), but most of the research may be on older preschoolers. The zero-order correlations that are stronger at Pre-K as opposed to K are phonological short-term memory and **visual perceptual skills**, but the latter does not hold up as a predictor in multivariate studies.

Snow, et al. (1998) seems to refer to much of the same research and to reach many of the same conclusions as Whitehurst & Lonigan (1998). They state, “Learning that the alphabet is a symbol system for sounds fits into this stream of development” (p. 44), referring to **understanding of symbols**, and citing the golden arches of McDonald’s as an example. The authors state that children do exhibit basic metalinguistic skills including **phonological awareness** by age 3 or possibly sooner.

Scarborough (2001) identifies the following strands of early literacy development: background knowledge, vocabulary, language structures, verbal reasoning, **literacy knowledge, phonological awareness, decoding, and sight recognition**. (The last two seem less relevant for infants and toddlers, but underlying skills of attending to and noticing differences among stimuli and symbolic sensitivity would seem to be foundational.) The author summarizes research indicating that preschoolers with language impairments are at risk for developing reading disabilities; that reading disabilities tend to run in families; that verbal skills (but not nonverbal skills) predict later reading performance from infancy; that different kinds of verbal skills are correlated with each other concurrently and predictively; and that different variables predict future success at different ages. “At the youngest ages, syntactic and speech production abilities were most deficient, relative to those of the comparison group, in the group of youngsters

who subsequently developed reading disabilities. Later in the preschool period, however, the groups differed instead in vocabulary and phonological awareness skills” (p. 102). Research indicates that risk is not destiny in the area of literacy development, as in other domains.

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Cognitive Development

Review of Research

Cognitive Development focuses on children's natural curiosity and ability to gather and organize information using all of their senses. They learn through playing, exploring, discovering, and problem solving. Linkage between nurturing early experiences and cognitive development has been confirmed by recent research on the developing brain.

During the first three years of life children learn faster than they will ever learn again. Babies and toddlers have a biological need and desire to learn. T. Berry Brazelton's research has shown that from the first moments of life, babies are active learners. They are busy gathering and organizing knowledge about their world. They learn through seeing, touching, hearing, smelling, tasting, and moving. Children also learn through their interactions with people, objects, and events to make sense of the world around them.

They are curious and like to investigate their surroundings. They begin to understand simple concepts by exploring, noticing, and wondering. They begin to notice differences in their environment and become interested as they engage in increasingly more focused explorations.

Daily routines are the curriculum from which infants learn. If performed in a consistent, organized way, care giving routines make life predictable for infants and toddlers. When a child develops trust and security, s/he can begin to predict events. This predictability in a child's daily life supports both social-emotional and cognitive development. The child can begin to understand and appreciate order in his or her world and use learned information for interactions with people, problem-solving, and creative thinking. These interactions between children and objects or events in the environment make cognitive development an on-going process.

I. Sensory Exploration & Discovery -- includes children's ability to discover and understand their world using their five senses.

"...[R]epetition of familiar actions and words helps young children form and maintain neuronal connections in their nervous systems" (DeBoysson-Bardies, 1999)". My note: These kinds of findings are often cited in support of the strategy of allowing and creating opportunities for children to repeat learning experiences. One might also argue that the infant's ability to recognize, show preference for, and request familiar objects and experiences is a key developmental accomplishment that supports further development.

From Berk (2005); "...[H]abituation greatly underestimates infants' memory when compared with methods that rely on their **active exploration** of objects" (Wilk, Klein, & Rovee-Collier, 2001). (p. 222) This suggests the importance of active exploration for bringing about a higher level of cognitive functioning. "During the first few years, children rely heavily on nonverbal techniques – such as visual images and **motor actions** – to remember. As language develops, children first use words to talk about the here and

now” (p. 224). This interpretation of the basis for memory is consistent with the phenomenon of infantile amnesia. Also, “compared with habituation/recovery, touching, sorting, and other play behaviors better reveal the meanings that toddlers attach to categories because they are applying those meanings in their everyday activities” (p. 225; cites study by Mandler & McDonough, 1998, in which toddlers offered a drink to a toy rabbit, but not a motorcycle, after observing an adult offer a toy dog a drink.) “Most researchers acknowledge that exploration of objects and expanding knowledge of the world contribute to older infants’ capacity to move beyond physical features and group objects by their functions and behaviors (Madole & Oakes, 1999; Mandler, 1999).

“Babies who spend more time **alert** probably receive more social stimulation and **opportunities to explore** and, therefore, may be slightly advantaged in mental development” (Gertner et al., 2002). (Quoted from Berk, 2005, p. 150).

The importance of **sensory exploration and discovery** for motor, cognitive and social development is illustrated by the developmental delays often observed in children who are blind, summarized in Berk (2005, pp. 196-197). For example, until children who are blind often are delayed in realizing that there are interesting objects “out there” to explore, which delays motor and cognitive development.

From Berk (2005): Habituation (Bornstein, 1998) is described as evidence that very young babies explore and learn about things. “Babies who **habituate quickly** to new stimuli in the first 6 months of life have been found to be intellectually advanced later in childhood” (Rose & Feldman, 1996). (Berk, p. 230). **Scanning** is another ability that emerges during the first three months; babies look at different features of an object rather than focusing on just one. The ability to do this seems to be related to later cognitive development (Colombo, 1995; Rose, et al. 1999).

From Berk (2005): “**Acting on the environment** plays a major role in perceptual differentiation. According to the Gibsons, perception is guided by the discovery of affordances – the action possibilities that a situation offers an organism with certain motor capacities (Gibson, 2000). By **moving about and exploring** the environment, babies figure out which objects can be grasped, squeezed, bounced, or stroked and whether a surface is safe to cross or presents the possibility of falling...Each skill leads infants to perceive surfaces in new ways that guide their movements. As a result, they act more competently” (Adolph & Eppler, 1998, 1999). (p. 202)

“Hollich and colleagues (2000) believe that a cluster of factors, including object naming by adults, social interactions, and a baby’s **ability to study and understand objects**, all contribute, in concert, to word learning.” (Quote from Trawick-Smith, 2006, p. 152)

Neuman & Roskos (1992), in a study that focuses primarily on the effects of literacy materials in the environment, found that **object familiarity** contributed to more meaningful and imaginative language in the context of literacy-related play. They cite additional studies suggesting that “...the more familiar the children are with play contexts and their corresponding objects, the more they tend to play in increasingly complex ways,

using elaborated language in the process” (p. 204). This points to the importance of curiosity as well as **sensory exploration and discovery** to build familiarity with a wide variety of objects and settings, in support of eventual complex play and language. (Note that the most recent NELP [2006] review of research emphasizes the more complex aspects of oral language, vs. just size of vocabulary, as predictors of eventual reading competence. Complex language in play may provide a foundation for the development of these aspects of oral language.)

Shonkoff & Phillips (2000): Discussion of thinking and learning begins on p. 146. Multiple studies are cited showing infants’ ability to recognize the **causal connection** between their actions and events, and their preference for situations where they have some control over events. “. . . [I]nfants’ **need to be active** in their own learning becomes abundantly evident when you take away their control over a situation” (p. 148). They note that preschool differences in **ability to categorize** depend on exposure to and knowledge about the items to be categorized, pointing to the importance of **active exploration** of a wide variety of things.

Shonkoff & Phillips (2000) also cite research with cats showing the importance of visual input for synaptic pruning. “Synapses appear to be programmed to be eliminated if they are not functionally confirmed. . . In general, frequently active connections. . . are more likely to survive” (p. 189). While it cannot be inferred from this research that differences in everyday stimulation caused by different opportunities for sensory exploration lead to significant differences in brain development, it does seem plausible that such **sensory exploration** and input is contributing to the connections that are retained during synaptic pruning. They also cite Greenough’s research with rats in deprived, typical, and enriched cages. Rats in the more complex environments did better than other rats on learning and problem-solving tasks, and there were significant differences in their brains as well. Effects diminished if rats were removed from the better environments. The authors note that the complex cages were probably less complex than rats’ natural habitats, so what is suggested here is the importance of some normal, minimum level of stimulation.

II. **Concept Development & Memory** – describes how a child begins to acquire and remember basic concepts, relates them to previous experiences, and uses them in new and different situations with people, objects, and events.

http://www.zerotothree.org/ztt_professionals.html

“School Readiness: To become eager learners, children need to develop skills in four key areas [one listed here]:

Thinking Skills

Children are born with a need to understand how the world works. They start by **making basic associations** such as, “I call out, dad comes.” As they grow, they develop more and more complex ways of figuring things out. In their everyday experiences, children use and develop an understanding of math **concepts**, such as **counting and sorting** and problem-solving skills that they will need for school.” (No references cited linking early concept development to success in school, but they probably exist and can be located.)

“...[R]epetition of familiar actions and words helps young children form and maintain neuronal connections in their nervous systems” (DeBoysson-Bardies, 1999)”. (quote from Rosenkotter & Barton, 2002) My note: These kinds of findings are often cited in support of the strategy of allowing and creating opportunities for children to repeat learning experiences. One might also argue that the infant’s ability to **recognize**, show preference for, and request familiar objects and experiences is a key developmental accomplishment that supports further development.

DeLoache (1996; in *Zero to Three*) discusses the importance of **understanding symbols**, the idea that one thing can represent another. Her research suggests that children must develop the expectation that symbolic relations are present before they will begin to look for them in new situations. She demonstrated considerable “transfer of training” effects from one task to another. Thus, symbolic sensitivity can be seen as a “mechanism for developmental change” (p. 15).

Berk (2005, p. 319) also discusses the development of **understanding of symbols**. “...[U]nderstanding one type of symbol helps preschoolers understand others...3-year-olds who can use a model of room to locate Big Snoopy readily transfer their understanding to a simple map (Marzolf & DeLoache, 1994).” This also points to the importance of learning that one thing can stand for another.

From Berk (2005): Infant intelligence tests, like the Bayley, predict future intelligence poorly for most children (p. 229). Performance on these perceptual and motor tasks doesn’t correlate well with later performance on the conceptual, language, and problem-solving tasks on IQ tests. However, such tests are useful for screening, because very low scores do predict later difficulties. Speed of **habituation**/recovery (McCall & Carringer, 1993; Sigman, Cohen, & Beckwith, 1997) and performance on Piagetian **object permanence** tasks (Rose, Feldman, & Wallace, 1992) do predict later intelligence (which in turn predicts school success). (p. 230) Berk suggests this is true because these tasks tap into basic cognitive processes such as **memory**, attention, and response to novelty (Colombo, 1995).

IQ tests at age 3 do begin to predict future performance (e.g. Hart & Risley, 1995). These include **conceptual**, language, and problem-solving tasks. Thus, one can argue that developmental accomplishments in these areas during the first three years of life are significant for future development.

From Berk (2005): “Infant **memory** appears to be related to later cognitive abilities (Rose, et al, 2001). In one study, babies’ visual memory was found to be associated with language and reading ability, quantitative competence, and general intelligence at age 6 (Columbo, 1993). In a summary of 23 studies of infant memory, McCall and Carringer (1993) concluded that infants’ ability to remember is associated with IQ scores at age 8.” (p. 134)

From Berk (2005): “Some early words are linked to specific cognitive achievements. For example, about the time toddlers master advanced **object permanence** problems, they use disappearance words, such as ‘all gone.’ And success and failure expressions, such as ‘There!’ and ‘Uh-oh!’, appear when toddlers can solve problems suddenly rather than through trial and error. According to one pair of researchers, ‘Children seem to be motivated to acquire words that are relevant to the particular cognitive problems they are working on at the moment’ (Gopnik & Meltzoff, 1986, p. 1057).” (p. 240).

From Berk (2005): “In addition, language both builds on and facilitates **categorization**. Adult labeling calls infants’ attention to commonalities among objects and also promotes vocabulary growth. Toddlers’ advancing vocabulary, in turn, is associated with advanced object-sorting behavior” (Gopnik & Meltzoff, 1992; Waxman, 2003). (p. 226)

From Berk (2005, pp. 317-318): “...[M]any studies reveal that **make-believe** strengthens a wide variety of mental abilities, including sustained attention, memory, logical reasoning, language & literacy, imagination, creativity, and the ability to reflect on one’s own thinking and take another’s perspective (Bergen & Mauer, 2000; Berk, 2001; Kavanaugh & Engel, 1998; Newman, 1990; Ruff & Capozzoli, 2003).”

In her discussion of the development of children’s artistic representations, Berk (2005, p. 306) notes the importance of cognitive development: “...[T]he realization that pictures can serve as **symbols** and improved planning and **spatial understanding**... allow the child to take a broader visual perspective rather than focusing on separate objects (Golomb, 2004).” When an adult shows 3-year-olds (who typically don’t understand this) how pictures can be used to represent objects, they are more likely to draw recognizable forms (Callaghan, 1999; Callaghan & Rankin, 2002).” This points not only to the importance of adult scaffolding, but to the developmental outcome of understanding symbols. Perception, language, **memory**, and fine motor skills all contribute to the development of realistic drawing (Toomela, 2002).

“Better **recall** in early childhood is strongly associated with language development, which greatly enhances long-lasting representations of past experiences (Simcock & Hayne, 2003).” (Quote from Berk, 2005, p. 334).

Bloom & Tinker (2001) present evidence that learning to speak, emotional expression, and **cognitive development as demonstrated in play** are all intertwined and influence each other. This is due to the effort expended in all of these activities/accomplishments, which must be drawn from a common “resource pool”. Results lead the authors to conclude that the child is the agent of his or her own development. “The three conclusions that follow from the results of the research are that (a) expression and interpretation are the acts of performance in which language is learned,...; (b) language is not an independent object but is acquired by a child in relation to other kinds of behaviors and their development; and (c) acquiring language in coordination with other behaviors in acts of expression and interpretation takes work, so that acquiring language is not easy” (pp. vii – viii). This points to the importance of previous developmental

accomplishments as a foundation for future development. A number of specific findings, some cited from earlier studies, are of interest:

- Children are more likely to start talking about **things they have in mind** than to build on what someone else just said (e.g. Bloom, et al., 1996). Mothers are more likely to talk after children talk, building on what they said (also found by Tamis-LeMonda, Bornstein, & Baumwell, 2001). Given the importance of the mother's talk for future development (e.g. Hart & Risley, 1995), the child's contribution must be important for further development.
- **More complex play with toys is associated with the vocabulary spurt** that occurs during the 2nd year of life. The development of more complex play is associated with the vocabulary spurt rather than with chronological age.

Whitehurst & Lonigan (1998) summarize research to date about the components of emergent literacy and their relationship to reading skills. Components that have effects on either other emergent literacy skills or on reading skills include **phonological memory and rapid naming**. Children with better phonological memory tend to acquire new vocabulary words at a faster rate. Rapid naming tasks also discriminate poor readers from good readers.

Whitehurst & Lonigan (2001) discuss the same “outside-in” and “inside-out” processes identified above, and present the structural equation model reported in Lonigan, et al. (2000). This chapter focuses on phonological processing, print awareness, and oral language, saying predictive evidence is strongest for these factors. Phonological processing includes phonological sensitivity, **phonological memory**, and phonological naming. Phonological sensitivity starts with sensitivity to the sound of words and syllables. “Effective phonological memory enables children to maintain an accurate representation of the phonemes associated with the letters of a word while decoding and, therefore, devote more cognitive resources to decoding and comprehension processes” (p. 15). This points to the importance of **memory** development for language development. **Phonological naming refers to the efficiency of retrieval**, which again points to the importance of cognitive development for language development. It is measured by rapid automatic naming tasks (e.g., naming a set of pictures).

Strickland & Shanahan (2004) and NELP (2006) both summarize a similar meta-analysis of studies about Pre-K and K predictors of eventual decoding, reading comprehension, and spelling. NELP (2006) appears to have carried the analysis beyond zero-order correlations. Predictors that hold up in multivariate analyses at least some of the time are alphabet knowledge, phonological awareness, concepts about print, **rapid automatic naming**, writing/writing name, oral language, and **phonological short-term memory**. This analysis points to the importance of general cognitive skills (memory, attention) as well as emergent literacy skills, for the development of literacy.

Bandura's theory and research (1999, 2001) are relevant to multiple domains. **Imitation**, and the contribution of children's ability to “listen, remember, and abstract general rules from complex sets of observed behavior” (Berk, 2005) affect further learning and development in his theory.

III. Human Interactions – describes how a child experiences the world through interactions with people.

Note: This area is weak because I did not understand what it included at first. There is a lot of research about the importance of social cognition skills for further development, so this will need to be added.

Bandura's theory and research (1999, 2001) are relevant to multiple domains. **Imitation**, and the contribution of children's ability to "listen, remember, and abstract general rules from complex sets of observed behavior" (Berk, 2005) affect further learning and development in his theory. He holds that children become more selective in what they imitate, based on observing others' attitudes about their own actions as well as feedback.

From Trawick-Smith (2006): Preschool children who are well liked by peers (high sociometric status) are active socially (Trawick-Smith, 1992), **use language effectively in social situations** (Hart, Olsen, Robinson, & Mandleco, 1997), are friendly and positive in their interactions with peers, giving positive attention, feedback, and affection (Crick, Casas, & Mosher, 1997), and can **accurately read social situations** (Dodge & Price, 1994; Lemerise & Arsenio, 2000).

From Berk (2005, pp. 317-318): "...[M]any studies reveal that **make-believe** strengthens a wide variety of mental abilities, including sustained attention, memory, logical reasoning, language & literacy, imagination, creativity, and the ability to reflect on one's own thinking and **take another's perspective** (Bergen & Mauer, 2000; Berk, 2001; Kavanaugh & Engel, 1998; Newman, 1990; Ruff & Capozzoli, 2003)."

Shonkoff & Phillips (2000): Empathic responding is promoted "...when parents fix their children's attention on another's distress and explain the causes of that person's feelings (Zahn-Waxler, 1992)." ... Re: theory of mind: "Even 2-year-olds... understand that people have inner experiences of perceiving, feeling, and desiring and that they will feel good if they get what they want and feel bad if they don't." (p. 110).

Shonkoff & Phillips (2000): Discussion of thinking and learning begins on p. 146. They emphasize research showing that toddlers' understanding of, and imitation of, others' intentions is a big factor in the development of cultural knowledge. "The capacity to learn from others, by perceiving their goals and **attempting to reproduce their strategies to achieve the same goals**, initiates for the 1-year-old the process of being socialized as a member of a particular cultural group..." (p. 148). They note that even 2½ -year-olds can take the perspective of another person, such as recognizing that the other person may have different tastes or preferences. This ability is seen as the foundation for a theory of mind, which develops later in the preschool years. Once again they note that there is little research focusing on individual differences and the reasons for them before children enter school.

IV. Problem Solving – is the child’s use of observational skills and previous experiences to find solutions in challenging situations. They will demonstrate flexibility, creativity, and persistence to solve new problems.

http://www.zerotothree.org/ztt_professionals.html

“School Readiness: To become eager learners, children need to develop skills in four key areas [one listed here]:

Thinking Skills

Children are born with a need to understand how the world works. They start by making basic associations such as, “I call out, dad comes.” As they grow, they develop more and more complex ways of figuring things out. In their everyday experiences, children use and develop an understanding of math concepts, such as counting and sorting and **problem-solving skills** that they will need for school.” (No references cited linking early problem solving skills to success in school, but they probably exist and can be located.)

Arend, Gove, and Sroufe (1979) found that two year olds who demonstrated greater “effective autonomous functioning” in a **problem-solving** situation at age 2 demonstrated greater ego-control and ego-resiliency at age 4-5 years.

At 10-12 months, babies are capable of **applying a strategy** learned to solve one problem to another similar problem (Chen, Sanchez, and Campbell, 1997). (Cited in Berk, 2005, p. 215). This is relevant not only to the level at which this ability is assigned (probably early toddler), but also to the developmental significance of **problem-solving** for further development. In other words, problem-solving itself contributes to future problem-solving ability.

From Trawick-Smith (2006): In Vygotsky’s theory, the concept of the Zone of Proximal Development suggests the importance of **moderately challenging tasks**, and the development of children’s willingness to approach them. It is in the context of these tasks, which require assistance from a more expert adult or peer, that Vygotsky felt the most learning occurred. (pp. 53-54). “Much research supports his perspective.” (Rogoff, 1997) (p. 55 in T-S.)

IQ tests at age 3 do begin to predict future performance (e.g. Hart & Risley, 1995). These include conceptual, language, and **problem-solving** tasks. Thus, one can argue that developmental accomplishments in these areas during the first three years of life are significant for future development.

“Some early words are linked to specific cognitive achievements. For example, about the time toddlers master advanced object permanence problems, they use disappearance words, such as ‘all gone.’ And success and failure expressions, such as ‘There!’ and ‘Uh-oh!’, appear when **toddlers can solve problems suddenly** rather than through trial and error. According to one pair of researchers, ‘Children seem to be motivated to acquire words that are relevant to the particular cognitive problems they are working on at the moment’ (Gopnik & Meltzoff, 1986, p. 1057).” (Quote from Berk, 2005, p. 240).

Berk (2005, pp. 335-336) discusses “overlapping-waves” theory, which holds that children **try out many strategies** for solving problems, and that this process is essential for developing more effective problem-solving skills. This process has been observed in children as young as two (Chen & Siegler, 2000).

Berk (2005, p. 337-338) cites a variety of cognitive and social skills and approaches to learning included in our standards as foundational to preschoolers’ theory of mind. These include “the ability to inhibit inappropriate responses, **think flexibly, and plan**... (Carlson & Moses, 2001; Hughes, 1998).”

Shonkoff & Phillips (2000): Discussion of executive function begins on p. 116. Precursors are believed to be present in infancy. The child must be able to orient to relevant stimuli, anticipate events, and engage in **mental representation**. Infants as young as 6 weeks are able to anticipate events. **Means-end behavior** emerges between 8 and 12 months. Language emerges at about the same time and allows the child to link the present with past experience and future goals. Measures of executive function identify three underlying factors: fluid and speeded response, **hypothesis testing** and impulse control, and **planning**. At the time of publication, not much was known about the factors affecting individual differences in executive function, although research with persons who have disabilities suggests that relevant skills can be taught. “The importance of understanding how children learn to **plan and organize** new actions, **remember past experiences and bring them to bear on new experiences**, and maintain attention to tasks is underscored by the consistent relation of deficits in any one of these processes to problems in school (Lyon, 1996)” (p. 119). Such skills are important for social problem-solving as well as academic success. Individual differences are evident when children enter kindergarten.

Shonkoff & Phillips (2000): Discussion of thinking and learning begins on p. 146. Multiple studies are cited showing infants’ ability to recognize the **causal connection** between their actions and events, and their preference for situations where they have some control over events. “...[I]nfants’ **need to be active** in their own learning becomes abundantly evident when you take away their control over a situation” (p. 148). They also emphasize research showing that toddlers’ understanding of, and imitation of, others’ intentions is a big factor in the development of cultural knowledge. “The capacity to learn from others, by perceiving their goals and **attempting to reproduce their strategies to achieve the same goals**, initiates for the 1-year-old the process of being socialized as a member of a particular cultural group...” (p. 148). They note that even 2½ -year-olds can take the perspective of another person, such as recognizing that the other person may have different tastes or preferences. This ability is seen as the foundation for a theory of mind, which develops later in the preschool years. Once again they note that there is little research focusing on individual differences and the reasons for them before children enter school. They do note that preschool differences in **ability to categorize** depend on exposure to and knowledge about the items to be categorized, pointing to the importance of **active exploration** of a wide variety of things.

V. Creative Expression

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Review and Validation of North Carolina's Early Learning Standards for Preschoolers

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North Carolina Early Learning Standards Review and Validation Project

History and Background

Every state has developed early learning standards to define what they want preschool-age children to know and be able to do. By design, early learning standards are intended to be the foundation upon which many other elements of early education are built—assessment, curricula, teacher professional development, etc. They define expectations for what students learn and how they develop. Given the important role standards can play in education, it is critical that the standards are appropriate in terms of content and in the level of challenge they present.

To develop early learning standards, most states establish a committee of persons who are knowledgeable of early childhood development and early childhood programs. The committee draws upon their own expertise and uses various sources of information to guide them as they write the early learning standards. This process typically includes a process to gather feedback on draft early learning standards from stakeholders (e.g., educators, family members, community representatives) and a review from various experts and other colleagues in the field.

While the stakeholder engagement process used in most states to write early learning standards is appropriate and important, it often does not include a systematic review of the extent to which the early learning standards reflect findings from current research. Most early learning standards have not undergone a formal content validation process to determine if their content is age appropriate and developmentally significant.

To develop its current set of early learning standards, the North Carolina Department of Public Instruction assembled a committee of early childhood educators and parents from across the state. This committee drew upon the knowledge and expertise of the members, as well as research and theory the members were familiar with. To ensure consistency and alignment, the committee examined the North Carolina Kindergarten Standard Course of Study and various curricula that are widely used in North Carolina. The draft early learning standards were also reviewed by a large group of well-known national- and state-level experts. The development process, like that of most states, did not however include a formal analysis to determine the extent to which the standards reflect current research findings. Therefore, North Carolina has realized a need for more in-depth analyses and for refinement in the content of their standards.

Purpose of the Project

The primary purpose of the research validation process is to examine the extent to which the current standards are consistent with research that describes children's learning and development in the preschool-age period and, to the extent possible, with research that indicates specific skills and knowledge that are associated with later success in school. A secondary purpose is to make note of other issues the Department might choose to address in future revisions of the standards. Ultimately, North Carolina hopes to use this information as the basis for refining and improving the standards when they are revised.

North Carolina's Early Learning Standards

North Carolina's early learning standards—titled *Foundations: Early Learning Standards for North Carolina Preschoolers and Strategies for Guiding their Success*—define what the state would like preschool-age children to know and be able to do. Within the document, the standards are called “Widely Held Expectations” (WHEs). The WHEs are the standards for children's learning and development used in Office of School Readiness/Office of Early Learning programs serving three, four, and five-year old children not yet age-eligible to enter kindergarten. The document focuses on children's learning in five developmental domains: Approaches to Learning, Health and Physical Development, Emotional and Social Development, Language Development and Communication, and Cognitive Development. Each of the broader domains is further divided into sub-domains intended to capture more distinct areas of development. For example, Approaches To Learning is further divided into six sub-domains: 1) Pondering, Processing, and Applying Experiences, 2) Curiosity, Information-Seeking, and Eagerness, 3) Risk-Taking, Problem-Solving, and Flexibility, 4) Persistence, Attentiveness, and Responsibility, 5) Imagination, Creativity, and Invention, and 6) Aesthetic Sensibility.

The Research Team for this Project

Catherine Scott-Little is an Associate Professor in the Department of Human Development and Family Studies at the University of North Carolina at Greensboro. She has conducted several national studies on the content of early learning standards and is intimately familiar with North Carolina's *Foundations* document because she played a key leadership role during the development of the document. She was joined by two colleagues from SERVE—Glyn Brown and Lucy Wynn—with extensive knowledge of early childhood research. The project was completed as part of SERVE's Task 1 work which is intended to provide technical assistance to states within its region.

SERVE is a research and development center housed at the University of North Carolina at Greensboro. SERVE operates the Regional Educational Laboratory funded by the U.S. Department of Education, Institute of Educational Sciences, to support the improvement of learning opportunities and educational agencies. Dr. Scott-Little and SERVE have published a variety of publications related to early learning standards and have provided technical assistance to numerous states in the areas of early childhood standards, assessments, and educational programming for young children.

Methodology

Search Process. The team began by reviewing the content of the *Foundations* document. Once the team was familiar with the elements of the *Foundations* document, they then began to identify and collect various documents and reports which summarize research on child development. Initially, the team focused on identifying significant and important works pertaining to children's development and early education. This collection included books such as *Eager to Learn: Educating Our Nation's Preschoolers*, *From Neurons to Neighborhoods*, and *Preventing Reading Difficulties*. We also collected more recent reports and presentations from task forces that have reviewed research and provided

recommendations on the specific skills and knowledge preschool children need to be successful in school, including the National Early Literacy Panel report and the National Research Council report on early childhood mathematics.

Next we assessed these sources to determine if sufficient information was available or if additional information was needed in particular areas of development and learning addressed in *Foundations*. If the team deemed that there was insufficient information in a particular area, then we searched for original research to make sure that each area was fully addressed. Finally, we consulted with the OSR staff on specific resources and references that might have been used when the original set of standards were created.

Coding and Analysis. Once we reviewed the content of the standards and identified key areas of research, the team developed a process for recording and analyzing research related to the WHEs. We created a series of charts, one for each developmental domain. Each chart was divided into five columns. The first column lists the domain, the second indicates the sub-domain areas, and the third contains the Widely Held Expectations for the particular domain. The next column summarizes research information pertaining to the specific WHEs. The final column includes notes regarding research findings that suggest children may demonstrate the particular skill or characteristic described in the WHE differently depending on their experiences. For instance, some WHEs describe skills/characteristics that may differ across cultures. This column also includes notes regarding inconsistencies or other observations the team made while working on the document. Occasionally, we noted that research exists to suggest that a skill/characteristic that is not included in the WHEs is important for children’s development. In these instances, we have noted a “Possible Addition” and included an additional row with possible language for a new WHE and the research which supports that area.

For three areas—Emotional and Social Development, Language and Communication Development and Mathematics—we have included a sixth column. In the sixth column, we noted the California early learning standard most closely related to the WHE. California has published early learning standards in the areas of Language and Literacy, Mathematics and Social-Emotional Development. During the development process, California completed an extensive review of the research and had their draft standards vetted by many national experts. Therefore, we thought it would be of interest to the Department to see how standards written by California compare to the WHEs. The result is that these three charts each provide a summary of the research or studies reviewed, notes related to WHEs, and the corresponding California standard.

Findings

The attached charts summarize the research support we located for each of the WHEs within each of the five developmental domains addressed in *Foundations*. We noted that there is variation in the amount and type of research support located for the WHEs. Typically, we were able to locate research that suggests whether the WHEs are age appropriate for preschool-age children. This type of research often includes the skills or characteristics addressed in the WHEs within a description of the developmental accomplishments of children this age (i.e., descriptions of what preschool-age children

can typically do or characteristics of preschool-age children). For some WHEs, we were also able to locate research that suggests that the particular skill or characteristic is empirically associated with successful outcomes later in children's lives. Most often this type of predictive validity evidence was available in the Language Development and Communication domain. For instance, children with age-appropriate phonological awareness skills when they are in preschool or kindergarten demonstrate greater success in learning to read. Both types of research evidence are included in the charts.

Careful review of the attached charts reveals that some of the WHEs have substantial support in the research literature, while others are less substantiated. We would like to point out that we did not conduct an exhaustive review of research in each of the areas, a task that would be beyond the scope of this project. Instead, we relied on credible sources that summarize research literature, and searched for specific research studies only when we were unable to locate secondary sources that addressed a particular WHE. Therefore, it is likely that additional research related to the WHEs exists. None-the-less, we feel the summaries provided on the chart sufficiently represent the research literature in the various areas.

While we recognize that the Department will primarily use the attached charts for reviewing the WHEs, we thought it would be helpful for us to summarize some of our observations related to each domain below. These observations are designed to present the "big picture" related to a domain and introduce some thoughts on what direction the Department might take when reviewing and revising the WHEs. Our observations are presented below by domain.

Approaches to Learning: The Approaches to Learning domain includes a number of WHEs that are supported by research. We were, however, unable to locate specific research to support some of the WHEs. In general, there is research to suggest that children's approaches toward learning are important, but this area of development is less well researched than some of the other domains. Therefore, there may not be adequate research studies to support some of the specific skills and characteristics included in the Approaches to Learning WHEs. Marilou Hyson's (2008) book titled *Enthusiastic and Engaged Learners: Approaches to Learning in the Early Childhood Classroom* provides a thorough and user-friendly summary of research in this area. Hyson also advocates a new framework for the constructs included in the Approaches domain. We highly recommend that the Department make use of this book when revising the WHEs in this domain. We have noted two additional skills/characteristics that might be included in the Approaches to Learning domain, and have identified several cognitive processes (see the final paragraph in this findings section) that could be considered for addition to the Approaches to Learning domain.

Emotional and Social Development: This domain is divided into two sub-domains—Developing a Sense of Self and Developing a Sense of Self With Others. We were able to find research related to almost all of the WHEs in both sub-domains. We observed that many of the skills/characteristics described in these WHEs may be highly influenced by factors such as children's temperament, culture, and experiences with adults, a

consideration that is important to keep in mind when writing and implementing the WHEs in this domain. We have also included the California early learning standards for this domain for comparison purposes. While there was some overlap between the North Carolina standards and the California standards, there also were distinct differences between the two sets of standards. For example, the California standards focused an entire set of standards on the developmental changes in children's pretend play, whereas North Carolina standards do not feature play with such specificity. Another area of difference between the two sets of standards has to do with children's relationships with others. North Carolina organizes children's relationships into a single category, "Relationships with Others." In contrast, California has chosen to organize their early learning standards according to the different types of relationships children form, with separate sections for children's relationships with parents, caregivers/ teachers, and peers. California also places significantly more emphasis on children's attachment with their parents and caregivers. In addition to the California standards, the Department might want to look at the most recent version of *Developmentally Appropriate Practices*. The chapter on preschool-age children covers social and emotional development, and uses a somewhat different organizational structure to present constructs related to this domain. It appears that most of the constructs addressed in the *DAP* chapter are also addressed in the WHEs, although they may be called something different or grouped somewhat differently.

We also would suggest that additional consideration be given to self-regulation when the WHEs are revised. Self-regulation is a very important development that includes behavioral regulation, emotional regulation, and some cognitive developments. Currently there are elements of self-regulation included in different domains, and behavior regulation and emotional regulation are treated to some degree as separate developments when, in fact, they are tightly connected. When revising the WHEs, the Department could consider whether there is a better way to communicate the integrated nature of the many components of self-regulation.

Health and Physical Development: The Health and Physical Development domain includes WHEs related to children's health, growth, and motor development. We noted that the WHEs related to children's motor development seem to be consistent with research on children's motor development. There are several WHEs related to children's activities that incorporate the use of specific types of equipment or materials (e.g., tools, outdoor equipment, etc.). These WHEs seemed to relate more to common teaching practices than to skills that children develop over time, and are not always supported by specific research, but seem consistent with promoting children's motor development. We were able to locate research to indicate that self-help skills, good nutrition, and perceptual-motor coordination are important for children this age. There was, however, considerably less research available related to children's hygiene and safety practices. While both of these areas are important early childhood curriculum issues, we found limited research conducted with children in these two areas.

Language Development and Communication: We noted relatively strong research support for each of the sub-areas included in the Language Development and Communication

domain. The research literature in this domain, particularly for early literacy skills, is relatively robust (especially when compared with the research literature related to some of the other domains), and includes studies that link children’s skills and abilities in this area to later school success. There were, however, some WHEs that seemed to have more support in the literature on “best practices” or expectations for how teachers teach than in research on children’s actual development and learning. We also noted that some of the WHEs might be strengthened by including language that describes the skill/ability a bit more specifically so that users would have a clearer sense of what skills are age-appropriate. For example, in the WHEs related to phonological awareness, it might be helpful to indicate the skills teachers should foster (such as sentence or word segmentation) rather than saying that the WHE is for children to enjoy/participate in activities that address the skill (such as clapping rhythmic patterns). It also might be helpful to communicate the typical developmental sequence of skills in this area, reflecting the research that suggests that children first learn to segment words within sentences and then move to understanding progressively smaller “chunks” of sounds within language, culminating with rhyming (often not until kindergarten). We also would recommend that additional consideration be given to cultural and second language learning differences in children’s receptive and expressive language development when revising *Foundations*. Several of the WHEs are highly dependent on children’s experiences and it might be helpful to provide additional information on the expected/typical variations in children’s language development. When comparing North Carolina’s WHEs with California’s early learning standards, we noted that there are a number of WHEs that do not have corresponding California standards, and that California’s standards are written in a somewhat more observable/quantifiable manner. North Carolina’s WHEs seem to emphasize the use of language in play and in other social interactions somewhat more than California’s standards.

Cognitive Development: The Cognitive Development domain is broken down into four sub-domain areas: Mathematical Thinking and Expression, Scientific Thinking and Invention, Social Connections, and Creative Expression. We summarize our observations for each of these four areas below, and provide observations related to a new area that the Department could consider adding to *Foundations*.

- *Mathematical Thinking and Expression*: The mathematics WHEs address several important mathematical concepts. We noted that in a couple of cases (use of numbers and knowledge of shapes in particular) a WHE addresses a broad area of mathematical knowledge without specifying the particular skills or components of the area that are important. We wondered if the users of the document might benefit from a bit more specificity in the language of the WHE to help them know the skills and abilities that are appropriate for four-year-olds. We also noted that some of the WHEs may be written at a level slightly below what is generally expected of four-year-old children (such as recognize and describe common shapes, which might also address children’s abilities to recognize shapes in both 2- and 3-dimensional formats, etc.). Finally, we questioned the clarity of one WHE. The final WHE in this area (“make and check predictions”) seems to be referring to children’s ability to

estimate but is worded in a way that does not clearly relate to mathematics. There is a research literature that suggests that estimation is an important mathematical skill and is applicable to a number of mathematical concepts (number, quantity, etc.). We would recommend that the wording for this WHE be revised to more clearly relate to mathematical estimation. We also would like to point out that operations has not been addressed in the WHE, so we have suggested two additional WHEs that would address operations.

When we compared the North Carolina WHEs to the California mathematics early learning standards, we noted that California has provided more specificity in the mathematical skills described in their standards and often has included standards that are somewhat “above” the general age/developmental level of the WHEs. Finally, we would recommend a careful review of the degree to which different mathematical concepts are emphasized within the WHEs. The recent publication on mathematics from the National Research Council (*Mathematics Learning in Early Childhood: Paths Toward Excellence and Equity*) provides very specific information on how mathematical competencies progress over the early childhood years, recommendations for which areas should receive the most attention during early childhood, and recommendations for instructional practices/experiences that support children’s mathematical development. In addition, the committee may find it helpful to review the National Council for Teachers of Mathematics’ *Curriculum Focal Points for Pre-kindergarten*. Both the NRC report and the NCTM *Curriculum Focal Points* suggest that the most important mathematical competencies for preschool children are in the areas of number and operations, geometry and spatial sense, measurement, and processes such as connections. The distribution of the WHEs may not be consistent with the areas that experts have recommended as the most fundamental concepts for the preschool years.

- *Scientific Thinking and Invention:* We found support for most of the WHEs within the Science sub-domain, although much of the research support seems to be general support rather than specific support for particular WHEs. We had difficulty finding research to support some WHEs that address experiences traditionally included in early childhood curricula (such as caring for living things). Some of these WHEs address children’s skills that had limited support from specific research studies. It might be helpful to look at recommendations from professional associations when thinking about how to conceptualize the science area. Science standards are often organized according to what children need to learn related to the scientific process, and what they should know related to scientific content areas (i.e., life science, physical science, and earth and space science).
- *Social Connections:* Research suggests that the areas addressed in social connections (children’s awareness of and knowledge of groups of people and how they interact) are appropriate for preschool-age children. We have noted that in several instances children’s culture and experiences may have a great impact on how they express their knowledge and views related to the WHEs

in this area. We also noted that there is a research literature on children's moral development, an area of development that seems to be related to this sub-domain but has not been addressed in WHEs. One issue to consider is the overlap between some constructs that are addressed in Social Connections with constructs that could also be considered as part of children's social and emotional development. For instance, several of the California standards that seem to relate to Social Connections WHEs are from the social domain in California's standards.

- *Creative Expression*: Creativity is considered the ability to produce work that is original—something that others have not yet thought of. Many theorists believe that creativity depends on a number of factors, including personality, motivation, and environmental resources. In addition, creativity also seems to be strongly influenced by the cultural context surrounding children—family, school, community, and media. The WHEs include standards related to creativity, and also address the areas of music, movement, and art. In general, there was good support for the WHEs in this area, although we noted that several of the references located are a bit dated. We also noted that the WHE expectations often appear to combine several elements of creative expression (i.e., different types of arts) and provide limited information regarding the stages of artistic development. It might be helpful in the WHEs to break out the different types of art and/or think about how the stages of development in each of the art areas could be communicated to readers. One aspect of music creativity that has been documented in the literature but not addressed in the WHEs is related to children's abilities to perform music. While the WHEs address participation in music, there is some research that identifies specific musical skills children this age are able to master. The Department could consider the possibility of adding a WHE to define specific skills related to children's abilities to make or perform music. We also noted that there is research and theory to suggest that creative expression plays a role in/is associated with advances in children's cognitive development. This might be a concept the committee would like to highlight.

We recommend that the Department give consideration to how to incorporate WHEs related to children's cognitive processes when the *Foundations* document is revised. There is an emerging body of research that suggests that children's cognitive processes (such as executive functioning, meta-cognitive skills, etc.) are an important area of children's development. In some cases, related constructs were addressed in the Approaches toward Learning domain and some were found in Science, but in other cases there were no WHEs to address specific areas of children's thought processes. We recommend that the Department consider whether/how to address children's cognitive processes within the *Foundations* and have provided some sample WHEs for this area. Conceptually, we view these skills as part of the cognitive development domain, but recognize that there is a great deal of overlap with the Approaches to Learning domain. The constructs could be integrated into various domains and sub-domains where children use various cognitive processes such as reasoning (Approaches toward Learning, Science and Mathematics for example), or could be included in a separate sub-domain focused on

Cognitive Processes. A committee revising the WHEs could consider adding WHEs related to cognitive processes to either the Cognitive Development domain (within existing sub-domains or in a new sub-domain) and/or the Approaches to Learning domain.

Overarching Issues

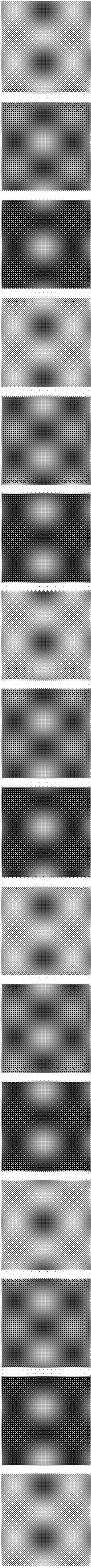
Two over-arching issues warrant some consideration across the various domains. First is the incorporation of play. We would recommend that as part of the revision process, the committee study the full document, looking specifically at how play is addressed in each domain. The goal of this review process would be to ensure that the importance of play is communicated across the domains and that the various elements or types of play are fully addressed, and are addressed in a cohesive fashion that leaves the person using the document with an understanding of the types of play and how each type of play supports the various areas of development and learning.

Second, we would recommend that the revision process pay special attention to how cultural differences are reflected within the document. We have provided at least one reference to research related to cultural differences in each domain. It seems that it would be helpful for a committee working on revisions to have some discussion of the various areas where cultural differences have implications for how children exhibit the skills/knowledge/characteristics described in the WHE, and make decisions for how the document will address these differences. It might be helpful to look at this issue “up front” so that subsequent revisions across the different domains can approach the issue of cultural differences consistently.

Summary and Conclusions

Overall, we found research to support the WHEs in *Foundations*. The document includes WHEs related to important areas of children’s development and learning and the WHEs are, for the most part, written at a level that is appropriate for four-year-old children. We recommend that the Department carefully review the attached charts and use them as one source of information for making decisions about revisions in the content and format of the WHEs.

| FOUNDATIONS EARLY LEARNING STANDARDS | COMMON CORE STANDARDS FOR ENGLISH LANGUAGE ARTS |
|---|--|
| <p>Language Development & Communication for Preschoolers</p> <p>Motivation for Reading</p> <ol style="list-style-type: none"> 1. Enjoy listening to and discussing storybooks, simple information books, and poetry read aloud. 1. Use books that communicate information to learn about the world by looking at pictures, asking questions, and talking about the information. <p>Vocabulary & Comprehension</p> <ol style="list-style-type: none"> 1. Discuss books by responding to questions about what is happening in stories and predicting what will happen next. 1. Ask questions about a story or information in a book. <p>Expressive Language</p> <ol style="list-style-type: none"> 2. Describe experiences and create and/or retell simple stories. <p>Vocabulary & Comprehension</p> <ol style="list-style-type: none"> 2. Imitate the special language in storybooks and story dialogue (repetitive language patterns, sound effects, and words from familiar stories) and use it in retellings and dramatic play. <p>Vocabulary & Comprehension</p> <ol style="list-style-type: none"> 3. Discuss books by responding to questions about what is happening in stories and predicting what will happen next. 3. Imitate the special language in storybooks and story dialogue (repetitive language patterns, sound effects, and words from familiar stories) and use it in retellings and dramatic play. <p>Expressive Language</p> <ol style="list-style-type: none"> 3. Describe experiences and create and/or retell simple stories. | <p>Reading Standards for Literature for Kindergartners</p> <p>Key Ideas and Details</p> <ol style="list-style-type: none"> 1. With prompting and support, ask and answer questions about key details in a text. 2. With prompting and support, retell familiar stories, including key details. 3. With prompting and support, identify characters, settings, and major events in a story. |
| <p>Receptive Language</p> <ol style="list-style-type: none"> 4. Understand and use a growing vocabulary <p>Motivation to Reading</p> <ol style="list-style-type: none"> 5. Enjoys listening to and discussing story books, simple information books and poetry read aloud. 6. NA | <p>Craft and Structure</p> <ol style="list-style-type: none"> 4. Ask and answer questions about unknown words in a text. 5. Recognize common types of texts (e.g., storybooks, poems). 6. With prompting and support, name the author and illustrator of a story and define the role of each in telling the story. |

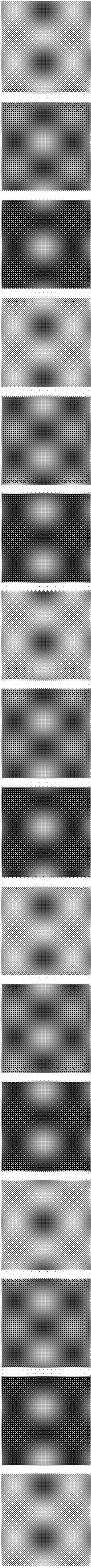


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|---|---|
| <p>Book and Print Awareness</p> <p>7. Be aware of print and understand that it carries a message by recognizing and creating it in different forms and for a variety of functions.</p> <p>Motivation for Reading</p> <p>7. Use books that communicate information to learn about the world by looking at pictures, asking questions, and talking about the information.</p> <p>Vocabulary & Comprehension</p> <p>9. Relate personal experiences to events described in familiar books.</p> <p>Expressive Language</p> <p>9. Describe experiences and create and/or retell simple stories.</p> | <p>Integration of Knowledge and Ideas</p> <p>7. With prompting and support, describe the relationship between illustrations and the story in which they appear (e.g., what moment in a story an illustration depicts).</p> <p>8. (Not applicable to literature)</p> <p>9. With prompting and support, compare and contrast the adventures and experiences of characters in a familiar story.</p> |
| <p>Motivation to Reading</p> <p>10. Enjoy listening to and discussing storybooks, simple information books, and poetry read aloud.</p> <p>10. Show an interest in books, other print, and reading-related activities, including using and sharing books and print in their play.</p> <p>Receptive Language</p> <p>10. Attend to language for longer periods of time, such as when books are read, people are telling stories, and during conversations.</p> | <p>Range of Reading and Level of Text Complexity</p> <p>10. Actively engage in group reading activities with purpose and understanding.</p> |



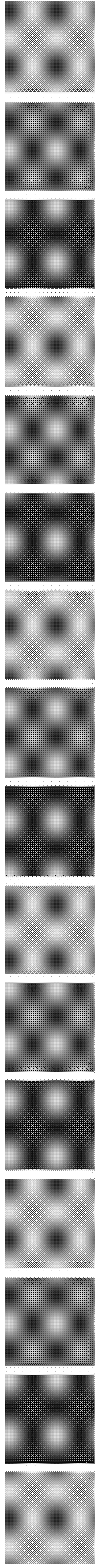
| FOUNDATIONS EARLY LEARNING STANDARDS | COMMON CORE STANDARDS FOR ENGLISH LANGUAGE ARTS |
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| <p>Language Development & Communication for Preschoolers</p> <p>Vocabulary and Comprehension</p> <ol style="list-style-type: none"> Develop knowledge about their world (what things are and how they work) and use this knowledge to make sense of stories and information books. Ask questions about a story or information in a book. <p>Expressive Language</p> <ol style="list-style-type: none"> Ask questions and make comments related to a topic of discussion. Describe experiences and create and/or retell simple stories. Describe experiences and create and/or retell simple stories. | <p>Reading Standards for Informational Text for Kindergartners</p> <p>Key Ideas and Details</p> <ol style="list-style-type: none"> With prompting and support, ask and answer questions about key details in a text. With prompting and support, identify the main topic and retell key details of a text. With prompting and support, describe this connection between two individuals, events, ideas, or pieces of information in a text. <p>Craft and Structure</p> <ol style="list-style-type: none"> With prompting and support, ask and answer questions about unknown words in a text. Identify the front cover, back cover, and title page of a book. Name the author and illustrator of a text and define the role of each in presenting the ideas of information in a text. |
| <p>Receptive Language</p> <ol style="list-style-type: none"> Understand and use a growing vocabulary. <p>Book & Print Awareness</p> <ol style="list-style-type: none"> Hold a book upright while turning pages one by one from front to back. Pretend to read familiar books in ways that mimic adult reading. NA | |
| <p>Motivation for Reading</p> <ol style="list-style-type: none"> Use books that communicate information to learn about the world by looking at pictures, asking questions, and talking about the information. NA NA | <p>Integration of Knowledge and Ideas</p> <ol style="list-style-type: none"> With prompting and support, describe the relationship between illustrations and the text in which they appear (e.g., what person, place, thing, or idea in the text an illustration depicts). With prompting and support, identify the reasons an author gives to support points in a text. With prompting and support, identify basic similarities in and differences between two texts on the same topic (e.g., in illustrations, descriptions, or procedures). |
| <p>Motivation for Reading</p> <ol style="list-style-type: none"> Enjoy listening to and discussing storybooks, simple information books, and poetry read aloud. Show an interest in books, other print, and reading-related activities, including using and sharing books and print in their play. <p>Receptive Language</p> <ol style="list-style-type: none"> Attend to language for longer periods of time, such as when books are read, people are telling stories, and during conversations. | <p>Range of Reading and Level of Text Complexity</p> <ol style="list-style-type: none"> Actively engage in group reading activities with purpose and understanding. |

| FOUNDATIONS EARLY LEARNING STANDARDS | COMMON CORE STANDARDS FOR ENGLISH LANGUAGE ARTS |
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| <p>Language Development & Communication for Preschoolers</p> <p>Book & Print Awareness</p> <ol style="list-style-type: none"> 1. Understand some basic print conventions (e.g., concept of letter, concept of word). <ol style="list-style-type: none"> a. Occasionally run their finger under or over print as they pretend to read a familiar book. a. Pretend to read familiar books in ways that mimic adult reading. Alphabet Knowledge <ol style="list-style-type: none"> b. Know that letters of the alphabet are a special category and are different from pictures and shapes. Book & Print Awareness <ol style="list-style-type: none"> b. Be aware of print and understand that it carries a message by recognizing and creating it in different forms and for a variety of functions (e.g., labels and signs). b. Recognize that print can tell people what to do, and understand that print and simple symbols are used to organize classroom activities (e.g., where to store things, when they will have a turn). b. Learn to identify their name and the names of friends. c. Understand some basic print conventions (e.g., concept of letter, concept of word). Alphabet Knowledge <ol style="list-style-type: none"> d. Recognize and name some letters of the alphabet, especially those in their own name or in the names of others who are important to them. | <p>Reading Standards: Foundations Skills for Kindergartners</p> <p>Print Concepts</p> <ol style="list-style-type: none"> 1. Demonstrate understanding of the organization and basic features of print. <ol style="list-style-type: none"> a. Follow words from left to right, top to bottom, and page by page. b. Recognize that spoken words are represented in written language by specific sequences of letters. c. Understand that words are separated by spaces in print. d. Recognize and name all upper- and lowercase letters of the alphabet. |
| <p>Phonological Awareness</p> <ol style="list-style-type: none"> a. Enjoy listening to songs, poems, and books that have rhyme and word play and learn the words well enough to complete familiar refrains and fill in missing words. a. Play with the sounds of language, learning to identify and then create rhymes, attending to the first sounds in words. b. Enjoy and repeat rhythmic patterns in poems and songs through clapping, marching, or using instruments to beat syllables. c. Play with the sounds of language, learning to identify and then create rhymes, attending to the first sounds in words. d. Associate sounds with written words, such as awareness that different words begin with the same sound (e.g., Keshia and Katie begin with the same sound). e. Associate sounds with written words, such as awareness that different words begin with the same sound (e.g., Keshia and Katie begin with the same sound). | <p>Phonological Awareness</p> <ol style="list-style-type: none"> 2. Demonstrate understanding of spoken words, syllables, and sounds (phonemes). <ol style="list-style-type: none"> a. Recognize and produce rhyming words. b. Count, pronounce, blend, and segment syllables in spoken words. c. Blend and segment onsets and rimes of single-syllable spoken words. d. Isolate and pronounce the initial, medial vowel, and final sounds (phonemes) in three-phoneme (consonant-vowel-consonant, or CVC) words. e. Add or substitute individual sounds (phonemes) in simple, one-syllable words to make new words. |



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| <p>Alphabetic Principle</p> <ul style="list-style-type: none">a. Understand that letters function to represent sounds in spoken words.a. Make some sound-to-letter matches, using letter name knowledge (e.g., writes “M” and says “This is Mommy”).b. NAc. NAd. NA | <p>Phonics and Word Recognition</p> <ul style="list-style-type: none">3. Know and apply grade-level phonics and word analysis skills in decoding words.<ul style="list-style-type: none">a. Demonstrate basic knowledge of one-to-one letter-sound correspondences by producing the primary or many of the most frequent sounds for each consonant.b. Associate the long and short sounds with common spellings (graphemes) for the five major vowels.c. Read common high-frequency words by sight (e.g., <i>the, of, to, you, she, my, is, are, do, does</i>).d. Distinguish between similarly spelled words by identifying the sounds of the letter that differ. |
| <p>Motivation for Reading</p> <ul style="list-style-type: none">4. Enjoy listening to and discussing storybooks, simple information books, and poetry read aloud.4. Independently engage in reading behaviors (e.g., turning pages, imitating adults by pointing to words, telling the story). | <p>Fluency</p> <ul style="list-style-type: none">4. Read emergent-reader texts with purpose and understanding. |

| Foundations Early Learning Standards | Common Core Standards for English Language Arts |
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| <p>Language Development & Communication, Cognitive Development, and Emotional & Social Development for Preschoolers</p> <p>Foundations for Writing</p> <ol style="list-style-type: none"> 1. Represent thoughts and ideas through drawings, marks, scribbles, and letter-like forms. 1. Attempt to connect the sounds in a word with its letterforms. 1. Learn how to tell their thoughts for an adult to write. 1. Use known letters and approximations of letters to write their own name. <p>Expressive Language</p> <ol style="list-style-type: none"> 1. Use verbal and non-verbal language (gestures, devices, signs, and picture symbols) to communicate for multiple purposes (e.g., to express wants, needs, ideas, feelings, and relate personal information and experiences). <p>Foundations for Writing</p> <ol style="list-style-type: none"> 2. Use known letters and approximations of letters to write their own name. 2. Learn how to tell their thoughts for an adult to write. <p>Expressive Language</p> <ol style="list-style-type: none"> 2. Describe experiences and create and/or retell simple stories. 2. Use verbal and non-verbal language (gestures, devices, signs, and picture symbols) to communicate for multiple purposes (e.g., to express wants, needs, ideas, feelings, and relate personal information and experiences). <p>Foundations for Writing</p> <ol style="list-style-type: none"> 3. Learn how to tell their thoughts for an adult to write. <p>Expressive Language</p> <ol style="list-style-type: none"> 3. Use verbal and non-verbal language (gestures, devices, signs, and picture symbols) to communicate for multiple purposes (e.g., to express wants, needs, ideas, feelings, and relate personal information and experiences). | <p>Writing Standards for Kindergartners</p> <p>Text Types and Purposes</p> <ol style="list-style-type: none"> 1. Use a combination of drawing, dictating, and writing to compose opinion pieces in which they tell a reader the topic or the name of the book they are writing about and state an opinion or preference about the topic or book (e.g., <i>My favorite book is...</i>). 2. Use a combination of drawing, dictating, and writing to compose informative/explanatory texts in which they name what they are writing about and supply some information about the topic. 3. Use a combination of drawing, dictating, and writing to narrate a single event or several loosely linked events, tell about the events in the order in which they occurred, and provide a reaction to what happened. |

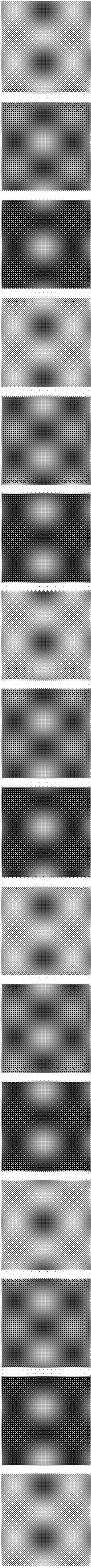


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| <p>Creative Expression</p> <ul style="list-style-type: none">5. Share experiences, ideas, and thoughts about artistic creations.5. Express interest in and show respect for the creative works of others. <p>Developing Sense of Self with Others</p> <ul style="list-style-type: none">5. Show interest in and respond to other points of view. <p>Foundations for Writing</p> <ul style="list-style-type: none">6. Use a variety of writing tools and materials (e.g., pencils, chalk, markers, crayons, finger paint, clay, computers). <p>Scientific Thinking and Invention</p> <ul style="list-style-type: none">6. Understand the uses and roles of various forms of technology. | <p>Production and Distribution of Writing</p> <ul style="list-style-type: none">4. (Begins in grade 3)5. With guidance and support from adults, respond to questions and suggestions from peers and add details to strengthen writing as needed.6. With guidance and support from adults, explore a variety of digital tools to produce and publish writing, including in collaboration with peers. |
| <p>Motivation for Reading</p> <ul style="list-style-type: none">7. Use books that communicate information to learn about the world by looking at pictures, asking questions, and talking about the information. <p>Expressive Language</p> <ul style="list-style-type: none">8. Describe experiences and create and/or retell simple stories. | <p>Research to Build and Present Knowledge</p> <ul style="list-style-type: none">7. Participate in shared research and writing projects (e.g., explore a number of books by a favorite author and express opinions about them).8. With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question. |

| FOUNDATIONS EARLY LEARNING STANDARDS | COMMON CORE STANDARDS FOR ENGLISH LANGUAGE ARTS |
|---|---|
| <p>Language Development & Communication, Cognitive Development, and Emotional & Social Development for Preschoolers</p> <p>Expressive Language</p> <ol style="list-style-type: none"> 1. Use language as a part of pretend play to create and enact roles. 1. Use language to establish and maintain relationships. <ol style="list-style-type: none"> a. Initiate and engage in conversations. <p>Sense of Self</p> <ol style="list-style-type: none"> a. Follow rules, transitions, and routines that have been explained to them. <p>Social Connections</p> <ol style="list-style-type: none"> a. Participate as a member of the group in a democratic classroom community. b. Initiate and engage in conversations. <p>Receptive Language</p> <ol style="list-style-type: none"> 2. Attend to language for longer periods of time, such as when books are read, people are telling stories, and during conversations. <p>Expressive Language</p> <ol style="list-style-type: none"> 3. Ask questions and make comments related to the topic of discussion. | <p>Speaking and Listening Standards for Kindergartners</p> <p>Comprehension and Collaboration</p> <ol style="list-style-type: none"> 1. Participate in collaborative conversations with diverse partners about <i>kindergarten topics and texts</i> with peers and adults in small and larger groups. <ol style="list-style-type: none"> a. Follow agreed-upon rules for discussions (e.g., listening to others and taking turns speaking about the topics and texts under discussion). b. Continue a conversation through multiple exchanges. 2. Confirm understanding of a text read aloud or information presented orally or through other media by asking and answering questions about key details and requesting clarification if something is not understood. 3. Ask and answer questions in order to seek help, get information, or clarify something that is not understood. |
| <p>Expressive Language</p> <ol style="list-style-type: none"> 4. Describe experiences and create and/or retell simple stories. <p>Creative Expression</p> <ol style="list-style-type: none"> 5. Share experiences, ideas, and thoughts about artistic creations. <p>Scientific Thinking and Invention</p> <ol style="list-style-type: none"> 5. Represent and demonstrate and understanding of discoveries (drawing, graphing, communicating, etc.). <p>Expressive Language</p> <ol style="list-style-type: none"> 6. Communicate messages with expression, tone, and inflection appropriate to the situation 6. Use verbal and non-verbal language (gestures, devices, signs, and picture symbols) to communicate for multiple purposes (e.g., to express wants, needs, ideas, feelings, and to relate personal information and experiences) | <p>Presentation of Knowledge and Ideas</p> <ol style="list-style-type: none"> 4. Describe familiar people, places, things, and events and, with prompting and support, provide additional detail. 5. Add drawings or other visual displays to descriptions as desired to provide additional detail. 6. Speak audibly and express thoughts, feelings, and ideas clearly. |

| FOUNDATIONS EARLY LEARNING STANDARDS | COMMON CORE STANDARDS FOR ENGLISH LANGUAGE ARTS |
|---|--|
| <p>Language Development and Communication for Preschoolers</p> <p>Vocabulary and Comprehension</p> <p>1. Imitate the special language in story books and story dialogue (repetitive language patterns, sound effects, and words from familiar stories) and use it in retellings and dramatic play.</p> <p>Foundations for Writing</p> <p>1. Represent thoughts and ideas through drawings, marks, scribbles, and letter-like forms.</p> <p>a. Play with writing letters and mastering conventional letterforms, beginning with the first letter of their name.</p> <p>b. NA</p> <p>c. NA</p> <p>d. NA</p> <p>e. NA</p> <p>Receptive Language</p> <p>f. Understanding increasingly complex sentences, including past, present, and future tenses.</p> <p>f. Understand and use a growing vocabulary.</p> <p>Expressive Language</p> <p>f. Use increasingly complex and varied language structures, sentences, and vocabulary.</p> <p>Motivation for Reading</p> <p>2. Independently engage in writing behaviors (e.g. write symbols or letters for names, use materials at the writing center, write lists with symbols/letters in pretend play, write messages that include letters or symbols).</p> <p>Receptive Language</p> <p>c. Develop familiarity with sounds in words (e.g., listening to, identifying, recognizing, and discriminating).</p> <p>Phonological Awareness</p> <p>c. Associate sounds with written words, such as awareness that different words begin with the same sound (e.g. Keshia and Katie begin with the same sound).</p> <p>c. Play with the sounds of language, learning to identify and then create rhymes, attending to the first sounds in words.</p> | <p>Language Standards for Kindergartners</p> <p>Conventions of Standard English</p> <p>1. Demonstrate command of the conventions of standard English grammar and usage when writing and speaking.</p> <p>a. Print many upper- and lowercase letters.</p> <p>b. Use frequently occurring nouns and verbs.</p> <p>c. Form regular plural nouns orally by adding /s/ or /es/ (e.g., <i>dog, dogs; wish, wishes</i>).</p> <p>d. Understand and use question words (interrogatives) (e.g., <i>who, what, where, when, why, how</i>).</p> <p>e. Use the most frequently occurring prepositions (e.g., <i>to, from, in, out, on, off, for, of, by, with</i>).</p> <p>f. Produce and expand complete sentences in shared language activities.</p> <p>2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.</p> <p>a. Capitalize the first word in a sentence and the pronoun <i>I</i>.</p> <p>b. Recognize and name end punctuation.</p> <p>c. Write a letter or letters for most consonant and short-vowel sounds (phonemes).</p> |

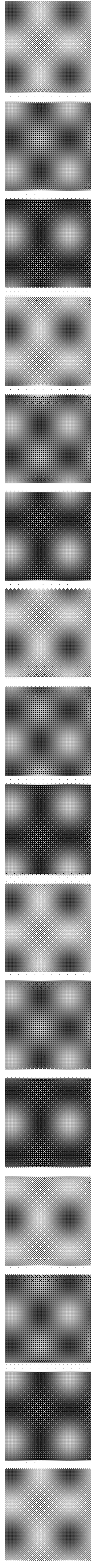
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|---|--|
| <p>Alphabetic Principle</p> <p>d. Understand that letters function to represent sounds in spoken words.</p> <p>d. Make some sound-to-letter matches, using letter name knowledge (e.g., writes “M” and says “This is Mommy”).</p> <p>Foundations for Writing</p> <p>d. Attempts to connect the sounds in a word with its letterforms.</p> | <p>d. Spell simple words phonetically, drawing on knowledge of sound-letter relationships.</p> |
| <p>Receptive Language</p> <p>4. Understand and use a growing vocabulary</p> <p>4. Understand increasingly complex sentences, including past, present, and future tenses.</p> <p>Expressive Language</p> <p>4. Use increasingly complex and varied language structures, sentences, and vocabulary.</p> <p>Scientific Thinking and Invention</p> <p>5.</p> <p>a. Identify, discriminate, and make comparisons among objects by observing physical characteristics.</p> <p>b. NA</p> <p>c. NA</p> <p>d. NA</p> <p>Vocabulary and Comprehension</p> <p>6. Imitate the special language in story books and story dialogue (repetitive language patterns, sound effects, and words from familiar stories) and use it in retellings and dramatic play.</p> | <p>Vocabulary Acquisition and Use</p> <p>4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on <i>kindergarten reading and content</i>.</p> <p>a. Identify new meanings for familiar words and apply them accurately (e.g., knowing <i>duck</i> is a bird and learning the verb to <i>duck</i>).</p> <p>b. Use the most frequently occurring inflections and affixed (e.g., <i>-ed</i>, <i>-d</i>, <i>re-</i>, <i>un-</i>, <i>pre-</i>, <i>-ful</i>, <i>-less</i>) as a clue to the meaning of an unknown word.</p> <p>5. With guidance and support from adults, explore word relationships and nuances in word meanings.</p> <p>a. Sort common objects into categories (e.g., shapes, foods) to gain a sense of the concepts the categories represent.</p> <p>b. Demonstrate understanding of frequently occurring verbs and adjectives by relating them to their opposites (antonyms).</p> <p>c. Identify real-life connections between words and their use (e.g., note places at school that are <i>colorful</i>).</p> <p>d. Distinguish shades of meaning among verbs describing the same general actions (e.g., <i>walk</i>, <i>march</i>, <i>strut</i>, <i>prance</i>) by acting out the meanings.</p> <p>6. Use words and phrases acquired through conversations, reading and being read to, and responding to texts.</p> |



| FOUNDATIONS EARLY LEARNING STANDARDS | COMMON CORE STANDARDS FOR ENGLISH LANGUAGE ARTS |
|--|---|
| <p style="text-align: center;">Language Development & Communication</p> <p>Receptive Language</p> <ol style="list-style-type: none"> 1. Consistently respond to requests for information or action (e.g., respond to questions and follow one- and two-step directions). 2. Comprehend and use language for multiple social and cognitive purposes (e.g., understand and talk about feelings, ideas, information, and beliefs). 3. Understand that people communicate in many ways, including through gestures, sign language, facial expressions, and augmentative communication devices. <p>Motivation for Reading</p> <ol style="list-style-type: none"> 1. Show preferences for favorite books. <p>Foundations for Writing</p> <ol style="list-style-type: none"> 1. Use a variety of writing tools and materials (e.g., pencils, chalk, markers, crayons, finger paint, clay, computers). 2. Use a variety of writing in their play and for a variety of purposes (e.g., labels, lists, signs, messages, stories). 3. Play with writing letters and mastering conventional letterforms, beginning with the first letter of their name. | <p>NA</p> <p>NA</p> <p>NA</p> <p>NA</p> <p>NA</p> <p>NA</p> <p>NA</p> |

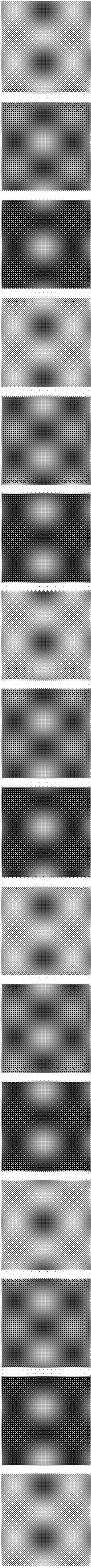
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|--|--|
| <p>Language Development and Communication</p> <p>3. Use verbal and non-verbal language (gestures, devices, signs, and picture symbols) to communicate for multiple purposes (e.g., to express wants, needs, ideas, feelings, and to relate personal information and experiences).</p> <p>Curiosity, Information-Seeking, and Eagerness</p> <p>3. Demonstrate an eagerness and interest in learning through verbal and nonverbal means while playing, listening, questioning, and interacting.</p> <p>Imagination, Creativity, and Invention</p> <p>4. Use or combine materials/strategies in novel ways while exploring and solving problems.</p> <p>Pondering, Processing, and Applying Experiences</p> <p>5. Describe or act out a memory of a situation or action.</p> <p>6. NA</p> <p>7. NA</p> <p>8. NA</p> | <p>3. Construct viable arguments and critique the reasoning of others.</p> |
| <p>4. Model with mathematics.</p> | <p>4. Model with mathematics.</p> |
| <p>5. Use appropriate tools strategically.</p> | <p>5. Use appropriate tools strategically.</p> |
| <p>7. Attend to precision.</p> | <p>7. Attend to precision.</p> |
| <p>8. Look for and make use of structure.</p> | <p>8. Look for and make use of structure.</p> |
| <p>9. Look for and express regularity in repeated reasoning.</p> | <p>9. Look for and express regularity in repeated reasoning.</p> |

| FOUNDATIONS EARLY LEARNING STANDARDS | COMMON CORE STANDARDS FOR MATHEMATICS |
|--|---|
| Cognitive Development for Preschoolers | Counting and Cardinality for Kindergartners |
| <p>Mathematical Thinking & Expression</p> <ol style="list-style-type: none"> 1. Experiment with and use numbers and counting in their play. 2. NA <p>Language Development & Communication</p> <ol style="list-style-type: none"> 3. Use a variety of writing in their play and for a variety of purposes. <p>Mathematical Thinking & Expression</p> <ol style="list-style-type: none"> 3. Experiment with and use numbers and counting in their play. | <p>Know number names and the count sequence.</p> <p>K.CC.1 Count to 100 by ones and tens.</p> <p>K.CC.2 Count forward beginning from a given number within the known sequence (instead of having to begin at 1).</p> <p>K.CC.3 Write numbers from 0-20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).</p> |
| <p>Mathematical Thinking & Expression</p> <ol style="list-style-type: none"> 4. Experiment with and use numbers and counting in their play. 5. Make and check predictions through observations and experimentation. 5. Use a variety of strategies to solve problems. | <p>Count to tell the number of objects.</p> <p>K.CC.4 Understand the relationship between numbers and quantities; connect counting to cardinality.</p> <ol style="list-style-type: none"> a. When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object. b. Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted. c. Understand that each successive number name refers to a quantity that is one larger. <p>K.CC.5 Count to answer “how many?” questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1-20, count out that many objects.</p> |
| <p>Mathematical Thinking & Expression</p> <ol style="list-style-type: none"> 6. Understand size and volume and make comparisons (short/tall, big/small, full/empty, length, weight, height, same, more, less). 7. NA | <p>Compare numbers.</p> <p>K.CC.6 Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies.</p> <p>K.CC.7 Compare two numbers between 1 and 10 presented as written numerals.</p> |

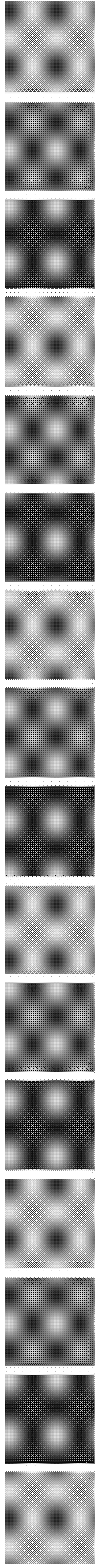


| FOUNDATIONS EARLY LEARNING STANDARDS | COMMON CORE STANDARDS FOR MATHEMATICS |
|--------------------------------------|--|
| NA | <p>Operations and Algebraic Thinking for Kindergartners</p> <p>Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.</p> <p>K.OA.1 Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.</p> <p>K.OA.2 Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.</p> <p>K.OA.3 Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, record each decomposition by a drawing or equation (e.g., $5=2+3$ and $5=4+1$).</p> <p>K.OA.4 For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or equation.</p> <p>K.OA.5 Fluently add and subtract within 5.</p> |

| FOUNDATIONS EARLY LEARNING STANDARDS | COMMON CORE STANDARDS FOR MATHEMATICS |
|--------------------------------------|---|
| NA | <p>Number and Operations in Base Ten for Kindergartners</p> <p>Work with numbers 11-19 to gain foundations for place value.</p> <p>K.NBT.1 Compose and decompose numbers from 11 to 19 into tens and ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (e.g., $18=10+8$); understand that these numbers are composed of ten ones and one, two three, four, five, six, seven, eight, or nine ones.</p> |



| FOUNDATIONS EARLY LEARNING STANDARDS | COMMON CORE STANDARDS FOR MATHEMATICS |
|--|--|
| <p align="center">Mathematical Thinking & Expression and Scientific Thinking & Invention for Preschoolers</p> <p>Scientific Thinking & Invention</p> <ol style="list-style-type: none"> Identify, discriminate, and make comparisons among objects by observing physical characteristics. <p>Mathematical Thinking & Expression</p> <ol style="list-style-type: none"> Participate in activities that involve non-standard measurement. Understand size and volume and make comparisons (short/tall, big/small, full/empty, length, weight, height, same, more, less). | <p align="center">Measurement and Data for Kindergartners</p> <p>Describe and compare measurable attributes.</p> <p>K.MD.1 Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.</p> <p>K.MD.2 Directly compare two objects with a measurable attribute in common, to see which object has “more of”/”less of” the attribute, and describe the difference. <i>For example, directly compare the heights of two children and describe one child as taller/shorter.</i></p> <p>Classify objects and count the number of objects in each category.</p> <p>K.MD.3 Classify objects into given categories; count the number of objects in each category and sort the categories by count.</p> |
| <p>Mathematical Thinking & Expression</p> <ol style="list-style-type: none"> Sort, classify, and order objects on the basis of one or two attributes (color, shape, size, small to large, short to tall, etc.). | |



| FOUNDATIONS EARLY LEARNING STANDARDS | | COMMON CORE STANDARDS FOR MATHEMATICS | |
|---|--|---|--|
| Mathematical Thinking & Expression for Preschoolers | | Geometry for Kindergartners | |
| Mathematical Thinking & Expression | | Identify and describe shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres). | |
| 1. Understand and use words that identify different positions in space (e.g., in, out, under, over). | 1. Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as <i>above</i> , <i>below</i> , <i>beside</i> , <i>in front of</i> , <i>behind</i> , and <i>next to</i> . | K.G.1 | |
| 2. Recognize and describe common shapes. | K.G.2 Correctly name shapes regardless of their orientations or overall size. | K.G.2 | |
| 3. NA | K.G.3 Identify shapes as two-dimensional (lying in a plane, “flat”) or three-dimensional (“solid”). | K.G.3 | |
| Mathematical Thinking & Expression | | Analyze, compare, create, and compose shapes. | |
| 4. Sort, classify, and order objects on the basis of one or two attributes (color, shape, size, small to large, short to tall, etc.). | K.G.4 Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/“corners”) and other attributes (e.g., having sides of equal length). | K.G.4 | |
| 5. NA | K.G.5 Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes. | K.G.5 | |
| 6. NA | K.G.6 Compose simple shapes to form larger shapes. For example, “Can you join these two triangles with <i>full sides touching</i> to make a rectangle?” | K.G.6 | |

| Foundations Early Learning Standards | | Common Core Standards for Mathematics | |
|--|-------|---------------------------------------|--|
| Mathematical Thinking & Expression for Preschoolers | | | |
| 1. Describe or demonstrate a sequence of events. | 1. NA | | |
| 2. Recognize and duplicate simple patterns within their environment using manipulatives, art materials, body movements, etc. | 2. NA | | |
| 3. Understand the passage of time within their daily lives (daily routines and the order of events). | 3. NA | | |

NC Pre-Kindergarten (NC Pre-K) Program Requirements

Effective SFY 2011-2012

Issue Date: August 2011



NC Pre-Kindergarten (NC Pre-K) Program Requirements

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Section 1: Introduction

The NC Pre-K Program is a program of the Division of Child Development and Early Education in the North Carolina Department of Health and Human Services.

The NC Pre-K Program is designed to provide high-quality educational experiences to enhance school readiness for eligible four-year-olds. The program requirements are built on the premise that to be successful academically in school, children need to be prepared in all five of the developmental domains outlined by the National Education Goals Panel. Each of these domains is critical to children's well-being and for their success in reading and math as they come to school. The five domains, as reflected in *Foundations: Early Learning Standards for North Carolina Preschoolers and Strategies for Guiding Their Success* are:

- Approaches to learning
- Emotional and social development
- Health and physical development
- Language development and communication
- Cognitive development

The requirements are designed to ensure that a high-quality pre-kindergarten classroom experience is provided for eligible four-year-olds in each local NC Pre-K Program and that, to the extent possible, uniformity exists across the state.

All NC Pre-K programs must comply with these requirements. Requests for exceptions to the requirements as specified in this document must be made in writing by the NC Pre-K local contractor to the Division of Child Development and Early Education:

Division of Child Development and Early Education
NC Department of Health and Human Services
2201 Mail Service Center
Raleigh, NC 27699-2075
919-662-4499 – Phone / 1-800-859-0829

www.ncchildcare.net

These *NC Pre-K Program Requirements* and the *NC Pre-K Program Fiscal and Contract Manual* may be downloaded from the Division of Child Development and Early Education website: <http://www.ncchildcare.net>

Section 2: The County/Region NC Pre-K Committee

A. Purpose of the NC Pre-K Committee

The NC Pre-K Program is built upon a system of existing local school boards and districts, private child care providers, and other entities that demonstrate the ability to provide high quality pre-kindergarten services for eligible 4-year olds.

The NC Pre-K Program requires that every county (or region) that chooses to participate in the NC Pre-K program to establish and maintain a County/Region NC Pre-K Committee. The purpose of the committee is to:

1. Select a contractor agency;
2. Develop operational policies and procedures;
3. Ensure collaboration and shared responsibility for developing, approving, and implementing the local plan for delivering NC Pre-K services at the community level;
4. Ensure that services are built on the existing early childhood service delivery system, and that service providers in the community with the ability to provide NC Pre-K services have the opportunity to express interest and be considered;
5. Provide ongoing, collaborative advice about local policies and procedures in the implementation of NC Pre-K services; and
6. Provide oversight for the local program (both programmatic and fiscal).

B. Committee Structure and Meetings

Co-Chairs

The County/Region NC Pre-K Committee must be co-chaired by the school superintendent (or designee) for the local education agency (LEA) and the board chair (or designee) for the local Smart Start Partnership. If a designee is assigned, it must be done in writing and the designee must have the same decision-making authority as the school superintendent or local partnership board chair. The contract administrator (person named in the NC Pre-K Plan) shall not serve as the chair of the NC Pre-K Committee.

If there is more than one LEA or local Smart Start partnership in a county or region, one superintendent and one local Smart Start board chair may be designated to serve as the co-chairs. All superintendents (or designees) and local Smart Start board chairs (or designees) in a county or region must be members of the committee.

Membership

The co-chairs are responsible for appointing the committee members and convening the committee according to these *NC Pre-K Program Requirements*. Appointments shall be made annually. The co-chairs should create an independent County/Region NC Pre-K Committee. However, they may designate another functioning early childhood committee or board in the county/region that has the appropriate membership to serve in this capacity. If an existing early childhood committee is designated to serve in this capacity, the existing early childhood committee must officially adjourn from its meeting and requirements, then

officially reconvene as the NC Pre-K Committee operating under NC Pre-K requirements, with the required co-chairs and membership to perform NC Pre-K functions.

Committee membership must be kept current in the online NC Pre-K Plan, and shall consist of the following:

In addition to the co-chairs, representatives to the local NC Pre-K Committee must include:

1. Licensed child care center (4- or 5-star license preferred) representative,
2. Head Start program representative,
3. Parent of preschool-age children (especially children who are at-risk) representative,
4. Child care resource and referral agency or another child-serving agency representative,
5. Department of Social Services or other child care subsidy funding agency representative, and
6. Public schools exceptional children's preschool program representative(s).

Committee Meetings

The Committee is a public body subject to the Open Meeting Law (G.S. Chapter 143, Article 33C) and Public Records Law (G.S. Chapter 132) and must operate in accordance with their obligations under those statutes.

http://ncga.state.nc.us/EnactedLegislation/Statutes/HTML/ByArticle/Chapter_143/Article_33C.html

http://www.ncleg.net/EnactedLegislation/Statutes/html/bychapter/chapter_132.html

The committee, under the direction of the co-chairs, should set a meeting schedule and establish protocol that allows the committee to fulfill its functions. The committee must maintain minutes of all meetings that document: 1) meeting attendees; 2) items discussed; and 3) actions taken or decisions made. In addition to regular meetings, the Committee must meet prior to May 31 to advise planning and document approval of the NC Pre-K plan for the following year.

C. Committee Authority

Actions Requiring Full Committee Approval

The County/Region NC Pre-K Committee is the decision-making body for the local NC Pre-K Program and is authorized to do the following (items 1-13):

1. Conduct annual planning for NC Pre-K and approve an implementation plan. All committee members must read and agree to the Assurances and Requirements, and sign Section 1, which must be submitted, along with a copy of the minutes of the meeting, to the Division of Child Development and Early Education by May 31.
2. Select or change the contract administrative agency (the Contractor).

Minutes and signatures of all committee members must be submitted to the Division of Child Development and Early Education for items 1 and 2.

3. Approve distribution of funding.

4. Review and approve the provider reimbursement strategy (i.e., payment rates to providers and other related costs).
5. Approve provider transportation charges to/from the NC Pre-K program.
6. Approve costs that may be charged to cover the full/partial costs of meals when children do not qualify for free/reduced priced lunch.
7. Approve the voluntary release of allocated slots back to the state office (DCDEE).
8. Approve adding new sites or non-voluntary termination of sites in the County/Region Plan.
9. Approve requests to increase or decrease the budget involving NC Pre-K funds.

Items 3 through 9 require committee approval but do not require the signature of all Committee members. The minutes of the Committee meetings shall be kept on file and shall indicate members present, decisions made, and results of votes.

Actions Not Requiring the Full Committee

In cases where decisions must be made before the Committee can be convened, the Contract Administrator and/or Committee co-chairs may do the following on behalf of the Committee:

10. Approve moving slots across sites.
11. Approve requests for slots.
12. Approve the voluntary termination of sites.
13. Approve increases or decreases in the budget involving other resources accessed (but not state NC Pre-K funds).

For **actions 11 & 12**, signatures of the Committee co-chairs are required. A report of all actions must be reported back to the Committee.

D. Additional Functions – Committee and Contractor

The Committee serves in an advisory role to the Contract Administrator in the development and implementation of local policies and procedures for implementing NC Pre-K, including the following:

1. Developing and implementing a coordinated process for recruiting, identifying, and placing four-year-old children who are at-risk;
2. Participating in collaborative efforts to offer professional development services to early childhood programs in the community;
3. Demonstrating and documenting how programs are accessing resources other than those provided by NC Pre-K;
4. Documenting agreements with other community agencies regarding the provision of services to young children with disabilities;
5. Developing and implementing a written transportation plan showing how the transportation needs of participating children will be met;
6. Developing and implementing a written transition plan showing how the needs of participating children will be met as they transition into pre-kindergarten and then into kindergarten;
7. Providing all families of participating children with information about access to health insurance (Health Check and NC Health Choice) and the importance of a medical home

- for their children;
8. Identifying and using community resources to develop a plan for obtaining child health assessments within the required timeframe;
 9. Developing a plan for consultation services from a qualified health consultant for all sites; and
 10. Documenting a process for ensuring that qualified eligible teachers and teacher assistants are compensated at the appropriate levels (See Section 6, Tables 3 and 4).

E. Reporting Program Progress

The Contractor must report to the County/Region NC Pre-K Committee throughout the year on implementation of the County/Region Plan including:

1. Program progress (recruiting, child identification and eligibility, enrollment, and attendance);
2. Site updates (slot allotment and use; star licensure progress);
3. Site staff education levels and progress (administrators, teachers, assistants);
4. Professional development activities;
5. Efforts to collaborate with other agencies;
6. Strengths and barriers to service delivery;
7. Efforts to implement plans related to transportation, transitions, helping families access health insurance and a medical home, helping ensure child health assessments, and consultation from a qualified health professional; and
8. Fiscal and budget reports, including funds received and funds paid to subcontractor(s).

Section 3: The NC Pre-K Child

A. NC Pre-K Child Enrollment Eligibility

Local Contractors are responsible for determining NC Pre-K Child Eligibility.

Children served in a NC Pre-K slot must meet age requirements, eligibility beyond age requirements, **and** service priority criteria as defined in this section.

Age Requirements

1. Children to be enrolled must be four years of age on or before **August 31st** of the program year.
2. Children age eligible for kindergarten cannot be served with NC Pre-K funds.

Eligibility Beyond Age Requirements

A child that meets the age requirements is eligible for NC Pre-K if the child meets one of the criteria below:

- Is from a family whose gross income is at or below 75% of the State Median Income level;
- Has an identified disability as indicated by the child having a current Individualized Education Program (IEP);
- Has Limited English Proficiency (LEP) as indicated by the family and/or child speaking limited or no English in the home;
- Has a developmental or educational need as indicated by the child's performance results on an approved developmental screening;
- Has a chronic health condition as indicated by a health care provider diagnosis;
- Has at least one parent or legal guardian who is an active duty member of the armed forces of the United States, the North Carolina National Guard or other state military force, or a Reserve Unit of the armed forces, and who is ordered to active duty by the proper authority within the last 18 months, or expected to be ordered within the next 18 months. A child whose parent or legal guardian has been seriously injured or killed while on active duty is also eligible.

Priority Requirements to Serve Children Who are "At-Risk"

The priority of NC Pre-K is to serve eligible children who are "at-risk". For the purposes of determining eligibility priority for the NC Pre-K program, a child is considered "at-risk" if the child meets one of the criteria below:

- Is from a family whose gross income is at or below 75% of the State Median Income level.
- Has an identified disability as indicated by the child having a current Individualized Education Program (IEP).
- Has been determined "at-risk" by DCDEE based upon documentation that the child's eligibility criteria and other factors constitute a significant and substantial risk that the child would be unable to avail himself/herself of the opportunity to obtain a sound basic education.

Eligibility for Families at or below 75% of State Median Income (SMI)

Income eligibility for NC Pre-K is determined by family size and gross income. **Children in families with annual incomes at or below 75% of the State Median Income (SMI) level are considered at risk for NC Pre-K services and will receive priority as noted in Section 3.B (see Table 1).**

| Table 1. 75 % STATE MEDIAN INCOME* | |
|---|---------------------------------------|
| Family Size | 75 Percent State Median Income |
| 1 | \$26,507 |
| 2 | \$34,663 |
| 3 | \$42,819 |
| 4 | \$50,975 |
| 5 | \$59,130 |
| 6 | \$67,286 |
| 7 | \$68,816 |
| 8 | \$70,345 |
| 9 | \$71,874 |
| 10 | \$73,403 |
| 11 | \$74,933 |
| 12 | \$76,462 |

*Based on August 1, 2011 North Carolina Subsidized Child Care Eligibility Limits

Temporary Assistance to Needy Families Maintenance of Effort (TANF MOE)

When a child is determined eligible for services, a % of poverty category must be determined (see Table 2), entered on the **Eligibility/Enrollment Scorecard** sheet, and in NC Pre-K Kids. **This information will be used to determine TANF MOE.**

| Table 2. INCOME ELIGIBILITY LEVEL* | | | | | | |
|---|-------------|-------------|-------------|-------------|-------------|-------------|
| <i>NC Pre-K 2011-2012</i> | | | | | | |
| Family Size | 130% | 150% | 185% | 200% | 250% | 300% |
| 1 | \$14,157 | \$16,335 | \$20,147 | \$21,780 | \$27,225 | \$32,670 |
| 2 | \$19,123 | \$22,065 | \$27,214 | \$29,420 | \$36,775 | \$44,130 |
| 3 | \$24,089 | \$27,795 | \$34,281 | \$37,060 | \$46,325 | \$55,590 |
| 4 | \$29,055 | \$33,525 | \$41,348 | \$44,700 | \$55,875 | \$67,050 |
| 5 | \$34,021 | \$39,255 | \$48,415 | \$52,340 | \$65,425 | \$78,510 |
| 6 | \$38,987 | \$44,985 | \$55,482 | \$59,980 | \$74,975 | \$89,970 |
| 7 | \$43,953 | \$50,715 | \$62,549 | \$67,620 | \$84,525 | \$101,430 |
| 8 | \$48,919 | \$56,445 | \$69,616 | \$75,260 | \$94,075 | \$112,890 |
| 9 | \$53,885 | \$62,175 | \$76,683 | \$82,900 | \$103,625 | \$124,350 |
| 10 | \$58,851 | \$67,905 | \$83,750 | \$90,540 | \$113,175 | \$135,810 |
| 11 | \$63,817 | \$73,635 | \$90,817 | \$98,180 | \$122,725 | \$147,270 |
| 12 | \$68,783 | \$79,365 | \$97,884 | \$105,820 | \$132,275 | \$158,730 |

*Based on 2011 Federal Poverty Levels Revised July 26, 2011

B. Service Priority Status

After a pool of eligible children is determined, service priority status should be used to prioritize those children for NC Pre-K services.

Priority 1. Children Who Are "At-Risk"

First priority for service must be given to children who are "at-risk". A child is considered to be "at-risk" if the child meets one of the criteria below:

1. Is from a family whose gross income is at or below 75% of the State Median Income level.
2. Has an identified disability as indicated by the child having a current Individualized Education Plan (IEP).
3. Has been determined "at-risk" by DCDEE based upon documentation that the child's eligibility criteria and other factors constitute a significant and substantial risk that the child would be unable to avail himself/herself of the opportunity to obtain a sound basic education.

Priority 2. Other Eligible Children

Once children who are at-risk have been served, service may be provided to other eligible children who meet one of the criteria below:

1. Has Limited English Proficiency (LEP) as indicated by the family and/or child speaking limited or no English in the home.
2. Has a developmental or educational need as indicated by the child's performance results on an approved developmental screening.
3. Has a chronic health condition as indicated by a health care provider diagnosis.
4. Has at least one parent or legal guardian who is an active duty member of the armed forces of the United States, the North Carolina National Guard or other state military force, or a Reserve Unit of the armed forces, and who is ordered to active duty by the proper authority within the last 18 months, or expected to be ordered within the next 18 months. A child whose parent or legal guardian has been seriously injured or killed while on active duty is also eligible.

Exception for maintaining slots for 3-year old children

NC Pre-K slots designated to a site within a county/region can be used to serve 3-year-old children when they become age eligible. However, no slot may be held for a 3-year old child if a 4-year old child who is "at-risk" is available and waiting to be served.

C. NC Pre-K Program Eligibility Form

NC Pre-K Program Eligibility Form (REVISED: Effective August 1, 2011)

Date Completed: _____

Child's Name: _____ Birth Date: _____

Address: _____

City: _____ Zip: _____ Phone: (____) _____

Determining Eligibility Factors

- 1) Will the child be four years of age on or before **August 31st** of the program year?
 ___ No (Child not eligible; discontinue scorecard.)
 ___ Yes (Move to question 2.)
- 2) What is the annual family gross income? _____ What is the family size? _____

Is the parent(s) – check all that apply: (These are not eligibility requirements but this information will help DCDEE leverage federal funding)

- Employed**
- Seeking employment**
- In post-secondary education**
- In high school or in a GED program**
- In job training**

- 3) Does the family's countable income fall at or below 75% of the State Median Income (SMI)?
 ___ No (Go to question 4.)
 ___ Yes (Child is at-risk and receives priority status; complete table B.)
- 4) Does the child have an Individualized Education Plan (IEP)?
 ___ No (Complete table A and B and move to question 5.)
 ___ Yes (Child is at-risk and receives priority status; complete table B.)

| TABLE A | | |
|-----------------------------------|--------------------------|--------------------------|
| Check one box for each: | Yes | No |
| Child of eligible military family | <input type="checkbox"/> | <input type="checkbox"/> |
| Limited English Proficiency | <input type="checkbox"/> | <input type="checkbox"/> |
| Chronic Health Condition(s) | <input type="checkbox"/> | <input type="checkbox"/> |
| Developmental/Educational Need | <input type="checkbox"/> | <input type="checkbox"/> |

| TABLE B (TANF/MOE only) | Check one |
|----------------------------|-----------|
| 130% of poverty and below | |
| 131 - 185% of poverty | |
| 186 - 200% of poverty | |
| 201 - 250% of poverty | |
| 251 - 300% of poverty | |
| Above 300% of poverty | |

- 5) Is there one or more yes boxes checked in Table A?
 ___ No (Child is not eligible for NC Pre-K)
 ___ Yes (Child is eligible to be served after all children who are "at-risk" have been placed.)

D. Definitions and Recommended Documentation for Verification

During the application process, at a minimum, the items and documentation identified in the chart below must be collected for each child and family. This information will serve two purposes: (1) to determine NC Pre-K eligibility and (2) for the state to determine TANF (Temporary Aid to Needy Families) and CCDF (Child Care and Development Fund) Maintenance of Effort (MOE) and Matching contributions.

| | |
|---|--|
| Element | Parent, guardian or caregiver statement substantiated by parent, guardian or caregiver signature is required for income, military status, family size, kinship. |
| Child's Name | Parent, guardian or caregiver statement. |
| Birth Date | Child's birth certificate, or medical records, or recorded in Family Bible |
| Child's SS # | Verification of child's social security number, if applicable |
| County | County of child's residence as documented on child's application. |
| Military Status | Parent, guardian or caregiver statement (signature required). |
| Kinship (signature required) | <p>Kinship is established when the child in care lives with an adult blood relative or with a non-relative who has legal custody or guardianship. If child is living with non-relatives or other adults that have legal custody or guardianship, guardian must present a <u>legal document</u> verifying they have <u>legal custody</u> or <u>guardianship</u>.</p> <ol style="list-style-type: none"> 1. A parent - This includes a natural mother or father, a legal mother or father, or adoptive parent(s) after issuance of the final order of adoption. 2. An alleged mother or father or other alleged maternal or paternal relative. 3. A blood or half-blood relative or adoptive relative limited to: brother, sister, grandparent, great-grandparent, great-great-grandparent, uncle or aunt, great-uncle or aunt, great-great-uncle or aunt, nephew, niece, first cousin. 4. A step relative limited to: stepparent, stepbrother, and stepsister. 5. Spouses of anyone in the above groups, even after the marriage has been terminated by death or divorce. 6. Other adults who have legal custody or guardianship of a child. Foster parents do not have legal custody or guardianship; custody remains with the Department of Social Services. |
| Family Size (signature required) (Number in Family: parents, stepparents, all siblings) | <p>Include the following individuals living in the child's home:</p> <ol style="list-style-type: none"> 1. The NC Pre-K child plus all minor brothers and sisters, half brothers, half sisters, stepbrothers and stepsisters. 2. Parents and stepparents of these children. 3. Incarcerated or institutionalized individuals are <u>not</u> included. 4. If a child is living with a relative like a grandparent, aunt, uncle, etc., or an individual who has <u>legal custody</u> or <u>legal guardianship</u>, then the family size consists of the NC Pre-K child, plus all minor brothers and sisters, half brothers, half sisters, stepbrothers and stepsisters living in the same household. The adults are <u>not</u> included, nor are the children of these adults counted. |
| Family Income (To convert weekly income to annual, multiply weekly by 4.3 to obtain monthly, then by 12 for annual.) | <p>Count parent or stepparent's regular gross income (signature required). Regular gross income may include income earned through sales commissions averaged over several months, regular employment through a temporary employment agency, child support, alimony payments, and workman's compensation. Excluded from regular gross income are parent, stepparent and child Supplemental Security Income, adoptive assistance, foster care payments, and irregular income (e.g., over-time, temporary unemployment pay, Work First, Food Stamps, student loans). If legal guardian, legal custodian, or other caregiver, only count the child's income, including Social Security Income and Child Support Payments. Do not count Supplemental Security Income. Count income from any <u>minor</u> siblings living in the home.</p> |

E. Parent Co-payments

No parent co-payment shall be imposed for parents of children who are “at-risk” enrolled in the NC Pre-K program.

No parent co-payment shall be imposed for children who have at least one parent or legal guardian as an active duty member of the armed forces of the United States, the North Carolina National Guard or other state military force, or a Reserve Unit of the armed forces, and who is ordered to active duty by the proper authority within the last 18 months, or expected to be ordered within the next 18 months. No parent co-payment shall be imposed for children whose parent or legal guardian has been seriously injured or killed while on active duty.

A parent co-payment may be assessed for other children eligible for NC Pre-K who are not “at risk.” However, a Contract Administrator may waive assessing a fee if the collection of a fee has the effect of diminishing the access of children who are “at-risk” to the NC Pre-K program.

F. Children with Unique Needs

When a teacher, parent, or other involved person has significant developmental, sensory, or behavioral concerns about a NC Pre-K child, he/she shall notify the local school system for assistance. The following steps shall be followed:

1. If, as a result of information gathered through the screening process, or from experience working with a particular NC Pre-K child, a NC Pre-K program has significant concerns about that child and the program’s ability to address his/her needs, the program shall notify the local school system’s Preschool Exceptional Children Program for assistance.
2. The NC Pre-K administrator, teacher, and parent, in consultation with the school system’s Preschool Exceptional Children Program and other available resources, shall work together to develop a coordinated plan to support the NC Pre-K child’s placement in the NC Pre-K program. Every effort shall be made to maintain the child’s enrollment and participation.
3. If efforts to access the consultation needed to develop a coordinated plan of support prove unsuccessful, the NC Pre-K program shall contact the Division of Child Development and Early Education for assistance.
4. The Division of Child Development and Early Education must be notified if the NC Pre-K child’s continued enrollment and participation becomes impossible due to chronic disruptions or concerns for the safety of that child or others, and it becomes necessary to find another placement for that child.

Section 4: The NC Pre-K Site

A. Facility Requirements

Pursuant to 2011 legislation, public school classrooms will have a one-year transition period to become licensed through DCDEE and may continue to operate NC Pre-K classrooms for the 2011-2012 school year. The Department shall create a transition plan to assist public schools in obtaining licensure through DCDEE. If meeting licensure standards for a public school constitutes a significant barrier to access to NC Pre-K for at-risk students, the public school may request a waiver of the licensure requirement from DCDEE.

Head Start programs operated by nonprofit organizations and all private nonprofit and for profit centers must meet North Carolina Division of Child Development and Early Education regulatory standards and maintain a 4 or 5 star license. Any Head Start program or private child care program that was granted approval to operate at a 3 star license because of certain conditions, must attain a 4 or 5 star license by July 2012.

B. Official NC Pre-K Day and Year

NC Pre-K sites must provide a Pre-K program for a regular school day (6.5 - 10 hours per day) for 180 instructional days per school calendar year.

C. Program Attendance Policy

Child attendance must be taken daily and submitted monthly for reimbursement. (See the NC Pre-K Program Fiscal and Contract Manual, for requirements on the payment process.)

When a child enrolled in the NC Pre-K program has been absent for three consecutive days, the site-level administrator should contact the family and determine the child's participation status. Any changes must be reported to the local contractor.

D. Nutrition

Sites must provide breakfast and/or snacks and lunch meeting USDA requirements during the regular school day. The partial/full cost of meals may be charged when families do not qualify for free/reduced price meals.

When children bring their own food for meals and snacks to the center, if the food does not meet the specified nutritional requirements, the center must provide additional food necessary to meet those requirements.

E. Transportation

When all other options have been exhausted, families with children participating in NC Pre-K may be charged a nominal amount for transportation to/from the NC Pre-K site. However, children who are at-risk should not be denied services based on the family's inability to pay.

F. Wrap-around Services

Families may also be charged for the cost of wraparound services provided before or after the regular school day, during holidays, or during summer months. NC Pre-K dollars may not be used for such costs.

G. Religious Activities

Activities, instruction, or communications which promote religious beliefs shall not be directed toward children participating in NC Pre-K during the NC Pre-K school day.

Section 5: The NC Pre-K Classroom

A. Child Health Assessments

A health assessment is required to be on file at the NC Pre-K site within 30 days after a child enters the NC Pre-K program and must have been conducted within 12 months of program entry. The health provider is responsible for making appropriate referrals as indicated by the health assessment. The health assessment must include:

1. Physical examination
2. Updated immunizations
3. Vision screening
4. Hearing screening
5. Dental screening

All health assessments must be reviewed to ensure that all necessary referrals related to the results have been made.

B. Developmental Screening

All children enrolled in NC Pre-K must receive a developmental screening using an approved screening instrument, unless the child has an existing Individualized Education Program (IEP). Children must be screened within 90 days after the first day of attendance in the program or within 6 months prior to the first day of attendance.

The NC Pre-K program requires that screening be used solely for the purpose of identifying children who should be referred for further evaluation and testing based on concerns in one or more developmental domains.

Children shall be screened using one of the approved screening instruments listed below:

1. Ages & Stages Questionnaires, Third Edition (ASQ-3) or Ages & Stages Questionnaires (ASQ)
2. Parents' Evaluation of Developmental Status (PEDS)
3. Developmental Indicators for the Assessment of Learning, Third Edition (DIAL-3) or Fourth Edition (DIAL-4)
4. Brigance Early Childhood Screen II (3-5 Years), or Brigance Head Start Screen, or Brigance Preschool Screen – II, or Brigance K & 1 Screen – II

C. Early Learning Standards And Curricula

NC Pre-K programs must be knowledgeable about *Foundations: Early Learning Standards for North Carolina Preschoolers and Strategies for Guiding Their Success*, and use these early learning standards to guide their planning of developmentally

appropriate, high-quality prekindergarten experiences for children. *Foundations* is available at http://www.ncprek.nc.gov/Foundations/pdf/BW_condensed.pdf

In addition, each NC Pre-K classroom shall use an approved curriculum. The selected curriculum must be approved by the NC Child Care Commission. The Child Care Commission shall approve additional curricula during quarterly meetings following a pre-determined timeline. This shall be reflected in the NC Child Care Commission minutes.

The following list represents currently approved preschool curricula:

1. *The Creative Curriculum® for Preschool, 4th Edition or 5th Edition*, Teaching Strategies, Copyright 2002
2. *The Empowered Child™, Childtime, 2nd Edition*, Copyright 2007 (Approved for use in Childtime programs.)
3. *Explorations with Young Children: A Curriculum Guide from the Bank Street College of Education*, Gryphon House, Copyright 1992
4. *HighScope Preschool Curriculum*, HighScope Press, Copyright 2002
5. *Opening the World of Learning™ (OWL)*, Pearson Early Learning, Copyright 2005 (Approved with the stipulation that full-year programs have a plan to supplement or extend the curriculum since OWL is designed to cover a school year.)
6. *Passports: Experiences for Pre-K Success*, HighReach Learning, Copyright 2007 (Approved with the stipulation that programs purchase the *Compass* and at least one set of study/theme materials.)
7. *Tutor Time LifeSmart™*, Copyright 2005 (Approved for use in Tutor Time programs.)

D. Instructional Assessment

Classrooms are required to conduct ongoing assessments to gather information about each child's growth and skill development, as well as inform instruction. The following instruments meet this requirement.

1. HighScope Preschool Child Observation Record (COR) (second edition)
2. Work Sampling System (Meisels)
3. Creative Curriculum Developmental Continuum, Ages 3-5 and Teaching Strategies GOLD;
4. Galileo On-line Assessment System
5. Learning Accomplishment Profile – Third Edition (LAP-3)
6. Learning Care System (for use with Tutor Time LifeSmart™ and The Empowered Child™ Childtime)

E. Staff-to-Child Ratio and Class Size

The classroom will not exceed a maximum staff-to-child ratio of 1 to 9 with a maximum class size of 18 children, with one teacher and one assistant teacher per classroom. Classrooms that provide for inclusive settings for children with disabilities

may require an adult to child ratio smaller than 1 to 9. For LEA-administered public school exceptional children's preschool classrooms, ratios must be in compliance with the North Carolina Policies Governing Services for Children with Disabilities, Section 1508-2, (Appendix B). <http://www.ncpublicschools.org/ec/>

F. Rest Time

A rest/quiet period is required for each child every day, the length of which shall be determined according to the individual needs of each child.

During rest time, the staff/child ratio is considered in compliance if at least one staff is in the classroom with children while resting or is visually supervising all children. The second person needed to meet the 1 to 9 ratio must be on the premises, within calling distance of the classroom to remain in compliance.

G. Indoor and Outdoor Learning Environments

Classrooms shall provide high-quality indoor and outdoor learning environments that support the implementation of *Foundations: Early Learning Standards for North Carolina's Preschoolers and Strategies for Guiding Their Success*, as well as the chosen curriculum. The outdoor classroom is considered an extension of the learning environment. Both indoor and outdoor environments shall address curricular objectives by encouraging child-initiated, teacher-supported, active learning experiences. Teachers shall arrange for children to be outdoors each and every day, for a minimum of one hour, weather permitting.

H. Family Engagement

NC Pre-K classrooms shall provide meaningful opportunities for families to be engaged in their child's education.

NC Pre-Kindergarten programs shall develop a comprehensive plan for family engagement to implement strategies designed to develop partnerships with families and build reciprocal relationships that promote shared decision-making. The following are examples of meaningful opportunities for families to be engaged in their child's education:

- (1) Home visits;
- (2) Formal and informal parent/teacher conferences;
- (3) Classroom visits and options for parents and families to participate in classroom activities;
- (4) Parent education;
- (5) Family involvement in decision making about their own child and about their child's early childhood program; and
- (6) Opportunities to engage families outside of the regular service day.

A log of activities, opportunities, or communications made for family engagement must be on file at the NC Pre-K site.

Section 6: The NC Pre-K Staff

A. Administrator Licensure and Credentials

Public Schools

Principal licensure is required.

Nonpublic Schools (Private Child Care/Pre-Kindergarten Settings)

Directors/administrators of nonpublic schools must have, or be working toward a North Carolina Early Childhood Administrative Credential (NCECAC) Level III. For the director/administrator working toward the required NCECAC Level III, the following will apply:

1. Provisional approval will be given for four years from the time the site began participation with the NC Pre-K program for the director/administrator with NCECAC I or II to obtain the NCECAC Level III.
2. Progress toward NCECAC Level III will be considered a minimum of six documented semester hours per year. The local NC Pre-K contractor will maintain documentation of the progress toward the required standard.
3. Under certain conditions, administrators showing good faith effort toward meeting the credential requirement may be granted an extension to the four-year timeline. Local contractors must submit a request for an extension in writing to the NC Division of Child Development and Early Education.

Administrators of NC Pre-K sites shall not serve as the NC Pre-K teacher or teacher assistant.

B. Teacher Education, Licensure and Credentials

All teachers will hold, or be working toward a North Carolina (NC) Birth-through-Kindergarten (B-K) Standard Professional II or Preschool Add-on licensure. For teachers working toward the required education and license, the following requirements apply:

Public Schools

Teachers will hold a minimum of a BA/BS degree **and**:

1. NC Initial Provisional Lateral Entry B-K License
or
2. A North Carolina K-6 license and a provisional Preschool Add-on license
or
3. Another North Carolina or other state's license and a NC Provisional B-K license.

Nonpublic Schools (Private Child Care/Pre-Kindergarten Settings)

Teachers will hold a minimum of a/an:

1. BA/BS degree in early childhood, child development, or a related field (human development and family studies, elementary education, or psychology), and be working toward a B-K License or eligible for a NC Initial Provisional Lateral Entry B-K License.

or

2. A North Carolina K-6 license and provisional Preschool Add-on license

or

3. Another North Carolina or other state's license and a NC Provisional B-K license.

On a case by case basis during the 2011/2012 transition year, and in order to expand capacity, exceptions to the BA/BS requirement may be allowed for teachers that hold an AA degree in early childhood education or child development (or related field). These exception requests can be submitted to DCDEE for consideration if qualified teachers are not available.

All NC Pre-K teachers in nonpublic schools holding a minimum of a BA/BS degree must be enrolled with the Early Educator Support, Licensure & Professional Development Unit (formerly the Teacher Licensure Unit) of the DCDEE.

Time Limit for Classroom to Have B-K Licensed Teacher

1. Progress toward B-K or Pre-school Add-on licensure will be considered a minimum of six documented semester hours per year. The B-K license must be achieved within three years. The local NC Pre-K Contract Administrator will maintain documentation of the progress toward the required standard.
2. Pre-K teachers with an AAS degree shall complete a minimum of six documented semester hours per year towards a BA/BS degree and B-K Licensure, and shall achieve the BA/BS degree and B-K Licensure within four years. The administrator shall maintain documentation available for review by the Division of the progress toward the required standard.

C. Teacher Assistant Education and Credentials

All assistants will have a high school diploma or GED and will hold, or be working toward, a minimum of an Associate Degree in early childhood education or child development or a Child Development Associate (CDA) credential. Teacher assistants working toward the Associate Degree or CDA shall make progress by completing a minimum of six documented semester hours per year. The administrator shall maintain documentation available for review by the Division of the progress toward the required standard.

Nonpublic Schools (Private Child Care/Pre-Kindergarten Settings)

1. Assistants will hold a high school diploma or GED equivalent and be working toward the ECE/CD associate degree or CDA (minimum).
2. Progress toward the ECE/CD associate degree or CDA will be considered a minimum of six documented semester hours per year.

Exceptions for Public Schools

Teacher assistants employed by public schools are exempt from this requirement to hold an ECE/CD Associate Degree or CDA if they meet the employment requirements outlined by the federal “No Child Left Behind” (NCLB) legislation, and have one of the following:

- (1) Six documented semester hours of coursework in early childhood education, or
- (2) Two years of work experience in an early childhood setting.

Exceptions for Nonpublic Schools

Teacher assistants working in private settings with a BS/BA degree in early childhood, child development or a related field (human development and family studies, elementary education, or psychology) meet the education requirement.

D. Substitute Staff

When a member of the NC Pre-K teaching staff is unable to work, a substitute staff person must be provided to maintain the staff-to-child ratio (1:9 and 2:18), and to implement the program in accordance with NC Pre-K requirements. Substitute staff must be at least 18 years of age and meet the following minimum qualifications:

Teacher Substitutes for Short-term Vacancies

Requirements for short-term vacancies, when teachers are absent from the NC Pre-K classroom for 15 or fewer days, include the following:

1. **Nonpublic Schools (Private Child Care/Pre-Kindergarten Settings):** Substitutes in private settings must have at least a high school diploma or a GED, and some course work in early childhood education or child development, such as the North Carolina Early Childhood Credential.
2. **Public School Settings:** Substitutes must meet the requirements of the substitute policy consistent with the local education agency (LEA).

Teacher Substitutes for Long-term Vacancies

Requirements for long-term vacancies, when teachers are absent from the NC Pre-K classroom for 16 or more attendance days, include the following:

Regardless of the program setting, long-term substitutes must have at least an associate's degree in early childhood education/child development or 4-year degree in a related field (child development, early childhood education, elementary education, human development and family studies, or psychology).

Teacher Assistant Substitutes

Substitutes for teacher assistants must be at least 18 years of age and have a minimum of a high school diploma or a GED.

E. Instructional Staff Standards

Staff Time

Instructional staff shall work in direct contact with children in the NC Pre-K program for at least a 30-hour work week. In addition to these direct, day-to-day instructional experiences, instructional staff will require additional time for related instructional activities, including time for planning, scheduling and conducting home visits, meeting with children's families, and/or attending required professional development activities. These related activities shall take place outside of the 6 ½ - 10 hour day of direct teacher-child contact, and are not to exceed 40 hours per week.

Professional Development Requirements

Licensed Personnel: Licensed Principals, Teachers, and Teacher Assistants in public schools will participate in professional development as consistent with the State Board of Education policy.

Administrators, Teachers, and Teacher Assistants in non-public school settings, working toward Pre-K qualifications will participate in a minimum of six documented semester hours per year.

F. Compensation for Instructional Staff

Compensation includes all salary, wages, health and/or retirement benefits paid to eligible NC Pre-K teachers and teacher assistants working in public and nonpublic school NC Pre-K programs as defined in this Section.

Teacher Eligibility

1. Teachers who work in **public school** NC Pre-K programs will receive salaries based on the NC Public School Salary Schedule for Certified Staff and receive health and retirement benefits offered through the NC State Health Plan and NC State Retirement System.

2. Teachers who work in **nonpublic school** NC Pre-K programs and currently hold a NC Birth-Kindergarten (B-K), Preschool Add-On, Provisional B-K, Preschool Add-on, or Lateral Entry B-K license are eligible to receive a compensation package as defined in **Table 3**.
3. Teachers with a BA/BS degree in child development, early childhood or a related field (human development and family studies, or psychology), and at least a 2.5 GPA will be granted an **Initial Provisional Lateral Entry B-K License** and are also eligible to receive a compensation package as defined in **Table 3**.

Teacher Assistant Eligibility

1. Teacher assistants working in **public school** NC Pre-K programs will receive salaries based on the NC Public School Salary Schedule for Non-Certified Staff and receive health and retirement benefits offered through the NC State Health Plan and NC State Retirement System.
2. Teacher assistants who work in **nonpublic school** NC Pre-K programs and exceed NC Pre-K education requirements (currently hold AA/AAS in ECE) are eligible to receive a compensation package as defined in **Table 4**.

Compensation Packages for Nonpublic School Programs

1. Compensation packages must be equivalent to at least the **minimum compensation level** for eligible teachers and teacher assistants, as defined in **Tables 3 and 4**. The package may consist of a, b, or c and equal to the package amount.
 - a. Salary **only**, or
 - b. Salary **plus** health **or** retirement plans, **or**
 - c. Salary **plus** health **and** retirement plans.
2. Local nonpublic school NC Pre-K programs are required to move eligible teachers and teacher assistants from the **minimum to the target compensation level**, based on available state and local fiscal resources.
3. Teachers with less than the required education and experience, and teacher assistants with less than an associate's degree in early childhood education, who work in nonpublic school NC Pre-K programs, should be compensated based on salary and benefit targets defined by the site administrator.

Table 3. Compensation Packages for Eligible Teachers Working in Nonpublic School Programs B-K Licensure, Pre-school Add-on Licensure, Provisional B-K Licensure, Initial Provisional Lateral Entry B-K License & BA/BS Degree

| Experience | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
|----------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Minimum Compensation | \$26,260 | \$26,680 | \$27,120 | \$28,680 | \$30,080 | \$31,420 | \$32,710 | \$33,750 | \$34,230 | \$34,720 | \$35,220 | \$35,710 | \$36,220 | \$36,730 | \$37,260 | \$37,800 |
| Compensation Target | \$30,900 | \$31,322 | \$31,786 | \$33,392 | \$34,834 | \$36,215 | \$37,543 | \$38,615 | \$39,109 | \$39,614 | \$40,129 | \$40,633 | \$41,159 | \$41,684 | \$42,230 | \$42,786 |

Notes

- Minimum and Maximum Compensation Target (Salary and Benefits) Packages** based on North Carolina Public School Salary Schedules for Certified Employees - Bachelor's Degree Certified Teacher Salary Schedule 5th Pay Period 2005-2006. For Minimum Compensation Tables for more than 15 years of service, see: <http://www.dpi.state.nc.us/docs/fbs/finance/salary/schedules/2005-06schedulespayperiod5.pdf>
- Health benefit calculation based on 2005-2006 NC State Health Plan rate **\$321 per month** (12 months of employment).
- Retirement benefit calculation based on **3% of annual salary**.
- Compensation scale assumes a 40-hour work week for 36 weeks (10-month school year) (1,440 hours: includes 6-6 1/2 hours direct child contact, plus related instructional planning, home visits, family conferences, professional development activities – See Section 6. b).
- Employer and employee state and federal taxes are not included in these figures.
- County supplements are determined by the Local NCPRE-K Committee.
- Initial Provisional Lateral Entry B-K License** – Granted to a teacher with a BA/BS degree in child development, early childhood or a related field (human development and family studies, or psychology), and at least a 2.5 GPA. Upon completion of B-K requirements teacher recommended for a B-K Standard Professional I or II license.
- Provisional B-K Licensure** – Granted to a teacher with another North Carolina license. Ex: Teacher with K-6 license approved for a provisional B-K or Preschool Add-on. Upon completion of B-K requirements teacher recommended for a B-K Standard Professional I or II license and/or Preschool Add-on License.
- Teaching Experience** – One year of full time (at least 30 hours/week) teaching experience in a public or nonpublic setting is given for each increment (step) on the state salary schedule. Experience is determined by the NC Department of Public Instruction (DPI) at the time the license is issued. Teachers should be placed at the “0” level of experience until the DPI Licensure Section computes “years of experience,” which are denoted on the license document mailed to the teacher. Teacher’s salary would move to the appropriate step of **Table 3** upon receipt of license.

**Table 4. Compensation Packages for Teacher Assistants Working in Nonpublic School Programs
AA/AAS Degree in Early Childhood Education**

| Experience | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
|----------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Minimum Compensation | \$15,810 | \$16,063 | \$16,328 | \$17,267 | \$18,110 | \$18,917 | \$19,693 | \$20,319 | \$20,608 | \$20,903 | \$21,204 | \$21,499 | \$21,806 | \$22,114 | \$22,433 | \$22,758 |
| Compensation Target | \$20,136 | \$20,397 | \$20,670 | \$21,637 | \$22,505 | \$23,337 | \$24,136 | \$24,781 | \$25,078 | \$25,382 | \$25,692 | \$25,996 | \$26,312 | \$26,629 | \$26,958 | \$27,293 |

Revised September 13, 2006 – Minimum Compensation and Compensation Target (based on a 10-month school year)

Notes

1. **Minimum and Maximum Compensation Target (Salary & Benefits) Packages** based on Fiscal Year **2005-2006** North Carolina Public Schools Salary Schedules - Curriculum Support Personnel Salary Grades for Teacher Assistants with at least AA/AAS degree.
2. Health benefit calculation based on **2005-2006** NC State Health Plan rate **\$321 per month** (12 months of employment).
3. Retirement benefit calculation based on 3% of annual salary.
4. Compensation scale assumes a 40-hour work week for 36 weeks (10-month school year). NC Pre-K teacher assistants work 37.5-40 hours a week for 36 weeks.
5. Employer and employee state and federal taxes are not included in these figures.
6. Teaching Experience – One year of full time teaching assistant experience (at least 30 hours/week) in a public or nonpublic setting is given for each step in **Table 4**.

Section 7: Evaluation and Monitoring

A. ECERS-R Assessments

Beginning July 2012, all NC Pre-K licensed programs in public schools and private child care facilities will be required to have an ECERS-R assessment every 3 years. This will be conducted at the time of the star rated license reassessment. At least one of the classrooms chosen for ECERS-R assessment must be a NC Pre-K classroom.

NC Pre-K classrooms must score **a minimum of 5.0**. Classrooms that receive less than 5.0 will be contacted by the Division of Child Development and Early Education and are required to submit a plan demonstrating how the minimum rating will be accomplished by the following year of operation. Classrooms have one year to improve quality.

B. Reported Child Abuse and Neglect Investigations

The NC Division of Child Development and Early Education will notify local Contract Administrators of an open abuse and neglect investigation occurring in a NC Pre-K site.

The NC Pre-K site in question may continue operating the NC Pre-K classroom until the investigation and resolution are complete. If the allegation of abuse and/or neglect is substantiated, NC Pre-K funds may be terminated where there is substantiation of abuse and neglect that jeopardize the health and safety of children enrolled in the program.

In some cases, NC Pre-K Program payments will continue through the appeals process. However, NC Pre-K funds will be terminated when the participating NC Pre-K site child care facility license has been suspended or revoked. Any substantiation of child abuse or neglect, or any administrative action resulting in a change of the license status, may determine future eligibility in the NC Pre-K program.

C. Program and Fiscal Monitoring of Local NC Pre-K Programs

The Division of Child Development and Early Education, local Contract Administrators, and site administrators are required to monitor for compliance with the NC Pre-K program and fiscal and contract requirements.

Monitoring by the Division of Child Development and Early Education

In addition to monitoring child care requirements, DCDEE child care consultants will monitor for compliance with specific NC Pre-K program requirements. Results of DCDEE monitoring will be sent to the Division of Child Development and Early Education.

Monitoring Tools

Monitoring tools developed by the Division of Child Development and Early Education must be used at the local level for self-review and verification of compliance with the operating requirements.

a. NC Pre-K Site Monitoring Tool (Site Tool), completed by the site administrator (or designee), is designed to provide checklists of those components of the program that

must be reviewed for compliance annually at the site and classroom level. **The Site Monitoring Tool shall be submitted to the local contractor and maintained on file at the child care facility for review by the child care consultant in the Division of Child Development and Early Education assigned to monitor the NC Pre-K program.**

b. NC Pre-K Contractor Monitoring Tool (Contractor Tool), completed by the local contractor (or designee), is designed to provide checklists of those components of the program (both programmatic and fiscal) that must be reviewed for compliance annually at the local contractor level. A copy of this tool will also be submitted to DCDEE.

D. Monitoring Timeline

Monitoring activities shall begin with the start of each program year and continue throughout the year to ensure that program requirements are met.

| When | What | Who |
|--|--|---|
| <p>By October 31</p> | <p>An original copy of the Site Tool is completed, and plans for items that require an Action Plan must be submitted to the Local Contract Administrator and the Child Care Consultant at the Division of Child Development and Early Education. (Site or classroom new after October 1 should complete and submit within 90 days of the first attendance day.)</p> | <p>Site administrator or designee (site director or public school principal)</p> <p>*All child developmental screenings may not be completed by October 31 and should be noted in the Action Plan.</p> |
| <p>November – January 31</p> <p>November – May</p> | <p>Complete Sections A through D on the Contractor Tool, including Action Plans and Timelines, as applicable.</p> <p>Local Contract Administrators conduct site visits to review and discuss Site Tool and results. Schedule follow-up visits as need</p> <p>DCDEE Child Care Consultants conduct site visits to NC Pre-K programs to review Site Tool and monitor for compliance with child care requirements.</p> | <p>Local Contract Administrator (or designee)</p> <p>Local Contract Administrator (or designee)</p> <p>DCDEE Personnel</p> |
| <p>By February 1</p> | <p>Local Contract Administrators complete Contractor Tool for all NC Pre-K sites to be reviewed and discussed with DCDEE Administration Section staff.</p> | <p>Local Contract Administrator (or designee)</p> |

| When | What | Who |
|--------------------------------|---|---|
| February 1 – May 15 | DCDEE Administration Section staff review Site Tools and Contractor Tool results with local Contract Administrators by desk audits and/or visits to the local Contract Administrator. | DCDEE Personnel |
| By May 31 | Action Plans (timeline/who completes each task) for items that do not meet the Program Requirements and/or Fiscal Guidelines, sign, date, and mail to the Division of Child Development and Early Education office. | Local Contract Administrator (or designee) |
| By June 15 | Mail copy of Contractor Tool, with any comments from DCDEE , to the local Contractor. (Original copy filed in the state office.) Monitoring results reported to the Local NC Pre-K Committee. | DCDEE Administration Section Contract Personnel Local Contractor |

E. Monitoring Temporary Assistance to Needy Families (TANF) and Maintenance of Effort (MOE)

State Responsibility

Local NC Pre-K administrative programs are subject to monitoring visits by the DHHS Division of Budget and Analysis Office to verify children's eligibility for the TANF/MOE match. Criteria to be monitored are collected in the NC Pre-K Reporting System (NC Pre-K Kids) database, which are entered and updated monthly by the local NC Pre-K program contract administrator.

Procedures include:

1. The DHHS Division of Budget and Analysis and the Division of Child Development and Early Education will work together to select a random sample of local NC Pre-K programs and individual sites to be monitored.
2. The DHHS Division of Budget and Analysis, in consultation with the DCDEE, will send a notification letter of a pending site visit with information about how the visit will be scheduled and conducted.
3. Each local program will receive a list of clients' files to be monitored.
4. Each local program may request a copy of the TANF/MOE Record Review Form and Record Review Guide as needed.

Only the state is impacted by the monitoring results. Local programs are not impacted fiscally by a finding of an ineligible TANF/MOE child.

Local Responsibility

Periodically, local programs must verify and update child information in NC Pre-K Kids. (NC Pre-K Kids automatically determines TANF eligible children based on the data entered in the system.)

Durham Connects: a Model for Child Finding, Triage, and Community Connections

The *Durham Connects (DC)* Program is an inexpensive (about \$700 per family), short-term, community-based, universal, home-visiting program that has been found in a population randomized controlled trial (RCT) to improve population rates of family and child outcomes. The goals of *DC* are to: 1) connect with the parent(s) in order to enhance parental functioning; 2) connect the family with individually-identified community resources in child care, education, mental health care, and financial and social support; so that 3) child outcomes improve.

DC consists of 4-7 intervention contacts, based on family need. It begins with a universal visit during the birthing hospital stay, followed by 1-3 home visits between 3-8 weeks of infant age, 1-2 contacts with a community service provider, and then a follow-up contact one month later. During the visits, the nurse engages with the parent and completes a health, psychosocial, and educational screening, during which she systematically assesses risk and family needs in 12 important empirically-derived domains of infant and family functioning. For each domain found to be at risk, the nurse intervenes directly to support the mother or connects the mother with ongoing evidence-based interventions in the community. Although *DC* is implemented universally, it focuses on triaging families according to assessed risk and then connecting them with ongoing collaborating community resources. Close monitoring of rates of identified family needs and of family experiences with services by community advisory boards enables program leaders to improve community infrastructure for services. Community agencies sign a memorandum of agreement to implement services according to a Preventive System of Care (Tolan & Dodge, 2005), which requires collaboration across agencies, family-centered delivery, and commitment to building a continuum of care.

DC has been evaluated through a population-level RCT (Dodge, 2011, Dodge, et al, 2011, Dodge, 2010). For the period July 1, 2009, through December 31, 2010, every infant born in Durham, NC, on an even birth date (2,329 births) was assigned to receive intervention, and every infant born on an odd birth date (2,451 births) received other services as usual and served as randomized controls. A random sample of these infants was assessed through in-home observations at infant age 6 months for impact evaluation.

Of families assigned to the *DC* intervention, 81% were successfully contacted and scheduled, with 83% penetration for Medicaid families and 72% for privately insured families. Individualized assessments triaged 36% of all families into one or more community resources, with the most common connections to health care, child care, family violence/safety care, and parent mental health care. An additional 47% of all families were scored as having moderate needs that the nurse could resolve directly (such as breast-feeding support, access to financial supports, advice about infant crying, and teaching a parent how to judge the quality of a childcare facility). Interviews by an independent caller with a random sample of families one month after the case was closed revealed that families were extraordinarily pleased with the program: 97% rated the nurse's response to the mother's needs as helpful, 95% rated the nurse's response about parenting as helpful, and 100% would recommend the program to other mothers.

Findings from the RCT indicate that at age 6 months, compared with the control group, the group randomly assigned to *DC* had had significantly fewer emergency medical visits and fewer overnights in the hospital. They also had more connections with community agencies such as parent-support groups, financial supports, and health care. When infants were in out-of-home childcare, the objective rating of the quality of that care as indicated by the "NC "star

certification” was higher. Mothers had lower scores for anxiety and depression and higher scores for positive parenting as rated by independent observers who had no knowledge of their DC involvement. Finally, DC mothers rated the infant’s father as having a better relationship with the infant. These findings are all statistically significant. Although the magnitude of effects is modest, given the small cost per family, the positive benefit-cost ratio is immediately apparent.

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Dodge, K. A. (September, 2011). *Evaluation of Durham Connects*. Technical Report to The Duke Endowment. Duke University, Durham, NC.

Dodge, K. A. (September, 2010). *Durham Connects*. Presentation at a Conference on Improving Low-Income Children’s School Readiness: New Perspectives on an Enduring Challenge, Institute of Human Development and Social Change, New York University, New York, NY.

Dodge, K. A., Goodman, B., Murphy, R., O’Donnell, K., & Sato, J. (2011). *Implementation and randomized controlled trial of a universal postnatal nurse home visiting program*. Under editorial review.



UNC
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***THE QUALITY ENHANCEMENT
PROJECT FOR INFANTS AND
TODDLERS 2000-2007***



FINAL REPORT

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Acknowledgement

The staff of the Quality Enhancement Project for Infants and Toddlers (QEP) would like to acknowledge the leadership and vision of the contract manager, June Locklear.

The staff would also like to acknowledge contributions of the QEP CCHCs, the staff of the NC Health and Safety Resource Center, and the Office of the NC State Child Care Health Consultant.

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The Quality Enhancement Project for Infants and Toddlers

The Quality Enhancement Project for Infants and Toddlers (QEP), a project of the Department of Maternal and Child Health, School of Public Health, The University of North Carolina at Chapel Hill (UNC-CH), was funded by the Division of Child Development in 2000. The contract ended June 30, 2007.

Over the seven years of the QEP contract sixteen objectives were addressed, and they are listed below. The objectives involved a wide scope of activities specific to child care health and safety consultation. Each objective is discussed separately in the following sections.

- I. To expand a community-based system of child care health consultation specializing in Infant-Toddler child care.
- II. To provide on-line support for web-based child care health consultation qualification training.
- III. To provide quality enhancement grants to regulated child care providers.
- IV. To evaluate the impact of child care health consultation on the health status of children, especially infants and toddlers.
- V. To produce and distribute a bimonthly, 8 page health *Bulletin* for child care providers focusing on health and safety issues in regulated child care.
- VI. To produce and distribute a health and safety calendar for child care providers.
- VII. To evaluate whether state-of-the-art improvements in the physical environment of child care centers, combined with child care provider training and consultation, can reduce the risk of infectious diarrhea among infants and toddlers.
- VIII. To disseminate training in diaper-changing, hand-washing, food preparation, and sanitation to child care providers and to develop and disseminate activities for children on transportation safety, medication administration and emergency preparedness.
- IX. To establish a regional CCHC mentoring program for providing education and technical assistance to CCHCs and the out-of-home child care programs that they serve throughout NC.
- X. To develop a model community college child care health and safety course for providers of infant/toddler care in regulated out-of-home child care programs.
- XI. To facilitate the development of a standard statewide role description and competencies necessary for successful child care health consultation.

- XII. To develop an electronic version of the Daily Encounter Form, Evaluation Summary and Evaluation Worksheet.
- XIII. To develop a format for reports that can be generated from the electronic forms.
- XIV. To respond to phone, email and written queries from out-of-home child care programs throughout NC.
- XV. To translate the IT-SIDS curricula developed by the NC Health Start Foundation into a web-based training.
- XVI. To develop a training manual on Medication Administration and train RN CCHCs throughout NC.

Objective I. Expand a Community-based System of Child Care Health Consultation Specializing in Infant/Toddler Care

Fifteen local CCHC projects were funded by QEP in 2000. A total of 43 agencies competed for the 15 grants. During the course of year 3, two of the 15 projects dropped out and relinquished their funds. The remaining 13 projects competed for funding for a second CCHC position. Over the course of the seven years, 1646 child care facilities (697 centers, 809 homes, 69 religious-based and 71 federally funded) in 43 counties (Figure 1) were served by a QEP CCHC. 33,177 children were directly impacted by the CCHC services and 20,738 children had their child care records reviewed. When the Project began in 2000 there were approximately 49 CCHCs funded throughout NC. Currently, North Carolina has approximately 108 active, qualified CCHCs across the state, including the Cherokee Reservation and East Coast Migrant Head Start. Most were funded by local health departments or Smart Start funds, and all have been trained by the NC Child Care Health and Safety Resource Center (RC) and the office of the state Child Care Health Consultant. QEP was instrumental in the development of the network of CCHCs by establishing CCHC's in 43 communities and by requiring the QEP CCHC to demonstrate state of the art child care health consultation as defined in *Caring for Our Children: National Health and Safety Performance Standards: Guidelines for Out-of-Home Child Care Programs (CFOC)*. In addition, QEP supported the network of CCHCs by providing continuing education training throughout the seven years of the contract.

*The Quality Enhancement Project for Infants and Toddlers
Final Report*

Facilities Served by QEP by County 2000-2006

N=1646

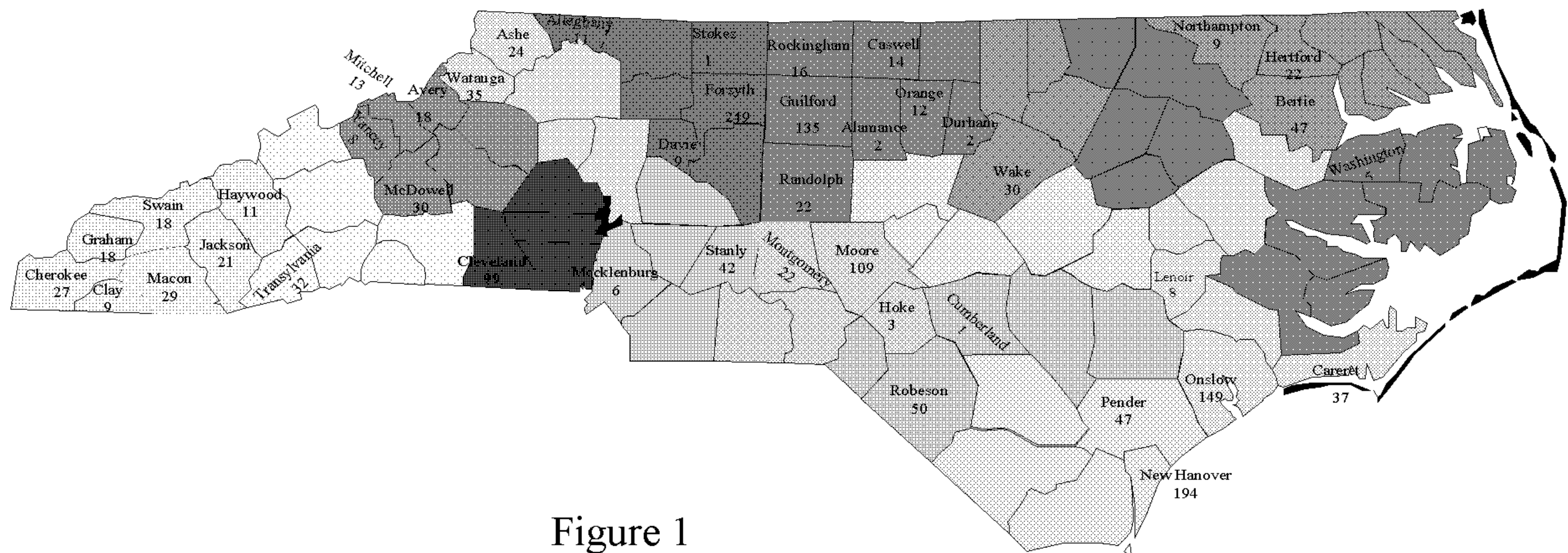


Figure 1

In order to promote change and convince local communities of the value of health and safety consultation in child care, QEP collected daily activity data and facility/child outcome data throughout the seven years. Three forms were developed for this data collection activity (the Daily Encounter Form, the Evaluation Summary and Evaluation Worksheet). These three forms were based on the standards and recommendations from *CFOC*. The forms are attached to this report (Attachment 1), and a summary of the results is provided below.

The QEP CCHCs spent 52% of their time over the four years of child care health consultation in: consultation with providers (OSC, OSO, TLC, TLO, IEO, IEC), training providers (TRO, TRC, HED), responding to requests (RFI) for information on health and safety topics and travel to the child care facilities. (Figure 2). QEP CCHCs were among the first CCHCs in NC and they were required to complete the qualification training and the development of a professional portfolio. Thus, 16% of their time was devoted to professional development. They also spent 18% of their time in administrative activities. This was in part due to the fact that they were involved in the two QEP research studies and this required additional paperwork and time in their office (e.g., negotiating with plumbers and electricians). Only 1.6% of their time was spent in direct health care services (DHS).

Percent of time CCHC spent by Activity from January 30, 2000-June 30, 2004

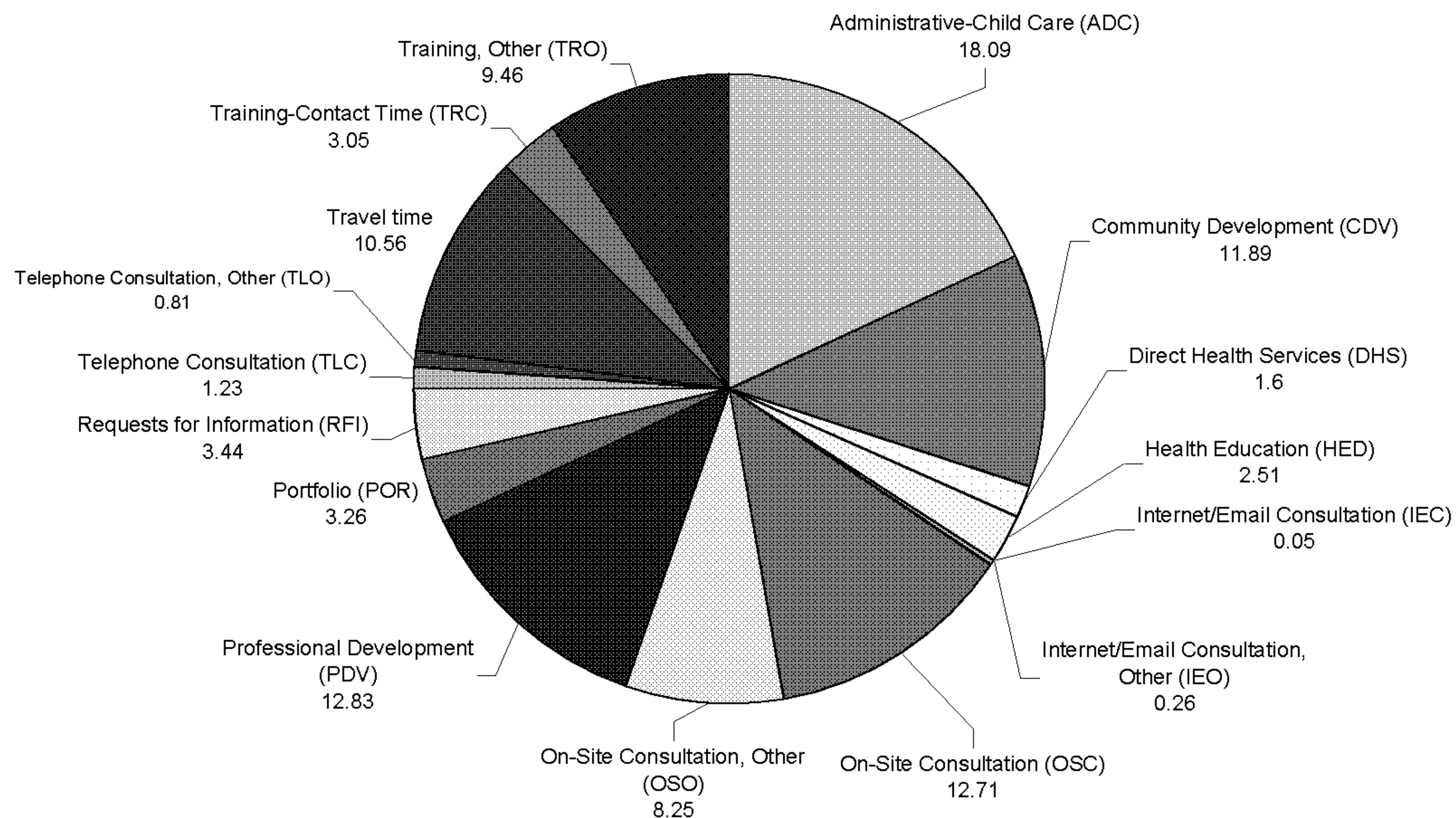


Figure 2

QEP also conducted numerous public awareness sessions at professional meetings such as: the National Smart Start National Conference, the NC Public Health Administrators Conference, the NC Public Health Association Conference, the NC Local Health Directors meeting, and the NC Local Boards of Health meeting. Through this medium QEP advocated for child care health consultation with local child care providers as well as with agencies and policy makers who have influence over monies that are used for children statewide.

QEP was successful in achieving Objective I as the number of employed, qualified CCHCs increased and the numbers of counties benefiting from the services of CCHCs also increased.

Objective II. Provide on-line support for Web-based Training for Child Care Health Consultation training.

QEP provided technical support to the NC Child Care Health and Safety Resource Center (RC) for the development and maintenance of an internet-based interactive training curriculum. This web site provides a distance learning component to the on-going Child Care Health Consultant Training Course. The Child Care Health Consultant Training Course has 4 parts. Two of the parts (2 and 4) are done face to face with the trainers and the consultants-in-training. The internet-based component provides access to the other 2 parts (1 and 3) necessary to complete the training from the CCHC trainees' homes or

worksites. The internet-based qualification training has trained 197 consultants to date, providing a pool of professionals with knowledge of both child care and child health.

QEP contributed to the RC's database development on the RC's homepage (www.healthychildcarenc.org). The Project provided support to the development of the informational database by providing resources and information from CCHCs, providers, Licensing Consultants and community agencies. In addition to the resources available, this website is used to post an electronic version of both the English and Spanish editions of the North Carolina Child Care *Health and Safety Bulletin (HSB)*. Pertinent news articles and links to other resources are also available on the website. A dynamic system links to the chapters from *CFOC* which are the foundation for the database. Using the national health and safety standards as a starting point, topics are researched for the state regulations that apply, for pertinent CDC information, and for additional websites that provide useful and reliable information on the topic.

Objective III. Provide Support for Quality Enhancement Grants to Child Care providers across NC

Quality Enhancement Grants (renamed Provider Enhancement Grants, or PEGs) were awarded to licensed child care centers and family child care homes. In total there were five rounds of PEGs. The total amount awarded was \$2,105,413.

The PEG process was competitive. Following a formal Request for Application that reached nearly 10,000 licensed child care facilities via the year 2000 child care health and safety calendar, an Approval Committee consisting of representatives of the NC Child Care Resource and Referral Network, DCD, DPH, Environmental Health (DENR), Smart Start, and QEP reviewed all of the applications that satisfied the administrative criteria for consideration, and rank-ordered the applications according to a quantitative score. Providers were funded in diminishing score order until the budgeted funds were exhausted. Table 1, Figure 3 and Figure 4 summarize the PEG activity. A total of \$2,105,413 was distributed statewide.

QEP sub-contracted part of the PEG process to The Network, a statewide coordinating office for local Child Care Resource and Referral Agencies (CCR&R). Specifically, The Network tracked the submission of final reports from the child care programs that received PEG awards. Several final reports were difficult to secure but repeated face to face visits by the CCHC and The Network staff were successful in securing the reports. Final reports were received from 535. This represents 99% of the programs that received grants. Seven final reports were not received. One provider died and the other programs closed without leaving any forwarding or contact information. Intense detective work by The Network failed to locate the responsible individuals.

Statistics for PEG Rounds I-V.

| Round | Submitted | | Awarded | |
|--------|-----------|-----------|---------|-----------|
| | Number | Amount | Number | Amount |
| I. | 40 | 107,482 | 26 | 68,158 |
| II. | 133 | 631,165 | 116 | 410,157 |
| III. | 199 | 1,027,923 | 140 | 481,921 |
| IV. | 232 | 821,477 | 129 | 431,457 |
| V. | 338 | 1,886,215 | 131 | 713,720 |
| Totals | 942 | 4,474,262 | 542 | 2,105,413 |

Table 1

Distribution of PEG Dollars by Region.

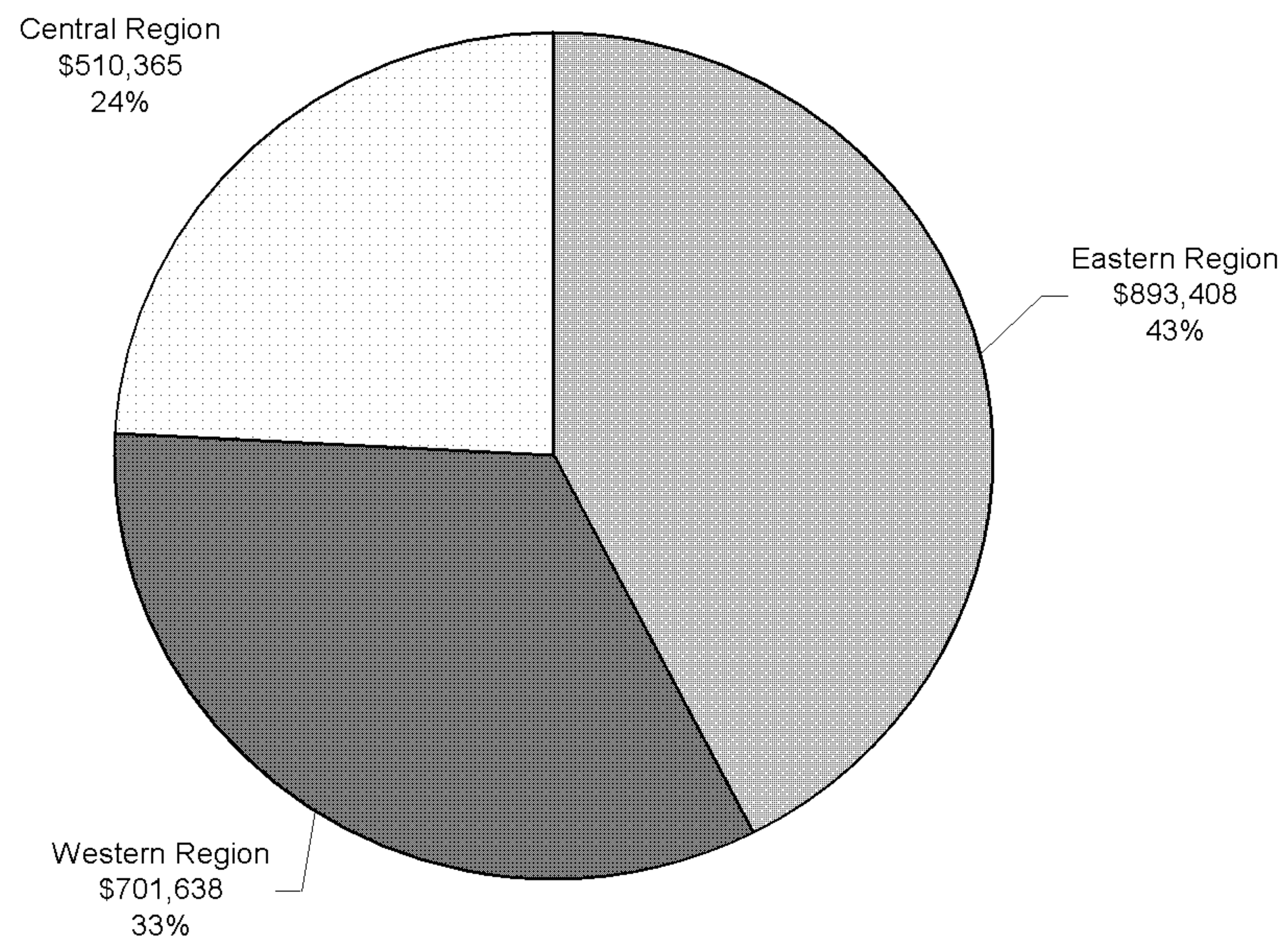


Figure 3

Distribution of PEG Dollars by Nature of Award.

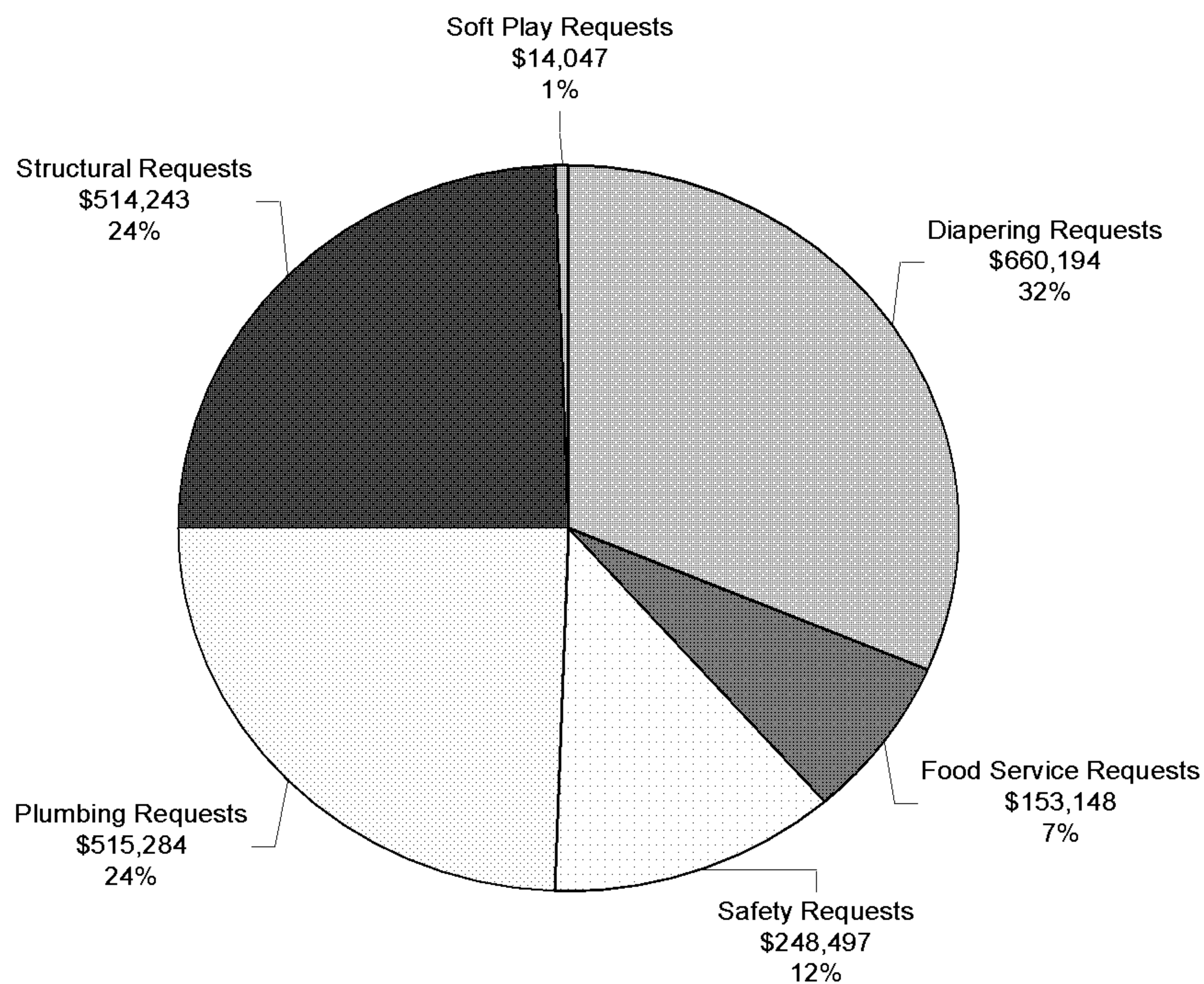


Figure 4

Evacuation Cribs

In collaboration with The Network, QEP also distributed 1,680 evacuation cribs to provide emergency egress from group child care for infants (and non-ambulatory toddlers) throughout North Carolina. Each crib cost \$305 for a total of \$512,400. By distributing the evacuation cribs throughout the state, a primary prevention tool was given to facilities across the state at no cost to them for the safety of infants and toddlers in their care.

Objective IV. Evaluate the Impact of Child Care Health Consultation

QEP CCHCs participated in a two year study to evaluate the impact that child care health consultation may have on both child care facility characteristics and on indicators of health and access to health care among the children participating in out-of-home child care. Attachment 2, a paper submitted for publication entitled *Child Care Health Consultation Improves Child Care Health Policies, Health Practices, and Children's Access to Health Care*, is appended to this report.

The study concluded that child care health consultation had a positive impact on health and safety policies and practices at the child care facility level and on indicators of health

status and access to health care at the child level. First, the data indicate a positive impact on the quality and completeness of written health and safety policies in child care facilities in NC based on state and national standards. The data also indicate a positive impact on observed health and safety practices at the facility level. Data based on health records on file in the participating child care facilities suggested small but significant improvements in use of medical care homes, health insurance coverage, recommended immunizations, screening tests, and well child physicals in the past year among children, especially infants and toddlers, in facilities served by CCHCs. The improvements, although small in absolute terms, are both statistically and practically significant. Given that there are about approximately 253,626 children in regulated out-of-home child care in NC, were child care health consultation services available statewide and were 11.7 % more children up-to-date in their immunizations as was the case in this study, then the number of fully immunized preschoolers could increase by 28,837 children. Even small but statistically significant improvements can have a meaningful effect on the health of preschool children statewide and presage lasting impacts when preschoolers enter kindergarten.

Unfortunately, we were unable to demonstrate a consistent decline in either absences or medically-attended injuries among children in out-of-home care. The numbers of medically-attended injuries were too small to generate stable rates. As for absences, although they declined in the first year, there are numerous reasons why they may have bounced back in the second year, such as unpredictable infectious disease outbreaks in the community, turnover of child care children and staff (and of the CCHCs themselves in some cases), recording errors, etc.

Objective V. To produce and distribute a bimonthly, 8 page health *Bulletin* for child care providers focusing on health and safety issues in regulated child care. The North Carolina Child Care Health and Safety Bulletin was produced in both English and Spanish versions.

From 2000 until 2005, QEP worked in collaboration with the RC to produce the *NC Health and Safety Bulletin (HSB)*. The *HSB* is a bi-monthly publication addressing health and safety issues in regulated child care. The RC provided most of the content, and QEP managed the printing and distribution, although at various points in time QEP staff also contributed to the content. All licensed child care centers and family child care homes, community colleges, child care health consultants, and state child care licensing consultants received a copy of the English version. The Spanish version was distributed through local CCR&Rs. Issues of the *Bulletin* can be reviewed on-line at www.healthychildcarenc.org, and copies are attached to this report (Attachment 3).

The *Health and Safety Bulletin* continues to be positively received by child care providers. In 2003, QEP conducted a survey to determine the usefulness of the *HSB* to the child care providers. The survey revealed that family child care providers valued the *HSB* the most. It was speculated that the family child care providers, who often operate in isolation from other providers and support systems, value the *HSB* because it connects them to current information and provides a sense of support for the work that they do.

Objective VI. To produce and distribute a health and safety calendar for child care providers in both English and Spanish

From 2000 until 2005, QEP worked in collaboration with the RC to produce the Health and Safety Calendar. Copies of the calendar were distributed to all licensed child care programs, to early childhood community college staff, all active NC qualified CCHCs, and to key stakeholders (e.g., DCD staff, CCR&R staff). The quality and value of the Health and Safety Calendar was recently recognized nationally by the receipt of the National Health Information Award.

Objective VII. To evaluate whether state-of-the-art improvements in the physical environment of child care centers, combined with child care provider training and consultation, can reduce the risk of infectious diarrhea among infants and toddlers

The results of this evaluation are presented in Attachment 4. The paper describing this study, entitled *Hand-washing and Diapering Equipment Reduces Disease Among Children in Out-of-Home Child Care Centers* (2007), was published in *Pediatrics*.

The study concludes that high quality diapering, handwashing and food preparation equipment, characterized by seamless, impermeable counter tops and touchless faucets and cabinet doors, is associated with significantly fewer episodes of diarrhea among children and fewer sick days among staff. Behavioral change strategies for reducing illness in out-of-home child care can be more effective if this source of contamination is controlled. Both improved staff hygiene and sanitation behavior and state of the art diapering and food preparation equipment are necessary for optimal illness prevention.

Objective VIII. To disseminate training in diaper-changing, hand-washing, food preparation, sanitation to child care providers and to develop and disseminate activities for children on transportation safety, medication administration and emergency preparedness.

Training materials were developed and published in conjunction with the statewide network of CCHCs. The first training manual was specifically for child care providers (*Keep It Clean*) and three products were designated as activities for children. These training materials are described below.

Curriculum for Child Care Providers

Keep It Clean addresses the knowledge, attitude and behavior of child care providers concerning hand-washing, diaper-changing/toileting and food preparation. The curriculum was developed as part of the Health Child Care Environments study listed in Objective VII above. Training of trainers and materials were provided to all qualified NC CCHCs. The curriculum continues to be given to all newly qualified CCHC by the RC. (Attachment 5)

Activities for Children

Medication Administration in Child Care. This topic was considered inappropriate for infants and toddlers, and a new objective was developed to address the needs of the child care providers. (See Objective XVI.)

Transportation Safety activities for children.

Transportation Safety Enhancement Activities teach infants and toddlers about transportation safety using puppets, groups of young children, songs adapted from popular children songs and enticing stories. Infants and toddlers may not fully understand the “why” of what is done for transportation safety, but they may be able to prompt a parent/caregiver about transportation safety by singing, humming or saying a word or phrase when they are in a vehicle. The activities provide interactive learning on four main transportation safety topics: pedestrian, traffic light, helmet, and car seat safety. It is common knowledge that children learn best when something interests them, when it is familiar to them and enjoyable. These activities tap into their interests using modalities appropriate for infants and toddlers. The activities are appended to this document in Attachment 6.

Emergency Preparedness activities for children. The citizens of NC agonized as terrorist attacks (e.g., 9/11/01), violence from our own citizenry (e.g., Oklahoma City), severe weather conditions (e.g., the ice storm of 12/02) and natural disasters (e.g., floods in March of 1998) occurred throughout our nation. Between 1998 and 2003, North Carolina experienced 12 significant weather events, extended power outages, numerous deaths, and property losses that added up to millions of dollars. What these experiences clearly demonstrate is a lack of preparedness for such emergencies and a need for coordinated guidance in dealing with emergency situations in child care.

Children and child care staff respond calmly and appropriately when they are prepared for emergencies and when they have practiced emergency routines, as was demonstrated over and over again when fires engulfed child care facilities in our state. The *Emergency Preparedness Enhancement Activities* were designed to provide children in child care and the staff that care for them, knowledge about emergencies and ways to react to when faced with an emergency. Attachment 7 presents these activities.

In conclusion, *Keep It Clean* and the *Enhancement Activities* provide practical, interactive guidance that promotes the prevention of negative health outcomes in child care by preparing the children and staff. We may never know the true extent of the impact of these materials because they are preventive in nature. However, numerous other child care health consultant professionals across the US have recognized the value of the materials and have requested copies for use in their state.

Objective IX. To establish a regional CCHC mentoring program for providing continuing education training and technical assistance for CCHCs and the out-of-home child care programs that they serve throughout NC.

From July 1, 2004 until June 30, 2006, nine QEP CCHCs were designated CCHC mentors. There was considerable controversy concerning the “regionalization” of the QEP CCHCs. This controversy was in part due to the fact that non-QEP CCHCs viewed a regional position as a supervisor and that the statewide network of CCHCs was not consulted about regionalization prior to its introduction. Thus, the first months of a QEP CCHC “working within a region” proved challenging, and 3 QEP CCHCs resigned. Those who remained on board (6) worked to be seen as advisors/supporters and not as supervisors. Each CCHC was assigned a region of responsibility. (See Figure 5) More than 300 mentoring visits were conducted by the remaining 6 QEP CCHC during the two year period. This is even more impressive when you consider that during the first six months of the regionalization there was considerable controversy and discontent from seasoned CCHCs and this controversy limited the number of requested mentor visits. Figure 6 demonstrates that 8% of the CCHC’s time involved mentoring activities.

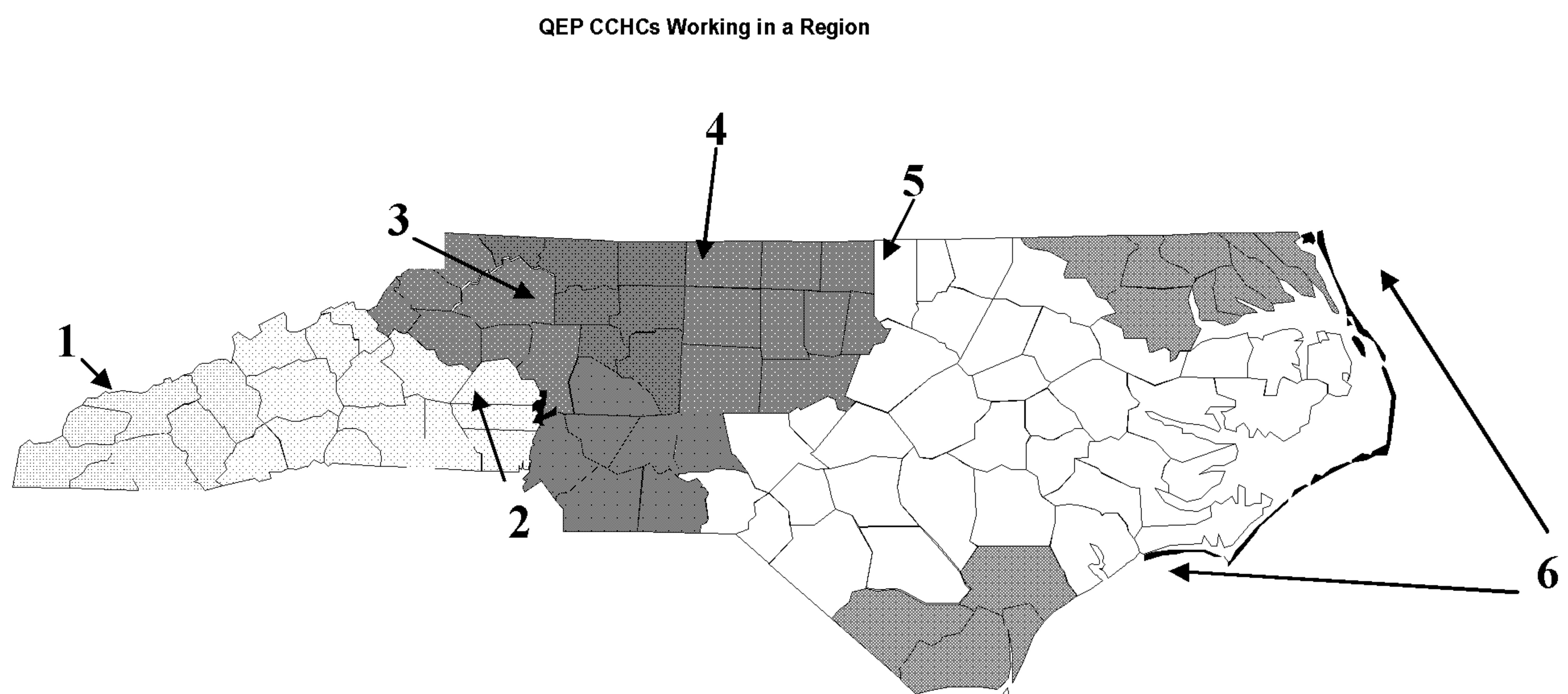


Figure 5

An additional issue involved the fact that the QEP CCHCs “working within a region” were asked to promote “systems change” in communities within their region. Many counties in each region did not have CCHC services for their child care programs. This was difficult for the QEP CCHCs as most of them previously had been funded by a local entity to work in only one county. Thus, their existing network was no longer sufficient to perform their new tasks, and they did not know the early childhood and health professionals in the other counties in their region. Therefore, considerable basic public awareness and relationship building was required (12% of their time). The QEP CCHCs were also required to assist communities in

locating funds and defining the agency responsible for the CCHC services. An intervening barrier to the success of establishing new professional positions was a very tight public budget period (e.g., state employees did not get a cost of living increase). In spite of the barriers to this activity, progress was made, and new positions were created or were written in to long term plans. To accomplish all of this the QEP CCHCs conducted numerous public awareness sessions throughout NC. Meetings with community leaders involved the following agencies: CCR&Rs, local Partnerships for Children boards, local boards of health, local health directors, Local Interagency Coordinating Councils, Pediatric Community Alliances, Community Healthy Coalitions, Racial Disparities committees, Family Support networks, local county child care directors meetings, the Asthma Coalition and Safe Kids groups as well as local radio shows and newspaper articles.

Direct services to local child care programs dropped from over 50% during the consultation years (2000-2004) to 8% during the mentoring years (2004-2006) as the CCHCs were instructed to slowly reduce the time they spend assisting providers and to focus on supporting CCHCs and promoting quality “state-of-the-art” child care health consultation. In addition about 1/2% of their time was spent in supporting CCHCs in regions other than their own. See Figure 6.

Percent of time CCHC spent by Activity from July 1, 2004-June 30, 2006

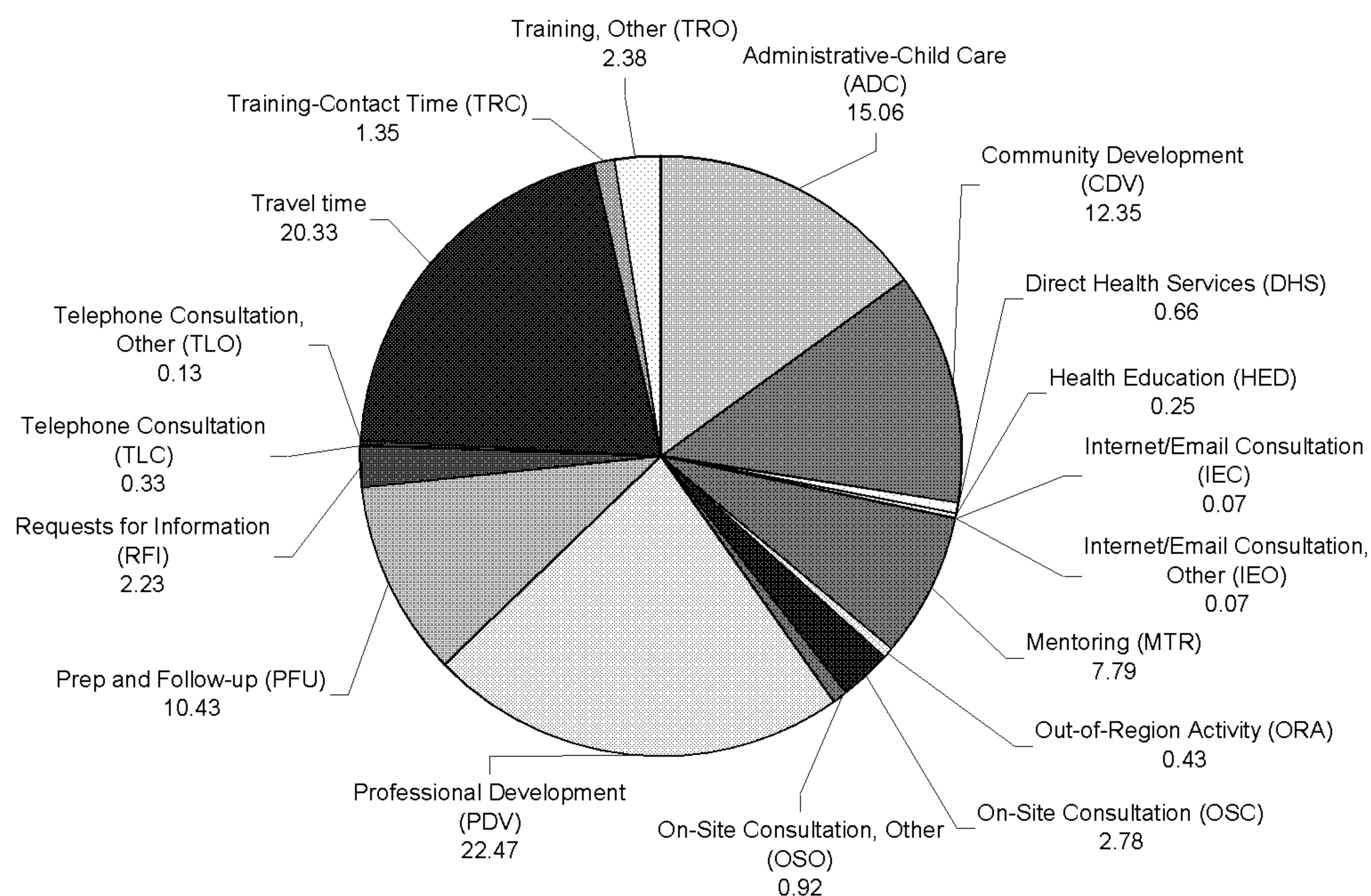


Figure 6

The QEP CCHCs “working within a region” was an idea that mirrored the DCD regionalization concept for technical assistance for child care (e.g., behavioral specialists, infant specialists, preschool specialists). However, the network of local CCHCs were not

adequately educated or prepared for the concept when it was rolled out. Some thought that the concept was imposing a new layer of supervision. The most experienced CCHCs expressed concern that the positions should have been opened up for recruitment statewide rather than just moving the QEP CCHCs in to the role. In time, however, the CCHC network realized the benefit of a regional CCHC (even a CCHC who may have less direct service experience than someone in their region) and they all expressed concern when the funding ended. A job description was developed for the regional CCHC and is attached to this report (Attachment 8).

Objective X. To develop a model community college health and safety course for providers of infant/toddler care in regulated out-of-home child care programs.

During the year that this objective was worked on, it was determined that there was considerable resistance from the community college faculty to integrating additional coursework into their existing curricula. Therefore, this objective was deleted. Subsequently, new efforts out of the Office of the State Child Care Health Consultant has resulted in CCHC course in Schools of Nursing at North Carolina Central University and Western Carolina University.

Objective XI. Facilitate the development of a standard statewide role description and competencies necessary for successful child care health consultation.

The role of a CCHC differed from county to county, and many CCHCs, although trained and qualified by the state training provided by the Resource Center, were performing tasks that were beyond a consultation role such as direct health care services (e.g., developmental screening). Often their role was dictated by the local Health Department they worked for and not by the funding agency (Smart Start) or their training or the guidance provided in *CFOC*. QEP facilitated monthly committee meetings to define the role of the CCHC in NC and the competencies necessary for the role. The state CCHC then assumed the responsibility for the development of a standard role description and competencies.

Objective XII. Develop electronic version of the Daily Encounter Form, Evaluation Summary and Evaluation Worksheet.

The Daily Encounter Form, the Child Care Evaluation Summary and Child Care Evaluation Worksheet gathered information on how each CCHC spent every day on the job as well as what impact the CCHC's had on the policies and practices of child care facilities and the health and safety of the children in those settings. It was determined that a paperless version of the forms would facilitate statewide use of the forms and would also allow for rapid generation of data reports at both the county and state levels. The initial attempt to create the web-based form, which would interact with the NACCRRA data base, failed, and the task was then given to Frank Porter Graham Child Development Institute's Design and Statistical Computing Unit to complete. The interaction with the NACCRRA data base again was not successful, but an electronic version of the DEF was produced.

A transdisciplinary committee designated "The Common Forms Committee" (CFC) was formed in 2003 to oversee the development of the electronic form. The committee

consisted of representatives from early childhood agencies, Child Care Health Consultants, programmers from the FPG Child Development Institute, RC staff, the NC Division of Child Development staff, NC Division of Public Health staff, NC Partnership for Children staff, and the Quality Enhancement Project for Infants and Toddlers UNC-CH staff. The committee met monthly for more than two years modifying and “electronifying” the forms. The forms’ complexities included data necessary to meet the reporting needs of various funding and employing agencies.

The EDEF was piloted by QEP CCHCs for 10 weeks, and then the QEP staff offered a series of hands on trainings across the state. It was then made available to all CCHCs across NC on January 1, 2005. On July 1, 2006, all Smart Start funded CCHCs were required to use the EDEF. The local Smart Start Partnerships that fund a CCHC have the capability of generating reports on their CCHCs’ for their county.

After 6 months of using the EDEF

- 85 CCHCs and 30 supervisors/funders were trained in using the EDEF by the QEP-CCHCs and staff
- 19 CCHCs and 34 supervisors/funders were trained/tutored by their colleagues
- 89 CCHCs across North Carolina entered data on the EDEF
- 25 CCHC supervisors generated reports
- 39 CCHC funders generated reports
- 153 people used the system in 52 counties.

When the EDEF first rolled out, QEP CH staff received more than 300 emails a month from CCHC and their supervisors. The emails involved questions on a variety of issues including: difficulties accessing the form, time requirements to complete the form, interpretations of fields on the form, etc. The number of emails decreased over time but continued to be received as new CCHCs began using the form. Questions from the field were valuable for: defining fields, adapting/changing the EDEF, etc. To address the most common questions, QEP staff sent out a “topic of the month” via email to all EDEF users and their agencies. (See Attachment 9.)

QEP staff presented six month statewide data at the 2006 National Smart Start Conference March 2006 Greensboro, NC. Specifically it was reported that:

- 33.5% of child care centers receive CCHCs services
- 22.2% of family child care homes receive CCHCs services
- 33.6% of religious facilities receive CCHCs services
- 434 Primary National Health Safety (NHS) codes were used 18,199 times. The 434 codes naturally fell into the following 16 groups (suggesting that the CCHCs are working on similar activities/topics).

- | | |
|-------------------------------|-------------------------------|
| 1. CCHC Services | 9. Infectious Disease |
| 2. Child Abuse | 10. Medication Administration |
| 3. Children with Disabilities | 11. Nutrition |
| 4. Emergency Plan | 12. Oral Health |
| 5. Facility | 13. Parent |
| 6. Hygiene | 14. Role of Support Agencies |
| 7. Illness Policy | 15. Sleep |
| 8. Immunization | 16. Transportation |

- The top 100 most frequently used Primary NHS codes were used 86.7% of the time.

Figure 7 demonstrates that most consultations and trainings across the state directly impacted the children (N=95,362) participating in child care. The next group benefiting from the CCHC activities are the families (N=41,834). Finally, the teachers (N=12,015) and the facility directors (N=3,767) benefited.

Sum of the Greatest Number of Target Groups by Consultation, Training, and DHS

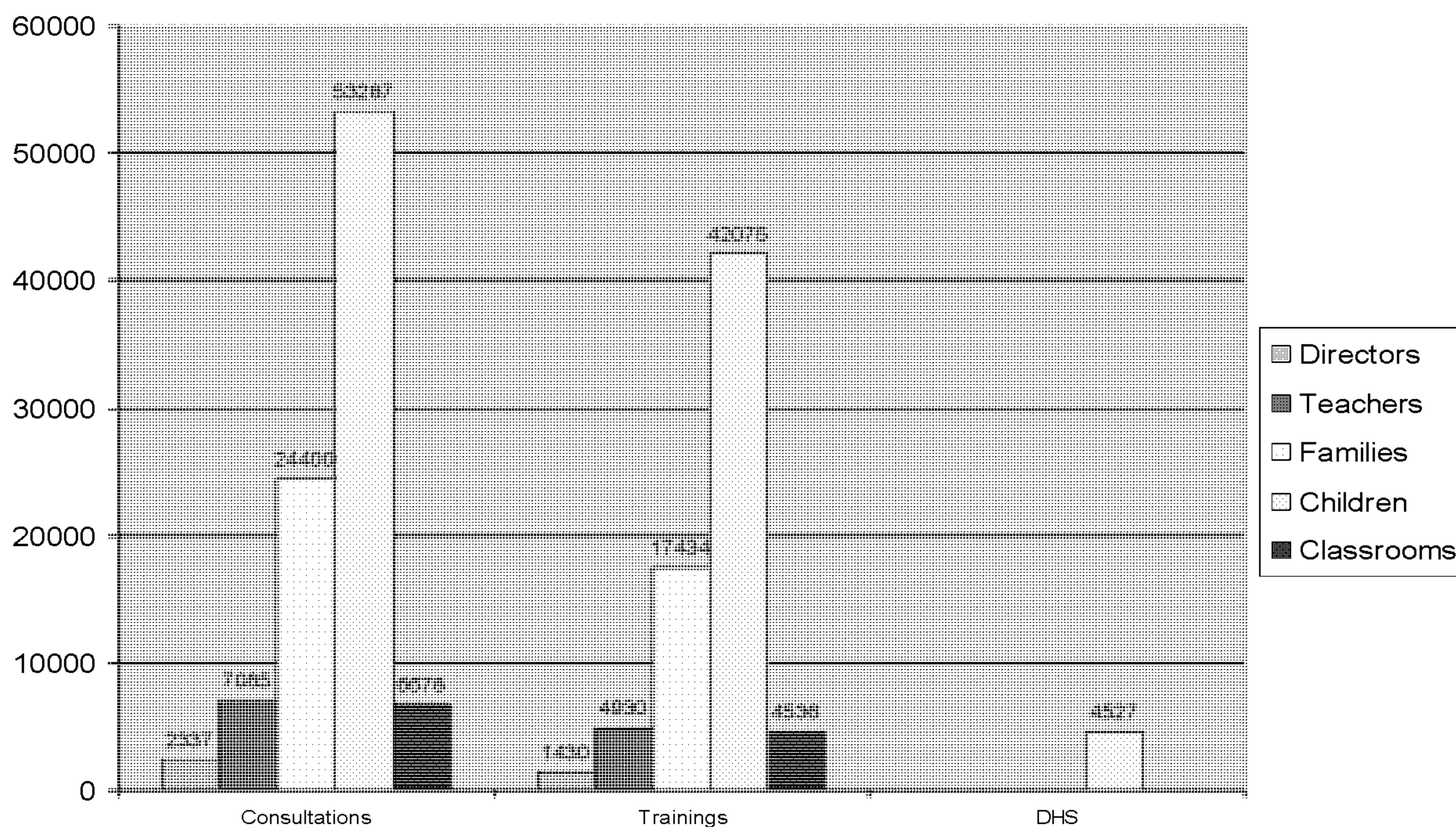


Figure 7

When the monetary support for the EDEF ended, some CCHCs expressed pleasure that they would no longer be required to track their time and activities with the form. However, several other consultants and their agencies were interested in continuing to use the EDEF. This would have involved an annual service fee to cover the cost of

access and maintenance. This still remains an option. Three counties that continue to be involved child care health and safety projects in collaboration with the Department of MCH at UNC-CH are planning on continuing to use the EDEF.

Objective XIII. Develop a format for reports that can be generated from the electronic forms.

The format for reports was developed in collaboration with the NC Partnership for Children, local Health Departments, local CCHCs, DPH and the DCD. Many CCHCs and agencies positively commented on the ease of generating required reports and of the ability to compare their county work with statewide data. Examples of the reports are provided in Attachment 10.

As with the EDEF, there were some CCHCs who did not value the electronic report generation. It was never determined if this was due to the fact that their individual reports: were used as a supervisory tool by their agency, did not match favorably with state data, were too much work, were difficult for them because of their computer skills or for some other reason. Other CCHCs were delighted with the ease of report generation. Anecdotally, one CCHC reported in a meeting in Waynesville that reports that had taken one week to prepare now took 5 minutes.

Objective XIV. Respond to phone, email and written queries from out-of-home child care programs throughout NC.

From January 2002 through June 2006, a QEP staff member (75% FTE) was housed at the RC. During this time the staff member fielded 8,782 phone calls, 3,594 email queries, and 171 requests via the website on health and safety topics from 99 of NC's 100 counties and 169 sites outside of NC. In addition, 11,404 orders for materials were taken and filled. These requests included the laminated posters developed by the project (e.g., hand-washing, diaper-changing, medication administration, etc). Topics of this information exchange included: communicable disease, training for CCHCs, *Health and Safety Bulletin*, first aid/safety, SIDS, immunization, child with special health care needs, DCD regulations, training/library materials, conferences and administrative questions. The calls were mainly from child care centers (2,262), family child care homes (815), and child care health consultants (1,692). However, many other early childhood professionals also contacted the QEP staff member, specifically: Health Departments, CCR&R agencies, universities, Smart Start agencies, state agencies, Head Start, public schools and DCD licensing consultants. (See Attachment 11.)

Objective XV. Translate the IT-SIDS curriculum developed by the NC Health Start Foundation into a web-based training.

This objective was completed and the curriculum is currently available on the RC website. It is available once a quarter and continues to train trainers. To date 115 potential trainers were accepted into the web-based training, and 106 have completed the training.

The training prepares CCHCs, infant toddler specialists and others to provide the ITS-SIDS training for child care professionals throughout the state. NC Child Care Rule .0705 requires directors and any child care provider scheduled to work in the infant room,

including volunteers counted in staff/child ratios working in a child care center licensed to care for infants 12 months of age or younger, to complete ITS-SIDS training within four months of beginning work, and to complete it again every three years from the completion of previous ITS-SIDS training. NC Child Care Rule .1705 requires family child care providers caring for infants 12 months and younger to follow the same ITS-SIDS training requirements. The train-the-trainer course is designed to be completed in 1 month.

The distance learning is internet-based and is completed on the Blackboard Learning System available through UNC at Chapel Hill. It is internet accessible and has software requirements. The training is provided at no cost. The trainers take the knowledge and materials from the course and offer ITS-SIDS training in their counties and communities. In selecting participants, priority is given to child care health consultants and infant toddler specialists. If a county has need for additional trainers it must either meet the eligibility criteria or be approved by DCD to become an ITS-SIDS trainer.

Objective XVI. Develop a training manual on Medication Administration and train RN CCHCs throughout NC.

The *Medication Administration in Child Care* manual and accompanying training were developed in 2006. The development of the manual/training was facilitated by QEP staff and technical expertise was provided by a committee of RN CCHCs. Initially, only RN CCHCs were invited to become trainers. This is based on the NC Nursing Practices Act which specifies that only RNs can train other individuals in methods of administering medication. However, when concern was raised that there were not enough RN CCHCs to cover the state a modification of the trainer qualification was instituted that allowed a team approach to the training. Chapters one and five of the manual do not involve instruction on the direct administration of medication and were therefore deemed to be appropriate for professionals other than RNs to teach. These two chapters provide an introduction to the importance of the correct administration of medication in child care and guidance for the development of a medication administration policy. Non-RN CCHCs and early childhood staff such as CCR&R of local Partnership for Children staff became involved in the training. Chapters 3, 4 & 5 involve techniques and skills for administering a variety of medications. Only RN CCHCs are trained on these chapters. The *Medication Administration in Child Care* manual is attached (Attachment 12)

At the end of the contract there were 35 counties that needed a qualified trainer to deliver the curriculum. The need for trainers is displayed by county below, and the RC assumed the responsibility for facilitating future training.

*The Quality Enhancement Project for Infants and Toddlers
Final Report*

| | | | | |
|--------------|---------------|----------------|------------------|----------------|
| 1. Alleghany | 8. Clay | 15. Hoke | 22. Polk | 29. Tyrell |
| 2. Ashe | 9. Columbus | 16. Jones | 23. Sampson | 30. Union |
| 3. Avery | 10. Dare | 17. Lee | 24. Scotland | 31. Vance |
| 4. Bertie | 11. Franklin | 18. Lincoln | 25. Stokes | 32. Warren |
| 5. Brunswick | 12. Graham | 19. Mitchell | 26. Surry | 33. Washington |
| 6. Carteret | 13. Granville | 20. Nash | 27. Swain | 34. Yadkin |
| 7. Chowan | 14. Halifax | 21. Perquimans | 28. Transylvania | 35. Yancey |

A *Medication Administration Resource Guide* was developed to augment the training and provide each trained facility with a quick reference. The *Guide* is attached to this report (Attachment 13).

Impact of the Objectives

The Quality Enhancement Project for Infants and Toddlers has enjoyed considerable success in achieving its objectives. The PEG grant process engendered a significant amount of good will for the state among providers, in addition to making health and safety improvements, as documented by licensing consultants and child care health consultants. \$2,105,413 was distributed to licensed facilities. Infants/toddlers and immobile children were safer because of the emergency egress evacuation cribs that were provided.

With respect to the child care health consultant projects, QEP CCHCs provided child care health consultation services in 43 counties in our state at various points in time. These communities would not otherwise have access to these services, and data indicate that child care health consultation had a positive impact on health issues and health policies in licensed child care facilities in North Carolina. Absences went down (although not enough to achieve statistical significance), and there were small but important improvements both in reported use of medical care homes, enrollment in health insurance, up-to-date immunizations, and well child physicals and health screenings among children, especially infants and toddlers, in facilities served by the QEP CCHCs.

Two significant curricula (*Keep It Clean* and *Medication Administration in Child Care*) were developed and continue to be used throughout NC. Time and resources made it impossible to measure the health and safety impact of these trainings. Perhaps in time, after the trainers have disseminated the information from the manuals to much larger number of the state's child care facilities, a retrospective review of indicators linked to sanitation/hygiene (e.g., scores on the Environmental Rating Scales) and the number of reported medication errors will provide the proof of their effectiveness.

The reports generated from the Electronic Daily Encounter Forms demonstrate a strong network of CCHCs delivering health and safety services for children and their child care facilities. The value of a single, statewide data collection system is yet to be affirmed by the stakeholders. However, it remains the most convincing method for justifying the continuation of CCHC services to policy makers who control the resources necessary for

their survival. When the value of common data at the local, county, regional and state levels is realized, the system is ready to be re-activated.

The *Health and Safety Bulletin* and the annual Health and Safety Calendar provide current information on topics that impact the health and safety of the children participating in out-of-home child care. The *Bulletin* addresses everyday reoccurring needs such as outdoor play and safety in the sun, but it also is able to deliver information on “hot” topics that are of imminent interest (e.g., a flu outbreak). Both the *Bulletin* and the Calendar give providers information on daily, weekly and/or monthly health and safety events that can be incorporated into the children’s daily activities (e.g., SIDS month, National Emergency Preparedness week, Stand for Children day). This allows child care providers to modify and link their daily activities to topics that the children may see or hear in their home and community.

The Common Forms Committee (CFC), although initiated to electronify the data forms, provided a forum for the development of a standard statewide job description for CCHCs. The EDEF was designed to capture the scope of activities that were performed by CCHCs in local communities throughout the state. This information provided a complete baseline summary of the CCHC activities and allowed for an examination of the appropriateness of the broad scope of activities provided by the existing network of CCHCs. A sub-committee of the CFC then worked with CCHCs across the state to draft a standard job description. The state CCHC, a member of the CFC, developed a list of competencies necessary to perform the tasks outlined in the draft job description. Until these discussions and work began, the roles of CCHCs differed dramatically from county to county despite the standard qualification training that all NC CCHCs received.

The QEP staff person at the RC generated considerable good will by her willingness to research and respond quickly to queries. Housed in Raleigh, she provided resources to CCHCs as well as broadcasting questions and responses to CCHCs and early childhood professionals.

Major Project Accomplishments

1. The publication resulting from the study *Hand-washing and Diapering Equipment Reduces Disease Among Children in Out-of-Home Child Care Centers* received national attention. The importance of hand-washing is a well established fact, but the novel idea that child care facilities must consider the use of quality equipment for the control of infectious illness was emphasized.
2. The study on the impact of CCHC services, to be resubmitted to a professional journal, provided evidence concerning the value of a CCHC for both center level and child level outcomes. Thus, local early childhood professionals now have data to present to local agency personnel when they are advocating for child care consultation. Children and staff will be safer when every child care facility has the services of a CCHC.
3. The *Health and Safety Bulletin* and Calendar are now established resources for the staff in out-of-home child care facilities throughout the state. Cutting edge and

- standard practice health and safety information support the staff daily through these mediums.
4. The pilot of the mentor CCHC role was the first in the nation. As more counties employ local CCHCs the need grows for a structure that will promote the provision of high quality standardized CCHC services. There is now evidence that this approach can work for child care health consultation in NC.
 5. The development and distribution of child handwashing, infant handwashing, diaper changing, and medication administration laminated posters to all licensed child care facilities in NC provided the local out-of-home child care providers with practical, concrete, standard information that they can use to improve the safety and health of the children in their care. The posters provide step by step guidance to the child care providers and the children that they serve.
 6. The curricula that were developed, *Keep It Clean* and *Medication Administration in Child Care*, are available statewide and training is offered constantly by a significant number of child care health consultants. The training will have an impact on child care in NC for years to come.

Unanticipated Benefit

1. The need to meet regularly to discuss the progress of the contract provided a forum for agencies interested/involved in child care health and safety consultation to regularly get together and talk. Bonds were built and remain intact to this day. The nature of child care health consultation, a concept developed under “Healthy Child Care America” a public health initiative, requires access to facilities managed by the NC Division of Child Development. Thus, two major state agencies needed to plan for the service. Other early childhood agencies, specifically NC Partnership for Children and the network of Child Care Resource and Referral agencies, were also interested in collaboration because they were involved in child care facilities locally and were providing training on some health and safety topics. True collaboration was achieved as monies from each of the agencies were dedicated to the CCHC initiative.

Recommendations for the future

1. Require that all regulated child care providers have a documented, regular relationship with a qualified CCHC.
2. Collaborate with other state agencies and early childhood organizations (DPH, Smart Start, R&R Network, etc.) to assure the resources necessary for there to be sufficient numbers of qualified CCHCs across the state to serve all regulated child care providers.
3. Require child care facilities to up-grade equipment that is used in diaper-changing, hand-washing and food preparation. The equipment must be impermeable, with seamless surfacing. In addition, automatic faucets and foot-activated, roll-out waste bins for soiled diaper disposal will minimize contact with the equipment by soiled hands, thus reducing the potential spread of infectious agents.

4. Follow-up all training with child care providers with regular, on-site reinforcement. A secondary finding from the study *Hand-washing and Diapering Equipment Reduces Disease Among Children in Out-of-Home Child Care Centers*, defines the importance of follow-up to all continuing education of child care providers. Over the course of seven months, the child care providers hand-washing and diaper-changing behaviors steadily improved and at the end they achieved an almost perfect rating.
5. In collaboration with DPH, re-institute a regional network for the support of CCHCs. As the network of CCHCs grows and all counties in NC utilize the services of CCHCs, support must be provided to maintain consistency and quality of the service and reduce the number of qualified CCHCs who leave child care health consultation for another job.
6. Provide basic/common training of all Child Care Technical Assistants (CCHCs, I/T Specialists, Behavior Specialists, Preschool Specialists). Technical Assistance professionals who are trained together can reinforce each other's message whenever they are in a child care facility if they are aware of what each is telling the child care provider. Conversely, uncoordinated technical assistance confuses providers when conflicting information is provided.
7. Standardize statewide, common data collection (preferably internet-based) on CCHC services so that the future impact will be documented. Such documentation will encourage local, county and state agencies to expand the number of CCHCs.
8. Encourage local agencies that fund CCHC positions to follow "state of the art" competencies and roles. It is easily demonstrated that consultation has an impact on a larger number of individuals than direct health services. The logic is simple. If consultation/training is provided to a classroom teacher, all of the children in the classroom will benefit. If consultation/training is provided to a director of a facility then possibly all of the teachers and children in the facility will benefit. Core competencies and a standardized role description will provide the clarity that local agencies employing CCHCs need to best serve their community.
9. Whenever a new idea is to be piloted that may have an impact on the CCHCs, the idea should be presented to the network of CCHCs first before it is disseminated. The "buy in" of the CCHC network through their professional Association is critical to the success of any new idea.
10. Interagency collaboration at the state level must be maintained as it is the key to the successful continuation and growth of this new service.
11. Require that each child have an annual well child physical recorded on a standardized (hopefully internet-based) form in order to participate in out-of-home child care. It is an established fact that young children get ill more frequently than older children and adults. This is in part due to the fact that their immune systems are immature, they are closer to the floor where germs grow and they put things into their mouths. It is also well established that when a child is ill he or she may lose developmental skills. (All states have documented this in their plans that address "the extended school year".) To recoup lost skills

requires additional time and often additional services. The institution of a required annual well child visit will insure that some children remain healthy and will not require time for recoupment.

This one step could also improve the percentage of children who are current on their immunizations and may begin a process of lifelong preventive health behavior which is a benefit to the individual and to society as a whole.

12. Invest monies in future research and evaluation activities such as those that QEP was involved in: important health and safety topics that address policy initiatives that are important to DCD, to child care providers and to children and families.
13. Invest in the development of new training modules to disseminate the lessons learned from the above research and to reach child care providers through their CCHCs with state of the art training on new health and safety topics as these are identified.

Summary

QEP acted as a stimulus for the discussion and development of new and innovative ideas and for interagency collaboration in the area of health and safety in out-of-home child care in NC. The monthly QEP contract meeting and the CFC meetings allowed creative ideas to be generated and discussed. These two groups explored the benefits and constraints of many ideas and were successful in implementing several.

We also believe that many children in NC who participated in out-of-home child care are healthier and safer. This is because QEP CCHCs provided services in counties with limited resources and personnel. We know that in the past the health and safety subscale scores on the Environmental Rating Scales for star-rated licensing assessments were the lowest category of all subscale scores. We look forward to the next round of rating visits and to a verification of improvements in those scores.

Finally, the staff of QEP would like to express our gratitude for the opportunity to work on such an exciting project. Our hope is to utilize the knowledge gained on future projects involving child care health consultation in NC.



AUGUST 2009

Issue Brief

North Carolina's ABCD Program: Using Community Care Networks to Improve the Delivery of Childhood Developmental Screening and Referral to Early Intervention Services

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ABSTRACT: Between 2004 and 2008, North Carolina's Assuring Better Child Health and Development (ABCD) program quintupled the number of screening tests administered during Medicaid well-child visits to identify young children at risk for developmental disabilities and delays. Referrals to Early Intervention programs quadrupled, helping to increase the percentage of infants and toddlers receiving Early Intervention services statewide—from an estimated 3.0 percent in 2003 to 4.3 percent in 2008. As a result, fewer North Carolina children are entering school with unrecognized or untreated developmental problems. Key elements of the ABCD program include identifying standardized screening tools and training physicians on how to implement them without disrupting the workflow of their practices; building providers' knowledge of referral agencies; helping their practices develop processes for tracking cases; and establishing working relationships with community agencies to enhance communication and bridge gaps in understanding.

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OVERVIEW

Between 2004 and 2008, North Carolina's Assuring Better Child Health and Development (ABCD) program quintupled the number of screening tests administered during Medicaid well-child visits to identify young children at risk for developmental disabilities and delays that can compromise their growth and readiness for school. Referrals to Early Intervention programs quadrupled, helping to increase the percentage of infants and toddlers receiving Early Intervention services statewide—from an estimated 3.0 percent in 2003 to 4.3 percent in 2008. As a result, fewer North Carolina children are entering school with unrecognized or untreated developmental problems.

To implement the program, North Carolina relied on 14 local community care networks—collectively known as Community Care of North Carolina—that serve low-income children and adults enrolled in Medicaid or the Children’s Health Insurance Program. The networks, which strive to forge partnerships between physicians and other local stakeholders, helped introduce easy-to-use screening tools, educated medical providers about community resources, and enhanced communication between those providers and the agencies and organizations to which they refer children for services.

This report profiles the activities of three diverse community care networks that used varied approaches to accomplish the aims of the ABCD program.¹ One hired an Early Intervention specialist to work directly with medical practices; a second partnered with another nonprofit organization that provided funding to hire a local program coordinator; and the third relied on existing community resources to accomplish its goals.

Key elements of the ABCD program include identifying standardized screening tools and training physicians on how to implement them without disrupting the workflow of their practices; building providers’ knowledge of referral agencies; helping their practices develop processes for tracking cases; and establishing working relationships with community agencies to enhance communication and bridge gaps in understanding. In addition, the creation of uniform statewide referral forms may promote more reliable information flow. The experiences of these networks suggest that the Community Care of North Carolina public–private partnership structure has proven valuable in disseminating a statewide initiative in a way that is flexible and responsive to local needs. Critical ingredients of success include supportive state policy, visionary leadership, and collaboration among stakeholders at both the state and local levels.

THE ISSUE

The first five years of life play a pivotal role in a child’s future. During these years, children advance through stages of physical, cognitive, and linguistic

development that are crucial not only for their health and happiness, but also for their academic and life success.² The early identification of developmental disabilities and delays allows some children the opportunity to overcome or adapt to them before entering school; it also may prevent the need for more costly interventions later. For example, recognizing children with speech and language delays or disorders and providing therapy can help them overcome expressive difficulties.³

Identifying and treating such problems requires a well-coordinated system of care at the community level—one that ensures health care providers in private systems and the community agencies that provide Early Intervention services through public systems collaborate with one another. Often, such collaboration is lacking. Many health care providers who have frequent contact with children under age 5 during well-child visits are unaware of the government agencies and nonprofit social service groups that help children with developmental disabilities and delays.

The agencies, in turn, report difficulty communicating with physicians about referrals. They may not get a timely response when they seek to follow-up on a referral or obtain authorization for additional services. Physicians—especially those who are accustomed to receiving written reports after referring patients to a specialist for treatment or consultation—find the haphazard communication frustrating as well. Without receiving some form of feedback after a patient has been referred to a community agency, they may become discouraged from making referrals, or even from conducting developmental screening, because they cannot judge whether their efforts in helping children are effective.

The lack of a well-functioning system to coordinate services for children with developmental deficits puts children who are at risk in further peril. If a parent misunderstands the nature of a referral or has trouble navigating the system, it may take months for the referring physician to discover the problem, during which time a valuable opportunity for treatment is lost. Unfortunately, such events are common.

“In times past, a primary doctor might make a referral and never find out if a family has gotten to that referral because the child may not be due back for an exam for six months. And then the child would come back and you’d find out the parent had trouble making it there, or they didn’t understand when they got the packet of information in the mail from a new agency who it was from,” said Marian Earls M.D., a Greensboro, N.C.–based developmental pediatrician.

In North Carolina, the low rates at which medical practices referred children for Early Intervention services suggested there were many missed opportunities to address children’s problems before they became more limiting and costly to treat. A 1999 study by the state legislature found that only 2.6 percent of North Carolina children ages 0 to 3 were receiving Early Intervention services, even though a statewide task force estimated that as many 8 percent to 13 percent would benefit and qualify for such services.⁴

One of the reasons so few North Carolina children were referred was that medical practices were infrequently screening children for developmental deficits and delays. Within the Medicaid population, only 15.3 percent of the infants and toddlers were tested for deficits in 2000.

ABOUT THE PROGRAM

North Carolina’s ABCD program aims to increase the rate at which providers in the state perform developmental screenings and the rate at which they refer children to other agencies for help. It also seeks to improve service coordination across agencies involved in Early Intervention. A key part of accomplishing these goals is improving communication between medical offices, social services agencies, and families. Toward that end, the program focuses on:

- identifying standardized screening tools and training physicians on how to implement them without disrupting the workflow of their practices; and
- helping providers forge relationships with community agencies and other partners to better coordinate care for children with disabilities.

TARGET POPULATION

ABCD seeks to identify Medicaid enrollees under age 6 who would benefit from Early Intervention services.⁵ This population includes children eligible for services under the federal–state Children’s Health Insurance Program (CHIP); in North Carolina, such children are enrolled in Medicaid until age 6.

To reach that group and ensure their care is well coordinated, the state also needed to encourage collaboration between the pediatric and family medicine practices that care for such children and the agencies that serve children with developmental disabilities. In North Carolina, children with developmental disabilities are served by two public agencies, which fulfill the requirements of the federal Individuals with Disabilities Education Act (known as IDEA). From birth until age 3, children are eligible for evaluation and service coordination services from the state’s Children’s Developmental Services Agencies (CDSA). From age 3 until they enter kindergarten, children with developmental disabilities and delays are served by similar, federally funded programs run by local school systems (Exhibit 1).

In North Carolina, local public health departments and private–public partnerships serve children whose needs are not severe enough to qualify them for CDSA or school services (Exhibit 2 describes a partial list of these groups).

HOW IT WORKS

To help increase rates of developmental screening and referral to Early Intervention services, North Carolina turned to a statewide system of 14 local community care networks—collectively known as Community Care of North Carolina (CCNC)⁶—that serves almost 1 million low-income individuals enrolled in the state’s Medicaid and CHIP programs.⁷ This population included almost 312,000 children under age 6 as of February 2009.

Community care networks are local nonprofit organizations that bring physicians together in a partnership with other local stakeholders such as hospitals, community health departments, and social service

Exhibit 1. Infant-Toddler Early Intervention and Preschool Exceptional Children Programs in North Carolina

Infant-Toddler Early Intervention Program: Eighteen Children’s Developmental Services Agencies (CDSAs) serve the state’s 100 counties under the supervision of the North Carolina Division of Public Health’s Early Intervention Branch. The CDSAs coordinate Early Intervention services for infants and toddlers from birth to age 3 in assigned counties. When a child is referred to a CDSA, the agency determines the child’s eligibility for services, develops an individualized family service plan if necessary, and makes and monitors referrals to community-based providers who specialize in areas of development for which the child needs services. Those may involve cognitive, physical, and adaptive developmental domains as well as social-emotional skills and language acquisition. If such providers aren’t available locally, the CDSA may provide the service directly.

Preschool Exceptional Children Program: North Carolina has 115 local school systems, known as Local Education Agencies (LEA), that coordinate special education and related services for 3-, 4-, and 5-year-old children who have developmental disabilities and delays and have not yet entered kindergarten. They provide these services with technical assistance from the State’s Department of Public Instruction, which is responsible for ensuring that the schools comply with federal and state regulations. For most of these children, school employees (such as licensed psychologists) provide the Early Intervention services; occasionally, the schools hire community providers to do so.

According to North Carolina policy, only the parent of a child or the school system can initiate an official referral for an evaluation for special education services. When a physician notifies the school system that a child may need services, the school contacts the family to determine the need for a referral. When a referral is made, the school system conducts an evaluation, determines eligibility for services, and develops an individualized education program for qualified children. The school system provides the results of the eligibility determination to the physician. The system also will follow up with the doctor if the family refuses services (Appendix 3).

agencies to help improve the accessibility, quality, and efficiency of care delivery. Together they cover the state’s 100 counties and include 1,324 medical practices with approximately 3,500 to 4,000 primary care physicians.

Each network has a clinical director to lead quality improvement initiatives throughout his or her network. The clinical directors meet as a statewide group to analyze data and set goals for new initiatives. The clinical directors, in turn, present information from these meetings to the medical management committees in their local networks. Those committees, which include representatives of local medical groups, implement the state-level initiatives and develop local improvement initiatives as needed.

Once a network has committed to a quality improvement initiative, such as reducing hospitalizations and emergency department visits among patients with asthma, it typically relies on case managers to communicate the details of the program to local physicians. The case managers are employed by the networks and assigned to work with medical practices to

monitor care and implement a variety of disease management programs. The majority of the case managers are nurses; some are social workers or health educators.

The ABCD program was introduced to the networks in a similar fashion. The networks’ medical management committees determined how to implement the program locally. Some chose to use case managers to convey the details of the ABCD program to medical practices. Other networks partnered with a nonprofit organization, Smart Start, which provided funding to hire ABCD coordinators. Many of these coordinators had a background in early childhood development or social work and special knowledge of developmental screening and Early Intervention services.

Like the case managers, the ABCD coordinators typically worked in network offices and traveled to medical practices to provide education and training to clinicians. The coordinators also served as liaisons between the medical practices and the CDSAs and schools that provided Early Intervention services.

Exhibit 2. Community Programs and Organizations Partnering with CCNC Networks

Many of the CCNC networks that seek to improve screening and referral rates have benefited by partnering with other organizations and programs that focus on improving child development and health care services. These include:

Smart Start, a nonprofit organization that funds programs in every North Carolina county geared to improving the health and educational readiness of children. Programming is determined by the local affiliates (known as Local Partnerships), which assess needs and administer state and private funding. There are 79 such groups in the state, some of which have existed for 10 years or longer. The nonprofit North Carolina Partnership for Children, Inc., provides oversight and technical assistance to the Local Partnerships.²³

Smart Start began seeking greater linkages with the medical community in 2001, when one local Smart Start partnership began working with rural medical practices to support developmental screening. The statewide organization now funds ABCD programs in eight counties, each of which receives \$40,000 per year as part of a two-year grant. In some counties, the Smart Start program works with the local CCNC network. In others, the group works directly with physicians or hospitals. Smart Start receives funding from the state and private donors.

North Carolina has an **Interagency Coordinating Council**, as required by the federal government, which meets quarterly to advise North Carolina's departments of Health and Human Services and Public Instruction and other agencies on the needs of children with disabilities.

The state also has 89 **Local Interagency Coordinating Councils**, which include representatives of CDSAs, schools, health care providers, Smart Start programs, nonprofits, and parents of children with special needs. The Councils promote local Early Intervention services and identify gaps in services or barriers to them at the county level. "There's variation among those councils in part because they are primarily volunteer," said Deborah Carroll, Ph.D., head of the state's Early Intervention Branch, which oversees the local CDSAs. "Some rural counties don't have as many options for whom to call on to even be on the council, and may end up with the same people—the same three people—having to do all the work that 30 people would do in an urban county."

Head Start is a federally funded preschool program designed to meet the health, emotional, and nutritional needs of children. Nationally, 12.8 percent of children enrolled in Head Start have some form of disability.

Medicaid Health Check Coordinators are community outreach workers who are deployed throughout the state to ensure that children enrolled in the Medicaid program receive comprehensive and preventive health, dental, and vision care, known as Early and Periodic Screening, Diagnostic, and Treatment services, as mandated by federal law. The coordinators, whose services are paid for by the Medicaid program, track Medicaid patients using a state database and use this information to help providers identify and reach patients in need of care.

The North Carolina Office of Rural Health and Community Care acts as the CCNC's central office to provide resources, information, and technical support to local networks.

Physician practices are paid on a fee-for-service basis for their participation in their local community care network. They receive an additional \$2.50 per member per month from the state to cover the cost of providing preventive care and around-the-clock access, coordinating specialty care, and participating in the network's care management and quality improvement activities.⁸ The state pays local networks \$3.00 per member per month to support local staffing, provide

case management services, and fund the local quality and efficiency initiatives.

To expand the model of the program to primary care physician practices that were not affiliated with the state's community care network, ABCD project leaders teamed up with representatives of state medical groups, Medicaid, and the Office of Rural Health and Community Care to develop a curriculum for providers that explained how to integrate screening tools into practices and develop a community system for screening and referral.

Community Care of North Carolina encourages collaboration among network leaders on a statewide

basis. An ABCD Quality Improvement Committee draws local community care network executive directors and clinical coordinators together from across the state to share issues and learn from their experiences in implementing developmental screening at the local level.

Another important feature of North Carolina's ABCD program is its state-level advisory group, which was created within the first year of the program to improve communication among providers, community agencies, and government. Members of the advisory group meet on a quarterly basis to address policy and reimbursement issues necessary to sustain the model, among other issues. It includes senior-level representatives of:

- American Academy of Family Medicine (North Carolina chapter);
- North Carolina Pediatric Society;
- Office of Rural Health and Community Care;
- North Carolina Division of Medical Assistance;
- Division of Public Health;
- Department of Public Instruction;
- Child Development Services Agencies;
- North Carolina Interagency Coordinating Council;
- North Carolina Division of Mental Health, Developmental Disabilities and Substance Abuse Services;
- Family Support Network of North Carolina; and
- North Carolina Partnership for Children (also known as Smart Start),

The ABCD advisory group works on tasks that would be difficult to accomplish at the local level, such as expanding the scope of screening to include measures of socio-emotional problems and creating generic referral forms for use by physicians across the state, as well as generic forms for agencies to use to communicate with physicians. The forms that the advisory group produces carry the logos of the participating organizations and government entities to convey widespread

endorsement. The group has created a universal referral form for CDSAs and has collaborated with the North Carolina Department of Public Instruction to create a similar form for the schools (Appendices 1 and 2).

PROGRAM DEVELOPMENT AND IMPLEMENTATION

A critical step in developing the ABCD program was piloting a method of screening that would appeal to physicians, who reported that tests for developmental disabilities and delays were too costly or time-consuming.⁹ For that, the state turned to Earls, a developmental and behavioral pediatrician whose practice in Greensboro, N.C., cares for children in families with low incomes (at, or below, 200 percent of the federal poverty level). The practice, Guilford Child Health Inc., operates in partnership with two local health systems and county agencies and serves 60 percent to 70 percent of the children covered by Medicaid and CHIP in Guilford County.

Staff from Guilford Child Health clinics worked with employees from the State's Office of Rural Health and Community Care to pilot new screening, referral, and parent education protocols. To screen children for developmental problems, the group decided it would be most efficient to use a parental assessment such as the Ages and Stages Questionnaire, a validated parental survey of child development, and to have parents fill out the survey during scheduled well-child visits.¹⁰

Using a screening tool based on parental assessments, rather than providers' observations, proved to be more reliable because the parents have a more comprehensive view of their children's strengths and weakness. Using parental assessments, which are easy to score, also freed up busy office staff. But using a new tool required provider education and monitoring. To do that, Partnership for Health Management, the CCNC network with which Guilford Child Health is affiliated, hired an Early Intervention specialist to visit practices and review charts. The Early Intervention specialist assisted practices that needed help using the screening tools or making referrals (the profile of Partnership for Health Management, below, offers additional detail about the specialist's role).

- As a result of the new methods of screening and monitoring, the Guilford Child Health clinics in the pilot program increased the percentage of children who were screened for developmental disabilities from 7 percent in 2000 to 62 percent in 2002. By 2009, the rate had increased to 90 percent.
- The rate of referral for Early Intervention services averaged 7 percent of the participating clinics' pediatric patients in the first two years of the pilot (2000 to 2002), compared with a statewide average during this time frame of 2.9 percent.¹¹ By tracking children who received a referral for Early Intervention services, the pilot leaders found that more than 95 percent of families completed their initial evaluation and almost 70 percent received some type of developmental intervention service.

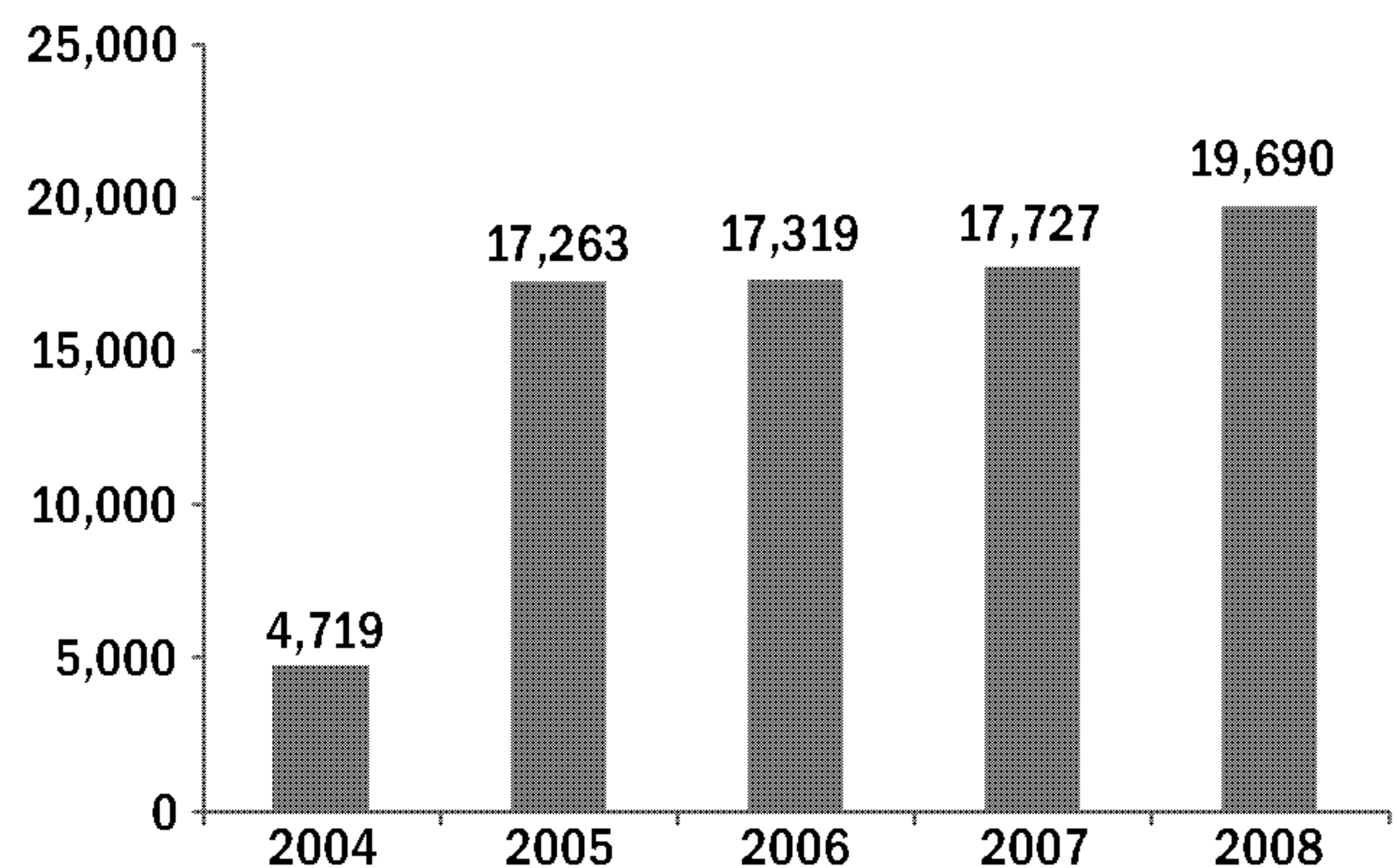
In 2004, based on the success of the pilot project, state Medicaid policymakers mandated that all providers perform developmental screening during well-child visits for children who are six, 12, 24, 36, 48, and 60 months of age. (The visits are paid for under Medicaid's Early and Periodic Screening, Diagnostic, and Treatment, or EPSDT, program.) Since July 2005, North Carolina's Medicaid program has had the right to refuse to pay for a well-child visit unless it includes a developmental screen.¹²

The policy change had a dramatic impact on referrals across the state, said Chris Collins, M.S.W., acting assistant director for managed care for the North Carolina Division of Medical Assistance and acting deputy director of the Office of Rural Health and Community Care. Referrals of children under age 3 to the CDSA increased nearly fourfold, to 17,263 in fiscal year 2005, from 4,719 the year before (Exhibit 3).¹³

The rate of screening for developmental disabilities also has increased dramatically statewide. Eighty percent of well-child visits now include a developmental screen, compared with only 15 percent in 2000. Among children from birth through age 5 enrolled in Community Care of North Carolina, the number of

Exhibit 3. Number of Referrals to the Infant-Toddler Early Intervention Program: Children Under Age Three Years

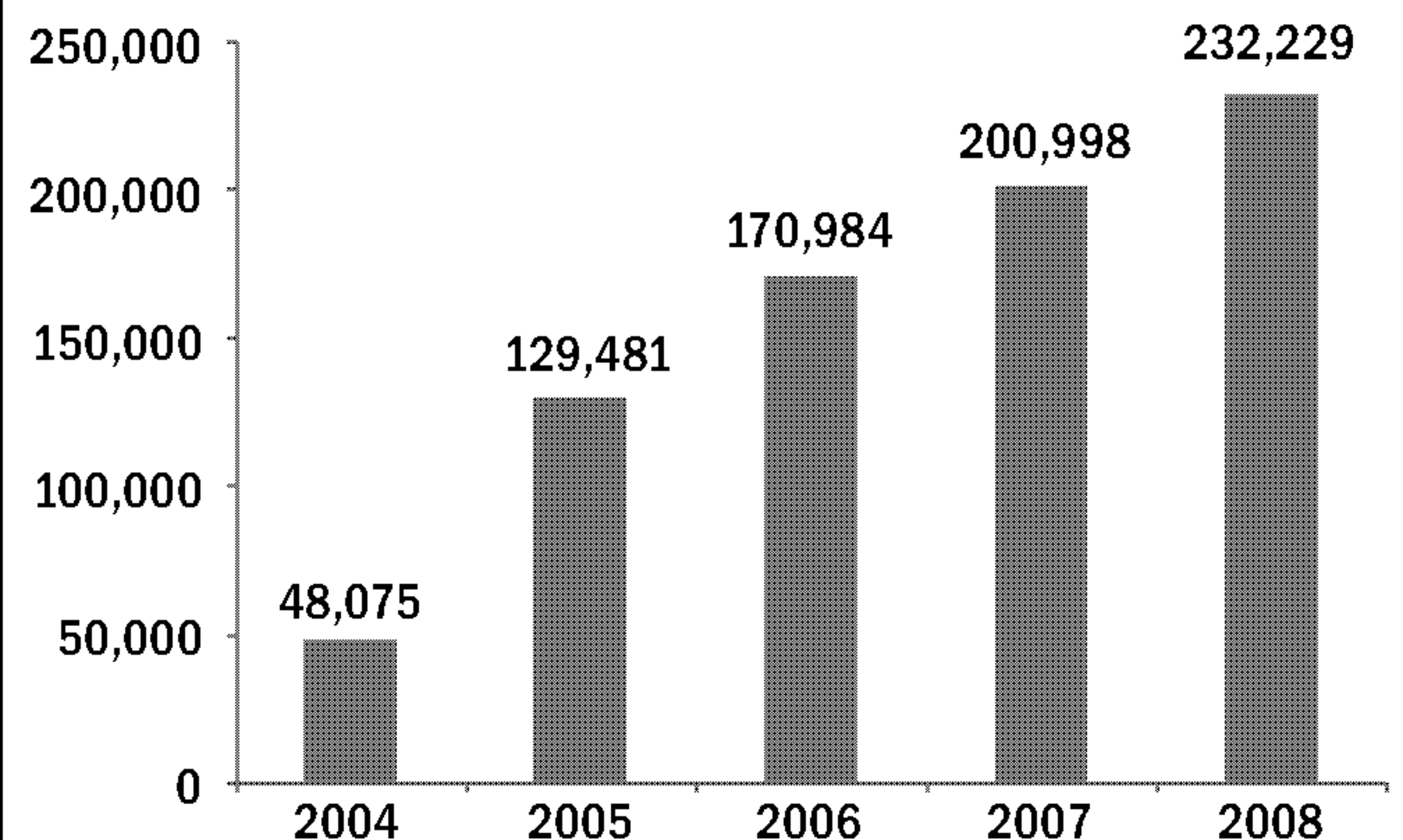
Number of referrals, by state fiscal year



Source: NC Early Intervention Program 2007-08 At-A-Glance (2004-07) and the North Carolina Department of Health & Human Services, Division of Public Health, Early Intervention Branch (2008 data).

Exhibit 4. Number of Developmental Screenings Completed at Medicaid EPSDT* Visits: Community Care of North Carolina

Screenings among children ages birth through age five, by state fiscal year



*EPSDT = Early and Periodic Screening, Diagnosis, and Treatment, Procedure Code 96110.
Source: North Carolina Division of Medical Assistance

screenings performed as part of Medicaid EPSDT visits increased nearly fivefold, to 232,229 in 2008 from 48,075 in 2004 (Exhibit 4).

Network Profiles

CCNC gave local networks latitude to develop programs consistent with their particular resources and needs. As a result, the networks used varying staffing models and community partnerships to achieve their shared aims of increased screening, referral, and coordination of care. The following profiles of three CCNC networks illustrate three different approaches in diverse settings: a metropolitan area, a market dominated by a transient military population, and a rural area.

PARTNERSHIP FOR HEALTH MANAGEMENT

Counties: Guilford, Randolph, and Rockingham

Medicaid and CHIP enrollees: 45,529¹⁴

Number of enrollees under age 6: 15,012 (33% of total enrollees)

Practices: 30, ranging in size from a single provider to practices of 20 providers

Medical offices: 37

Providers: 179, including 16 nurse practitioners and 5 physician assistants

Key staff: Claudette Johnson, president; Marian Earls, M.D., medical director

Region: With two large cities (Greensboro and High Point), Guilford County has a variety of services for children with developmental disabilities. Residents of neighboring Randolph and Rockingham counties, which are more rural, tend to cross county lines to use Guilford County's speech and hearing, physical therapy, and mental health specialists.

The Partnership for Health Management (P4HM) includes Guilford Child Health Inc., the Greensboro-based practice that served as a pilot site for the state's ABCD model and serves about two-thirds of the children enrolled in Medicaid and CHIP in Guilford county (the network also includes 29 other physician practices). Guilford Child Health is one of the most advanced practices in the state in terms of the breadth and depth of screening. Its providers not only screen for developmental disabilities, but also for indicators of socio-emotional difficulties such as maternal depression. The network also benefits from having Earls, one of the state's leading authorities on early childhood development, as its medical director.

Activities to Increase Screening

P4HM gave medical practices the option of using one of two tools: the Ages and Stages Questionnaire (ASQ) or the Parents' Evaluation of Developmental Status (PEDS).¹⁵ Both surveys are completed by parents and can be scored in less than five minutes by office staff.

The ASQ, which detects potential problems in the areas of communication, gross motor skills, fine motor skills, problem solving, and personal/social skills, costs \$199.95. Spanish-language editions are similarly priced. After purchasing the kit, practices may make unlimited copies of the questionnaire. The PEDS form, which assesses similar developmental skills, costs \$30 for 50 response forms and 50 scoring forms. Although the tool costs less, its authors do not allow copying, so practices must reorder forms at the same price as supplies are exhausted.

To help practices implement the new screening tools, the network hired an Early Intervention specialist, Amy Jobe, B.S., who has knowledge of developmental disabilities and experience working with families and children. Jobe visited practices to assess their existing protocols and help organize workflow to incorporate screening into the office routine. Her salary was paid with the case management fees the network receives from the state.

Because Jobe kept regular hours in some of the larger providers' offices, she came to play an integral role in the screening. She spent two days a week at the network's largest practice and visited smaller practices as needed. Having dedicated time in the medical practices enabled the providers to schedule more difficult screenings while she was present. For example, Jobe would administer a follow-up social-emotional screening (using a special version of the Ages and Stages Questionnaire) if social or emotional issues were identified in the initial screening. She also performed screenings when language barriers existed.

The network tracks its performance on screening through state-generated quarterly reports, which focus on primary care practices that perform at least 50 EPSDT exams per month. These reports, which are available to every network, indicate whether those practices use the CPT code to bill for a development screen. The state's Medicaid office identifies practices that use the code on less than 70 percent of well-child visits. To help them, P4HM conducts outreach and offers technical assistance in implementing developmental screening into office practice. "For some it was just a billing thing. They didn't know how to use the

CPT code correctly. For others, it was that they were trying to do screening, but because they hadn't gotten it into their office flow very well, they don't always get it done," Earls said.

Among children from birth through age 5 enrolled in P4HM, developmental screenings at Medicaid well-child visits increased more than three-fold, from 3,257 in 2004 to 10,592 in 2008.

Activities to Increase Appropriate Referrals

In addition to training providers about developmental screening, Jobe educated the practices about the community agencies to which they might refer children, as well as other resources. For each of the 15 primary care practices she worked with, she created a notebook that informed providers of the range of services available to children, based on the children's ages and needs. This reference prevented mix-ups that had occurred when practices sent referrals to the wrong agencies (e.g., to the CDSA instead of the school system). In such cases, the resulting rejection letters might go unnoticed for weeks or months by busy office staff. She also helped to streamline referrals that became complicated when parents crossed county lines to see doctors. "Each county can dictate how their programs work, so our Early Interventionist has to know what happens in each county and what those resources are," Johnson said.

Jobe also helped coordinate referrals to Early Intervention and other programs such as Head Start, and found resources for children who didn't qualify for federally or state-funded services.

The percentage of children from birth to age 3 who received Early Intervention services in 2008 was 4.5 percent in the three P4HM counties (ranging from 3.0 percent to 5.5 percent by county). This represented a 70 percent increase from a rate of 2.6 percent in 2003 (ranging from 1.5 percent to 4.5 percent by county).¹⁶

Activities to Encourage Follow-Up

The Early Intervention specialist acted as a liaison between the providers and the community agencies. This proved useful for physicians, who were frustrated by the lack of feedback from agencies and schools. Feedback is especially important to primary care

doctors, who are often asked to sign off on referrals for physical therapy and other services, Earls said.

To keep local providers informed, the specialist created a referral tracking form for the office, which documented the agency to which a child was sent, the services they qualified for, and whether the family had declined services. If a family declined services, she put the form into their doctor's inbox so he or she could follow up with the family immediately.

When necessary, the specialist, who had previously worked for the predecessor agency to the CDSA in Guilford County, could pick up the phone and find out what happened to a child and thus help close the information loop. She typically communicated that information verbally to physicians.

One of Jobe's first assignments was to establish positive working relationships with all of the community groups to which practices might make referrals. "I made appointments and sat down with them and said, 'here is my job. I'm working directly with physicians and can talk to them. What do you want me to take back to them? How would you like for this relationship to work?'"

The specialist also tracked down families who missed appointments. She would talk to these families by telephone or meet with them in their homes to address their concerns and help them overcome barriers to getting services, such as a lack of day care. Earls said the follow-up was crucial: "It is abundantly clear that if left to our own, there would be a lot of families that wouldn't make that first contact. Having this close relationship really makes a huge difference."

The CDSAs found the Early Intervention specialist useful for making contact with physicians, too. Given their busy schedules, physicians might take several days to return a call from a CDSA case manager seeking information about a child. The specialist could expedite this communication in the practices where she kept regular hours.

Families also benefited from having an Early Intervention specialist embedded in the physician practice. "You have a person who is right there in the physician's office who is very knowledgeable about community resources and can take immediate action if the

family so desires and is available, furthermore, for the family's questions, answers, follow-up," said Deborah Carroll, Ph.D., head of the state's Early Intervention branch. "One of the challenges for families is that if they have a child who has special needs, they're managing a huge amount of information and a huge amount of coordination just getting all the appointments done every month. Having someone who can help them and check back with them to make sure something doesn't fall off the list is incredibly beneficial to families."

The specialist found it harder to track children in school systems, especially in districts that did not identify a single point of contact for coordinating services. The Department of Public Instruction does not have the same tradition of communicating with medical practices as do Early Intervention programs, which historically have been embedded in public health departments, Earls said. "That doesn't mean it doesn't happen, especially in individual counties," she said.

Key Insights

P4HM will continue to focus on meeting the needs of children in a holistic fashion. "We can't forget all the kids who don't require Early Intervention but whose families benefit from the anticipatory guidance and the promotion of good developmental stimulation," Earls said. As an example, Jobe cited the case of a teenage mom who lacked social supports and needed guidance to address concerns about her child's eating and growth. Jobe might refer such families to a home visitation program run by the county health department or to other family-based programs and offer educational resources and advice until formal services were in place. "You have to get creative at how you get services started for families," she said.

Promoting a systems approach is key to helping physicians incorporate a new activity such as developmental screening into their practice flow. Physicians have to see "that this is doable without completely blowing the time they have to see kids," Earls warned. To help overcome resistance, the network encourages practices to make changes as part of a broader redesign that will improve staff productivity and access for their patients. "We work with them to see the positive

aspects [of changing their processes], to look at it as part of their daily work, as opposed to some additional tasks that they have to do," said Claudette Johnson, P4HM's executive director.

CAROLINA COLLABORATIVE COMMUNITY CARE

County: Cumberland

Medicaid and CHIP enrollees: 50,558¹⁷

Number of enrollees under age 6: 12,968 (26% of total enrollees)

Practices: 74, ranging in size from one to six providers

Medical offices: 76

Providers: About 180, including mid-level practitioners

Key Staff: Brenda Sparks, R.N., executive director; Carolyn Smith, R.N., clinical coordinator

Region: The population of Cumberland County clusters around Fayetteville, which is home to Fort Bragg and Pope Air Force Base, as well as the county's one health system. The local network finds it challenging to maintain contact with Medicaid patients, who are both transient and unaccustomed to having case managers intervene in their care.

Cumberland County has a high concentration of Medicaid enrollees but, until recently, it did not have the benefit of a community care network to implement and oversee quality initiatives for the Medicaid population. The state, which needed the participation of hospitals, physicians, and public health and social service departments, had difficulty gaining local support for such a network until it persuaded a large physician group to spearhead the effort. Sandhills Physicians, Inc., a Fayetteville-based independent practice association with more than 600 associated physicians, used its sway to rally health system and social service agency partners to join together, forming the Carolina Collaborative Community Care (4C) network in 2005.

As the most recent network to join the CCNC network, 4C has concentrated its efforts on core objectives such as improving outcomes for Medicaid patients suffering from asthma, diabetes, heart failure, and other chronic conditions. It began to focus on the ABCD project when asked to do so by the CCNC central office.

Activities to Increase Screening

4C sent representatives to the state-level ABCD advisory committee meetings, where they learned how to assess existing screening protocols in medical offices and how to educate providers about validated tools and community services. “We were able to get ideas and strategies,” said Carolyn Smith, R.N., the clinical coordinator for the network, “and disseminate this information to our medical providers.”

To relay the information to physicians, the network relied on its case managers, who had established working relationships with providers to manage chronic diseases. The case managers, who are employed by the network and located in its offices, typically visited physician offices once per month. They stressed the importance of developmental screening and referral. If a practice appeared skeptical, a local pediatrician who serves on the network’s medical management committee would visit and speak with the physician or physicians. If a practice remained resistant to change, “we had to get the support of CCNC and Medicaid to say, ‘this is an expectation if you want to take care of Medicaid children.’ That was very helpful,” said Brenda Sparks, R.N., 4C’s executive director.

The network also made use of Medicaid health check coordinators, who are assigned to physician practices but located at the network offices. Health check coordinators, who often have experience working in schools or social work, act as liaisons between Medicaid patients or their parents and the physician or other providers to ensure that children have regular Early and Periodic Screening, Diagnostic, and Treatment (EPSDT) examinations, as required by federal law, and to follow up when they do not. 4C’s three health check coordinators rely on a state database that

indicates which Medicaid enrollees have missed well-child screenings. As part of their job, the coordinators also perform outreach, informing area residents about the Medicaid and HealthChoice programs. The state reimburses the network a set portion of their salaries.

The network also has information from the state on the rate at which affiliated medical practices use the CPT code for developmental screenings when they provide well-child exams. If the network identifies low screening rates at the practice level, the case manager will share data with the office manager showing the need for improvement. If the problem isn’t remedied, the network’s medical director—a local practicing primary care physician—calls the practice and speaks with the appropriate physician about the importance of regular screening. The medical director “has the credibility in the community so that when he asks [physicians] to do something, it appears reasonable,” Sparks said. Medicaid’s regional consultant also will visit practices that appear to have difficulty screening children on a regular basis.

Physicians have to be convinced screening is worthwhile. “If they believe it has value, they will do it. If they think it’s just another thing that Medicaid is asking them to do, and they are not being paid to do so—which they remind you often—then it’s less likely to happen,” said Sparks. The network’s initial assessment found the majority of practices were receptive to using validated screening tools, but lacked information about where to send children who needed additional help.

Among children from birth through age 5 enrolled in 4C, developmental screenings at Medicaid well-child visits increased almost twofold, from 6,450 in 2005 to 11,117 in 2008.

Activities to Increase Appropriate Referrals

The network turned to the Cumberland County Partnership for Children, the local Smart Start program, for help educating medical practices about local Early Intervention services. The nonprofit created literature informing providers where they could send children who were identified as being at risk for developmental delays.

One organization the nonprofit promoted was COLORS (Children’s Organizations Linking Opportunities, Resources, and Support), the Local Interagency Coordinating Council of Cumberland County. The community agencies and organizations that make up the group—including the local CDSA and Smart Start—have reached out to medical practices, child care providers, and families to inform them of local services for children with developmental disabilities and delays. It sponsored an annual conference for child care providers to help them identify potential deficits in children and talk to parents about seeking help from local providers. The group also created a brochure for parents outlining the services that are available for children according to age and developmental challenge.

Cumberland County’s CDSA also actively encourages referrals. Its pediatrician has provided every pediatric practice in the county with information about the agency, said Ann Crane, M.S., its director. The percentage of children from birth to age 3 who received Early Intervention services in 2008 was 3.8 percent (5 percent of children who received Early Intervention services through a program at Fort Bragg are included). This represents a 56 percent increase from a rate of 2.5 percent in 2003.¹⁸

Activities to Encourage Follow-Up

Once a referral is made by a physician’s office to the CDSA, the 4C network does not generally get involved in communications between medical groups and community agencies, Smith said.

The CDSA, however, plays an active role in follow-up. The agency has one intake coordinator, who faxes information to physician practices about patients who have been referred to the agency. If a patient does not show up for the initial evaluation, she informs the referring practice immediately. She also seeks permission from the family to inform the referring physician of the results of the evaluation. “We send them a one-page summary of the intake eligibility assessment. That way they have immediate feedback,” Crane said. The CDSA hopes that providing that information promptly will encourage physicians to sign authorizations for

services quickly. That’s been an ongoing challenge, Crane said.

The network’s collaboration with Smart Start helped to prevent the duplication of effort among the groups working in the area. “We had our Smart Start program trying to develop things related to developmental assessment and it had already been worked on. Because they were a nonclinical group, they were very shy to communicate with the doctors and the doctors rarely communicated back to them, even if they asked them for anything,” Sparks said. Because of the partnership between the network and Smart Start, Sparks was able to inform them of the physicians’ activities.

Key Insights

4C has been less active than other networks in fostering collaboration between medical practices and the agencies that serve children with developmental disabilities for several reasons, the most important of which may be that it lacks a dedicated Early Intervention specialist. “We do incorporate a lot of what [Early Intervention specialists] do,” Smith said. But the network does not do so in as comprehensive a manner. “They will monitor the number of referrals. We have not been involved to that level,” she said. Many of the functions of an Early Intervention specialist—providing education and outreach services and acting as a liaison with local agencies—are now provided by the local CDSA and the Local Interagency Coordinating Council. In the meantime, the network is working on other priorities, including work related to a grant to reduce health disparities and the implementation of chronic care initiatives.

The network believes communication between medical practices and the agencies that provide Early Intervention services is difficult because of the lack of an established relationship and trust between the parties involved. “The agency is saying they can’t get the doctors to do anything, and the doctors are thinking, ‘Well, who are they anyway?’ because they really don’t know who they are.... We were able to bridge that [disconnect], because we understand the importance of Smart Start and CDSAs and [other programs],” Sparks said.

The CCNC's relationship is built in part on paying medical practices a case management fee for each of their patients, which helps open doors to communication from the network. "When we come in and we talk to them about things that are important for Medicaid, things that are important for their children, we have a receptive ear," Sparks said. Her advice to others who are working with physicians to promote developmental screening: "Just be persistent, sharing that it's very important for the well-being of this child... because that is their vision. That is their mission."

SANDHILLS COMMUNITY CARE NETWORK¹⁹

Counties: Harnett, Hoke, Lee, Montgomery, Moore, Richmond, and Scotland

Medicaid and CHIP enrollees: 45,792²⁰

Number of enrollees under age 6: 11,267 (25% of total enrollees)

Practices: 85, ranging in size from 1 to 10 providers

Medical offices: 85

Providers: 202, including mid-level practitioners

Key staff: Tammie McLean, R.N., B.S.N., network coordinator; Jennifer Ormsby, B.S.W., project coordinator

Region: The network serves seven counties, none of which have large cities. Because the area is largely rural, public transportation is limited. Medical practices also tend to be small and face financial challenges.

To provide case management and administer quality improve programs, Sandhills Community Care Network must reach 85 mostly small medical practices spread across seven counties in the south-central portion of the state. Because of their small size and limited resources, many practices have struggled to incorporate developmental screening into their routines. Some report they do not have the money for the tools. Others insist they do not need a formal process for screening.

Activities to Increase Screening

"Some providers don't understand that they need that screening. They think that they can spot the delays without having to have a formalized screening and it's hard to break through that barrier sometimes," Tammie McLean, R.N., B.S.N., Sandhills' network coordinator, said. Other practices were screening all of their pediatric patients but using non-validated tools, such as checklists in their electronic medical record.

To stress the importance of screening using validated tools and to help practices do so, the network partnered with four local Smart Start groups that had received a two-year grant for this purpose from the North Carolina Partnership for Children. The leader of one of the four local Smart Start organizations had approached the Sandhills network to propose a collaboration, knowing it would be difficult to gain access to local physicians without the network's help.

"You can't just call up a practice and say 'I'm so-and-so and I know about developmental screenings and I want to come talk to you about it,'" McLean said. "You can't get in the door. They're busy. They're overwhelmed. They don't see the value in what you're doing."

Like other community care networks, the Sandhills network not only has access to the physician practices through its case management relationships, it also has business partnership agreements in place that allow it to review patients' medical charts as part of the CCNC quality monitoring process. Such partnership agreements take time to establish, as the network discovered when Smart Start asked it to add non-network practices to its outreach program.

The Smart Start grant allowed the network to hire an ABCD project coordinator, Jennifer Ormsby, who previously worked at the local CDSA and has a bachelor's degree in social work. At Smart Start's request, the network targeted the largest practices first—those that served as many as 2,000 Medicaid enrollees under age 5. After doing baseline chart reviews, Ormsby introduced the practices to new screening tools, as necessary.

One of the challenges of the partnership between the Sandhills network and Smart Start is that the Smart Start grant only covered four of the network's seven counties (Those four are Lee, Montgomery, Moore and Richmond counties.) Nonetheless, practices that have received help have valued it. Dellena Nicholson, C.M.A., clinical manager of Community Family Medicine, which has offices in Sanford and Pittsboro, N.C., said the practice has stopped using a software tool that came with its electronic medical record for screening and began using the ASQ. The software often suggested a child's developmental delay stemmed from a problem with hearing or vision and seemed to lack appropriate attention to other types of problems, Nicholson said.

The Sandhills network encourages providers to conduct developmental screening for all of their pediatric patients, not just Medicaid-insured children. McLean described this as a learning process that requires gaining trust, such as by commending a practice for successes achieved with Medicaid patients and sharing stories of children who have been helped by Early Intervention services. "Then we point out that all children are at risk for having developmental delays and wouldn't it be great to give other children the same benefit as children with Medicaid."

The key to effectively working with a physician practice is, first, to identify the "go-to" person who can get things done—whether that is an office manager, a physician, or even a receptionist, McLean said. Then, "you have to meet a practice where they are, and you have to be very nonthreatening and very nonjudgmental. Help them move from the place they are to the place they need to be." Because of staff turnover and other distractions, it can be helpful to educate a practice multiple times. "It doesn't hurt to keep saying the same things over and over until you know it's stuck," Ormsby said.

Among children from birth through age 5 enrolled in the Sandhills Community Care Network, developmental screenings at Medicaid well-child visits increased more than sixfold, from 1,065 in 2004 to 6,819 in 2008.

Activities to Increase Referrals

Once screening procedures were in place, Ormsby performed regular chart reviews to see if children were being screened and referred as needed.

"When I first started this project, a lot of the practices were only referring to private agencies like private speech therapy agencies or physical therapy agencies. And if there was a child that possibly had more going on than just a speech delay, they wouldn't have the multidisciplinary evaluations. ... Something like autism might be overlooked," Ormsby said.

To prevent such problems, she created a referral and resource guide, organized by age, outlining local resources and providing educational brochures for parents as well as forms and instructions for providers to use in making referrals to community agencies. "A lot of the practices ... didn't realize that [early childhood intervention] services and evaluations are available and that there is no cost to the families for the evaluation," Ormsby said.

The network also organized a luncheon for the largest practice and invited staff from the CDSA, school system, and local health department to share information about their role in the Early Intervention process. Although the luncheon was successful in establishing stronger relationships between the groups, it might be hard to replicate for smaller practices, because agency staff often have travel and time constraints that would make small presentations prohibitive, McLean said. To help other practices improve, CDSA staff have given Ormsby feedback about which practices are increasing their referrals and which might need additional assistance.

In 2008, the proportion of children from birth to age 3 who received Early Intervention services was 4.7 percent (ranging from 3.9 percent to 6.6 percent) in the seven counties that make up the Sandhills network. This represented an 8 percent increase from a rate of 4.4 percent in 2003 (ranging from 1.6 percent to 8.5 percent by county).²¹ The relatively small overall increase in children receiving services in this network may reflect the fact that, before the ABCD program, Sandhills network providers delivered more

Early Intervention services than other profiled networks and the state as a whole. Restructuring of Early Intervention programs to modify the agencies that had oversight over the programs earlier in the decade also may have affected local capacity to deliver services. To address disparities in referral rates among counties, the local CDSA opened offices in each county and shifted staff to counties with lower referral rates to increase referrals.

Activities to Encourage Follow-Up

To further strengthen the referral process, Ormsby has been encouraging the local CDSA to send medical practices notices when they determine a child's eligibility for services. She also asks the agency to send providers copies of the agency's evaluation, with parents' consent.

Nicholson says her practice appreciates having someone from the network track referrals. Ormsby spends a half hour in that practice, every other week, reviewing recent screenings. She also ensures that appropriate referrals were made and follows up if the practice has not received a response from the agency to which the child was referred. Before Ormsby did that, "whoever was making the referrals kept up with it, if they had the time," Nicholson said. The follow-up activity is "wonderful when we don't have the manpower here in the office [to do it]. They are helping us from losing that child," Nicholson said.

Ormsby is working with nine local practices, including one small practice that asked the network for help, tailoring her approach to meet their particular needs. For example, Ormsby visits one practice on a biweekly basis to offer assistance with referrals, sits down with some providers for lunchtime discussions, and checks in with others on a periodic basis. She also serves as a resource to the network's case managers and to practices to answer questions as needed.²²

Key Insights

To improve communication between the network and the agencies that serve children, Ormsby serves on the Local Interagency Coordinating Council in every county where she works. "This offers an opportunity to

network and facilitate communication with other local programs in the communities who work with young children," McLean said.

Networks that cover a large number of counties, especially those with multiple school districts that have unique policies for referral, may find it difficult to keep providers informed of referral protocols without inundating them. "I don't want to overwhelm the practices with forms for every single county. So I say, if you have someone [from a different county than yours], call me and I will get you the information," Ormsby said.

The network continues to get inconsistent information about referrals from the schools. While doing chart reviews, "it's still not clear to me which kids are getting services and which are not," Ormsby said. There's no universal form to indicate clearly that a child is receiving services through the schools, she said.

To help make referrals to Early Intervention services more predictable, the statewide ABCD advisory group has created a uniform referral form and process that can be followed by CDSAs statewide. An effort is under way to do the same for the schools. The Department of Public Instruction has produced a flowchart for preschool children and a one-page notification form with a parent signature area for exchange of information between the schools and medical practices. (Appendices 2 and 3). "We are thrilled with this result from our collaborative efforts," Earls said.

Vivian James, Ph.D., the exceptional children preschool coordinator for the North Carolina Department of Public Instruction, said she hopes the form will help physicians understand what information the schools need from the medical practices. "It was designed to improve our relationship with the medical community... so that they knew what they were supposed to be sending us," she said. Whether the form will encourage a freer exchange of information remains to be seen, however. "I know that my people are so overworked that they perhaps have not been as mindful as they should be [about feedback]." But, she added, "There is a point in time in which the families have responsibility also to provide feedback to that doctor and I don't think we should ever not expect that."

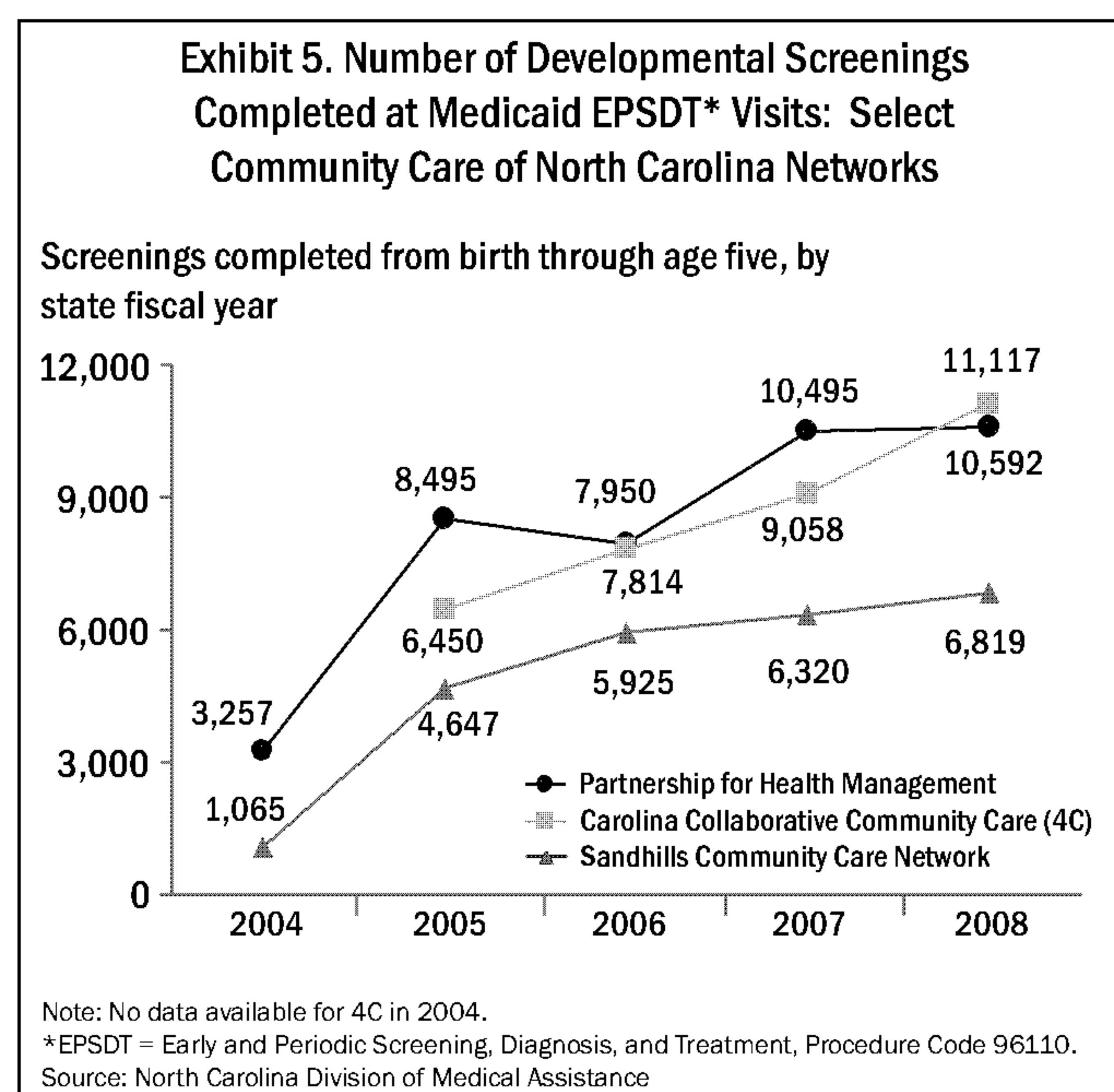
FINANCING AND SUSTAINABILITY

To develop this program, North Carolina sought and received funding from The Commonwealth Fund, which in 1999 launched the Assuring Better Child Health and Development initiative to strengthen the capacity of the health care system to support the development of children from low-income families. As part of the initiative, Medicaid agencies in North Carolina, Utah, Vermont, and Washington received three-year grants to develop and implement innovative strategies to deliver early child health and development services. Smart Start also provided funding to select CCNC network to hire an Early Intervention specialist (Smart Start receives funding from the state and private sources).

Because of the structure of the CCNC, networks have broad discretion in how they spend money on quality improvement initiatives. The approaches the networks use to fund ABCD efforts reflect a wide degree of variation. The Partnership for Health Management uses case management fees to cover the salary of its Early Intervention specialist, while Sandhills Community Care Network has relied on funding from Smart Start to support a similar position. Because the Smart Start grant was limited to two years, the network must find a new source of funding to continue that work. In contrast, Cumberland County has relied on the efforts of community agencies and organizations to provide much of the outreach and follow-up that other networks provide and thus its outlay for the ABCD program is minimal.

RESULTS

The number of developmental screenings increased nearly twofold to more than sixfold among the three profiled community care networks from 2004 to 2008 (Exhibit 5). Changes may not be directly comparable across these networks because they began their efforts at different points in time. The P4HM network benefited from a pilot project that began in the late 1990s. Although the C4 network was not in operation until 2005, it has now achieved about the same level of screenings as the P4HM network, despite having fewer age-eligible children. Although the Sandhills network

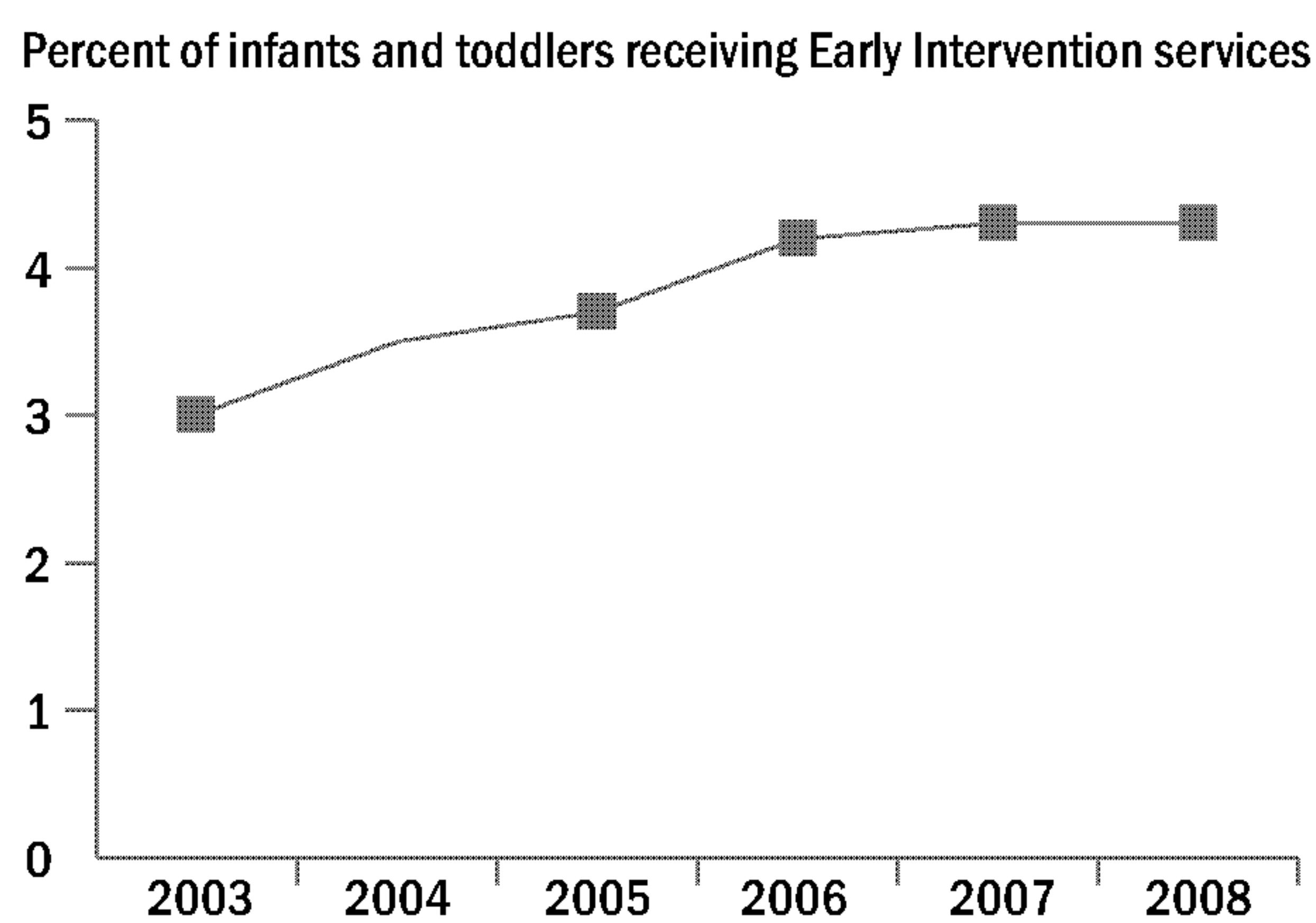


has shown steady improvement in screenings, their screening rate is lower than in the other networks, likely reflecting the challenges of its rural service area and the fact that its intervention is active in only a subset of its counties.

Statewide, the proportion of infants and toddlers who received Early Intervention services reached 4.3 percent in 2008, representing a 43 percent increase from a rate of 3.0 percent in 2003 (Exhibit 6).²⁴ Among the three profiled community care networks, the service rate increased the most in the P4HM network during this time (Exhibit 7). The higher overall rate of services in the Sandhills network may reflect greater socioeconomic challenges in its rural and underserved counties. Early Intervention service rates ranged from 3.0 percent to 6.6 percent in 2008 in the counties served by the three profiled CCNC networks.

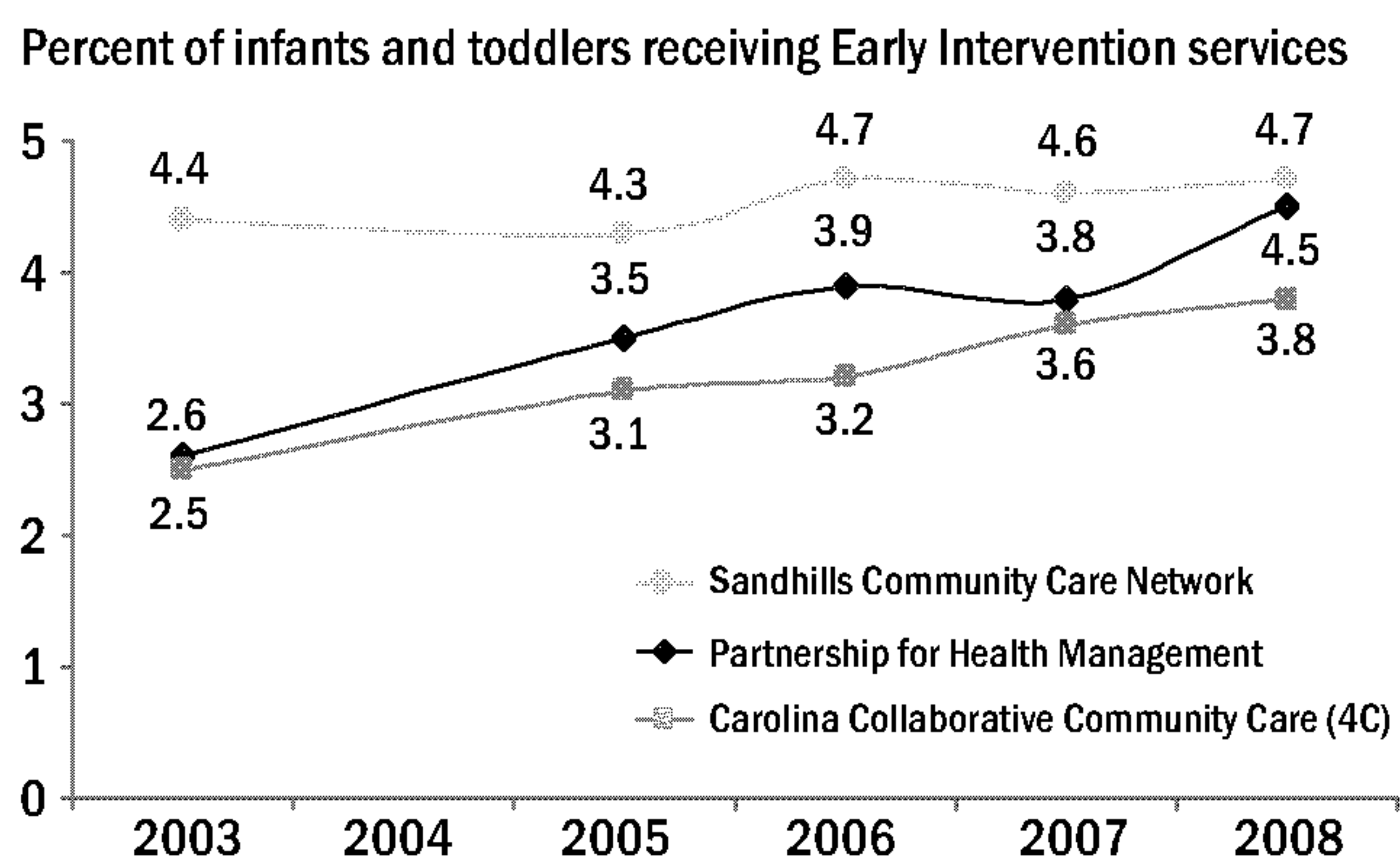
In 2006, physicians were responsible for 28 percent of all referrals to the infant-toddler Early Intervention program; by 2008, this proportion had increased to 37 percent (Exhibit 8). This increase in physician referrals may mean that the improvements brought about by the ABCD program are leading to children being reached who would otherwise have been missed by opportunistic referrals based on observation alone without systematic screening. Other sources of referrals—and potential contributors to the overall increase in service

Exhibit 6. North Carolina Statewide Early Intervention Program Service Rate



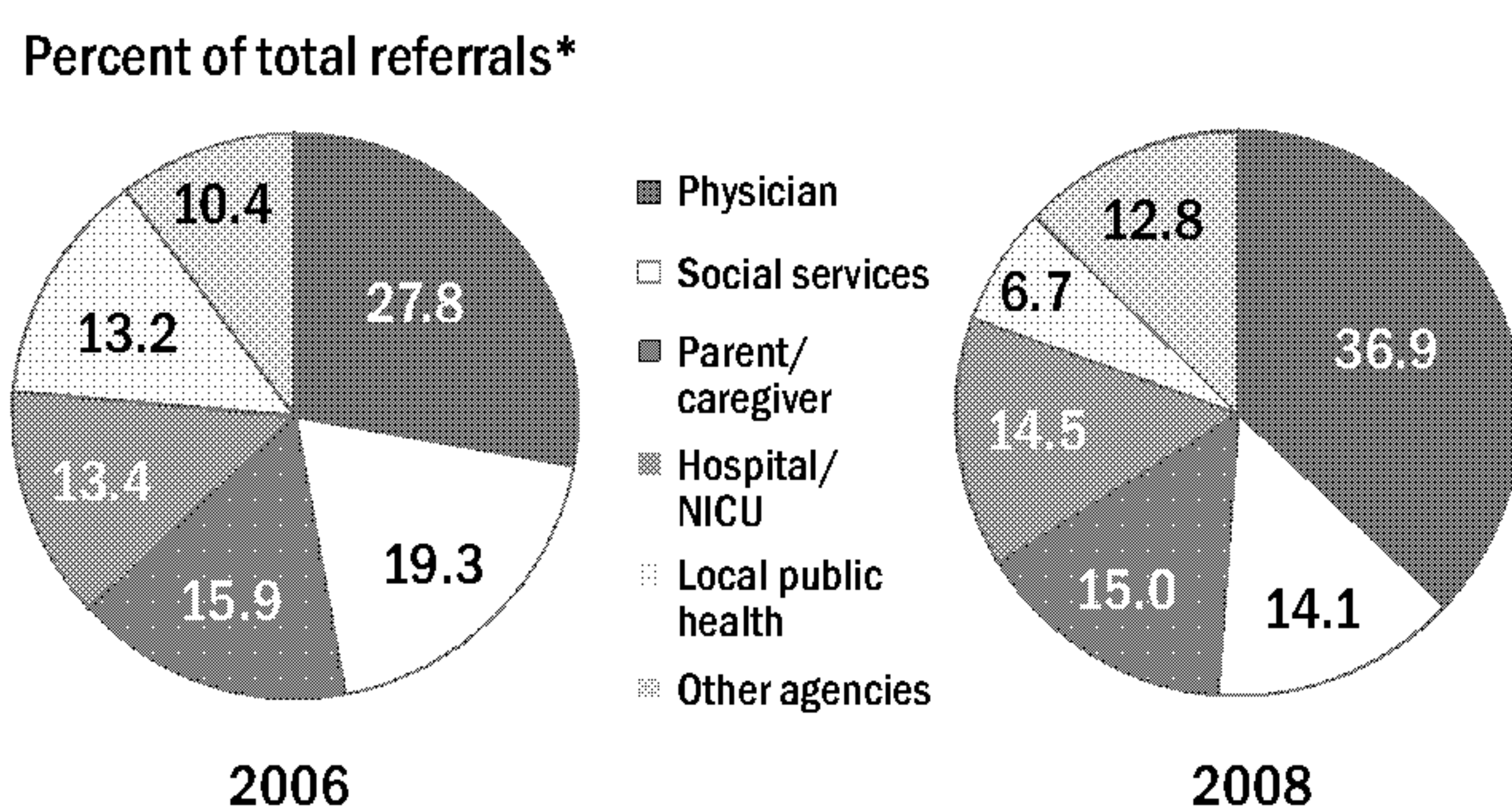
Note: Rates are derived from an unduplicated count of the number of infants and toddlers (from birth to 3 years of age) enrolled in the early intervention program at any time during the year. Years are state fiscal years, from July 1 through June 30. No data are available for 2004. Source: D. Carroll, North Carolina Department of Health & Human Services, Division of Public Health, Early Intervention Branch (personal communication, 2009).

Exhibit 7. Case-Study Community Care Networks Early Intervention Program Service Rates



Note: Rates are derived from an unduplicated count of the number of infants and toddlers (from birth to 3 years of age) enrolled in the early intervention program at any time during the year in counties served by each CCNC network. County data were combined as weighted average population rates. Years are state fiscal years, from July 1 through June 30. No data are available for 2004. The 4C network was not created until 2005; the 2003 rate is shown for comparative purposes only. Source: D. Carroll, North Carolina Department of Health & Human Services, Division of Public Health, Early Intervention Branch (personal communication 2009).

Exhibit 8. North Carolina Early Intervention Program Referral Sources



*Note: Data reflect initial referrals during the last six months (July–December) in each reported year. NICU = neonatal intensive care unit. Other agency referrals include those from early childhood programs and community and other agencies. Source: D. Carroll, North Carolina Department of Health & Human Services, Division of Public Health, Early Intervention Branch (personal communication, 2009).

use—including parents and caregivers, hospitals, and local public health and social services agencies.²⁵ The state does not track referrals to Early Intervention programs at the CCNC network level.

LESSONS LEARNED ACROSS THE THREE NETWORKS

Local community care networks have played an important role in propagating childhood developmental screening in primary care. “It was [the CCNC] infrastructure that allowed us to do the spread with ABCD and with other initiatives,” said Earls, the pediatrician who led the pilot program in Guilford County. “ABCD was just one more of the quality improvement initiatives that networks agreed to take on and that practices agreed to do” as part of their participation in community networks. “It’s hugely helpful to have care coordinators in the network that can help you negotiate your initial connections to the community agencies,” she noted.

The experiences of the three community care networks demonstrate that geography plays a critical role in the successful implementation of such programs. Networks in urban areas have the advantage of working with large medical groups, which tend to have enough time and staff resources to devote to such a project.

Networks that operate in rural areas with more dispersed populations and small medical practices face greater challenges in attempting to reach individual practices. Still, these examples show that networks operating in such communities can partner with groups that have similar goals to achieve their aims.

Given the differences among communities, each must choose the model that works best in its local circumstances. For example, in some rural communities in the eastern part of North Carolina, where there are few large pediatric practices, the Smart Start program has chosen to work directly with medical providers to promote developmental screening.

Two key elements of a successful program are supportive state policy and visionary leadership to bring that policy into practice. The state’s Medicaid policy directive requiring developmental screening to be performed as part of Medicaid EPSDT visits acted

as a catalyst to change. That directive was given added impetus by having champions who cared passionately about the topic and worked with other stakeholders to bring about necessary change in systems. “We have many people who are very committed to the kinds of services that kids need, and so there’s a lot of both political will and individual willpower to make systems better,” Carroll said.

Adequate staffing also is critical. Shortages of Early Intervention professionals can pose a significant impediment to such programs, as Smart Start found when its groups tried to extend their program into rural counties of eastern North Carolina. “They cannot hire in that area staff that have the qualifications to be able to successfully pull off the project. There is not a nurse who does public health work who understands the CCNC network and developmental screenings. So they just have to say we can’t do it and give us back the money,” said Stephanie Fanjul, executive director of the North Carolina Partnership for Children.

Given the importance of staff to successful implementation, states wishing to replicate this program should consider investing in training programs for care coordinators. Hiring staff who have had previous experience working for Early Intervention agencies also may help build trust between physician practices and the community agencies, especially in communities where apprehension and frustration exist between them.

States also should recognize that better screening will likely create a need for more specialists and therapists in the referral network, which may challenge government agencies, especially those operating in areas that have difficulty recruiting providers. “A few years ago we found that, in eight of our 100 counties, we did not have speech therapy providers at all in our provider networks. In 23 counties in North Carolina, we did not have physical therapy providers. In a similar number—27 counties—we had no occupational therapy providers,” Carroll said. “It’s a constant struggle trying to get enough providers or provide the services ourselves if we have to.” North Carolina’s Improving Pediatric Access through Collaborative Care, which links pediatric specialists in academic medical centers

to primary care doctors in underserved areas, may provide an example of how to increase access to specialty care.²⁶

The use of universal referral forms is likely to facilitate communication between primary care providers and Early Intervention agencies. Still, states may need to create additional incentives or standardized mechanisms to ensure that community agencies and schools relay information back to physicians. To date, the process appears to be working better for infants and toddlers than for preschool-age children in North Carolina. Local school systems may have little incentive to provide feedback once they have been notified that a preschool-age child may need Early Intervention services. Schools receive funding from the state to provide services and do not need physicians to sign off on orders for special education services. In contrast, CDSAs need to interact with physicians, who must authorize referrals of infants and toddlers to specialty health care services.

A lack of electronic linkages between medical providers and Early Intervention agencies is one obstacle to improvement. The state is considering whether the case management information system used by CCNC case managers could be extended for use by other cooperating agencies, but its initial focus is on behavioral health care. For now, such communication occurs over the phone or via mail in the areas where the network care coordinator has built a good working relationship with the agency.

The ultimate goal is to facilitate communication among primary care providers, Early Intervention agencies, and families. “We want to make sure that families are aware of what’s going on with their child and that they have enough information that they can share with us what the doctor said, and share with the doctor what we said, and give us permission to talk to each other when appropriate,” said Carroll. The agency has established a standardized process for communicating information back to referring medical providers, but service coordinators also need to remind families so that they remember to share information directly with their providers, she said.

Executing a developmental screening and referral program without a CCNC-style network or a similar infrastructure may be challenging. When Earls conducts technical assistance in other states, she requires that the state assemble a team of stakeholders—high-level administrators from the Medicaid and Early Intervention agencies working with the pediatrics and family medicine physician communities—to shepherd changes through the system and overcome bureaucratic obstacles.

Collaboration at both the local and state levels is important. At the local level, community care networks have established relationships with local primary care providers and community agencies that have opened lines of communication between the two. These local partnerships promote effective use of time and resources and avoid the tendency for groups to “reinvent the wheel” when they work independently. Likewise, statewide committees have provided opportunities for stakeholders to break down barriers between disciplines and for local networks to learn from one another’s experiences. Statewide collaboration among stakeholder groups also helps to ensure that policymakers hear a unified message supporting adequate funding for Medicaid and Early Intervention services and “that keeps the doctors in the game,” Fanjul says.

Monitoring is important, too. “Accountability is the biggest thing.... We feel like it’s important to do routine monitoring. We do sampling and we check to see if things are happening well for all the kids that way. That’s how we’ve been able to improve over the last four years from some pretty dismal compliance numbers—around 50 percent or so, to the high 90s,” Carroll said, referring to the percentage of eligible infants and toddlers who are evaluated and enrolled within 45 calendar days of being referred to the CDSA. The local CCNC networks also create a system of community accountability and foster a spirit of healthy competition between communities to do what is best for children.

FUTURE DIRECTIONS

The statewide ABCD advisory group is exploring ways to expand developmental screening, such as to include social-emotional screenings and maternal depression screening. An important step in the process has been securing payment for providers that perform secondary screenings when the primary screening suggests a child is at risk for depression, autism, or other health problems. Those billing codes were created at the beginning of 2009, according to Collins.

In the meantime, the Early Intervention Branch has been working with the North Carolina Pediatric Society to develop a referral flowchart using the M-CHAT (Modified Checklist for Autism in Toddlers) tool, so that all parties understand the process. They are currently working with the pediatric society and the ABCD advisory group to educate providers across the state about screening for autism.

It is not clear what will happen when the current Smart Start grants to local CCNC networks come to an end. Local networks will continue to support the ABCD program, but may not have the resources to provide the same level of education and technical assistance to physician practices. “The results have been certainly worth the effort and the partnerships that have been engaged are very excited about getting such good feedback on the project,” Fanjul said. “As far as the dollars go, that’s our dilemma.”

NOTES

- ¹ To gather information, we interviewed a variety of participants, listed in the Acknowledgments, including local community care network executive and medical directors, project coordinators, a case manager, a physician office manager, the head of the state's early intervention branch, the exceptional children preschool coordinator for the North Carolina Department of Public Instruction, and the leader of a statewide public-private initiative promoting early childhood development.
- ² Institute of Medicine, *From Neurons to Neighborhoods: The Science of Early Childhood Development* (Washington, D.C.: National Academies Press, 2000).
- ³ J. Law, Z. Garrett, and C. Nye, "Speech and Language Therapy Interventions for Children with Primary Speech and Language Delay or Disorder," *Cochrane Database Systematic Review*, 2003 (3):CD004110.
- ⁴ *Comprehensive Child Health Plan: 2000–2005. Report to the North Carolina Department of Health and Human Services* (Chapel Hill, N.C.: North Carolina Institute of Medicine, 2000).
- ⁵ Children who are age 5, but have not yet entered kindergarten, are eligible for Early Intervention services.
- ⁶ As of February 2009, CCNC served a total of 980,763 individuals: 884,097 Medicaid beneficiaries (including 133,574 aged, blind, and disabled individuals) and 96,666 children ages 6 to 19 enrolled in CHIP, which is known as North Carolina Health Choice. Medicaid enrollment included 311,981 children under age 6, including CHIP-eligible children under age 6 who are enrolled in Medicaid. This enrollment represented about 75 percent of all Medicaid and CHIP beneficiaries who were eligible to enroll in managed care programs sponsored by the state (personal communication with Shelley Kier in the CCNC central office, February 2009).
- ⁷ Physicians receive \$1.50 per member per month for participating in Carolina Access, the state's Medicaid enhanced primary care case management program. They receive an additional \$1.00 per member per month when they join a local community care network.
- ⁸ For more on CCNC, see a companion case study, D. McCarthy and K. Mueller, *Community Care of North Carolina: Building Community Systems of Care Through State and Local Partnerships* (New York: The Commonwealth Fund, June 2009).
- ⁹ For more detail on the early stages of the project, see H. Pelletier and M. Abrams, *The North Carolina ABCD Project: A New Approach for Providing Developmental Services in Primary Care Practice* (Portland, Maine.: National Academy for State Health Policy, July 2002).
- ¹⁰ Ages and Stages Questionnaire (Baltimore: Paul Brooks Publishing Co.), www.pbrookes.com.
- ¹¹ S. Hay, ABCD Project in North Carolina. www.dbpeds.org/articles/detail.cfm?TextID=109.
- ¹² The state has not denied any provider payments under this policy because its audits suggest that providers are generally performing the screening tests but sometimes have difficulty reporting doing so when their billing software does not permit them to record a code for which there is no reimbursement.
- ¹³ Data provided by the North Carolina Department of Health and Human Services, Early Intervention Branch.
- ¹⁴ Data supplied by Community Care of North Carolina, based on February 2009 enrollment. Includes 4,021 aged, blind, and disabled individuals, of whom 164 were children under age 6.
- ¹⁵ Parents' Evaluation of Developmental Status. Ellsworth & Wanderer Press LLC, 1013 Austin Court, Nolensville, TN 37135, 1-615-776-4121, www.pedstest.com.
- ¹⁶ Personal communication with Deborah Carroll, North Carolina Department of Health and Human Services, Division of Public Health, Early Intervention Branch, 2009.
- ¹⁷ Data supplied by Community Care of North Carolina, based on February 2009 enrollment. Includes 7,088 aged, blind, and disabled individuals, of whom 386 are under age 6.
- ¹⁸ Personal communication with Deborah Carroll. Data supplied by the North Carolina Department of Health and Human Services, Division of Public Health, Early Intervention Branch, 2009.

- ¹⁹ No affiliation exists between this network and Sandhills Physicians Inc., which appeared in the preceding profile of Carolina Collaborative Community Care.
- ²⁰ Data supplied by Community Care of North Carolina, based on February 2009 enrollment. Includes 5,482 aged, blind, and disabled individuals, of whom 136 are under age 6.
- ²¹ Personal communication with Deborah Carroll. Data supplied by the North Carolina Department of Health and Human Services, Division of Public Health, Early Intervention Branch, 2009.
- ²² Although the Smart Start grant that supports Ormsby's position lasts only two years, the network will seek funding to keep her there.
- ²³ For more on the role of Smart Start, see: J. Rosenthal, C. Hanlon, and C. Hess, *The Role of State Health Policy in Multi-Sector System and Service Linkages for Young Children* (Portland, Maine.: National Academy for State Health Policy, Sept. 2008), pp. 48–49.
- ²⁴ The 1999 estimate was reported in: *Comprehensive Child Health Plan: 2000–2005. Report to the North Carolina Department of Health and Human Services* (Chapel Hill, N.C.: North Carolina Institute of Medicine, 2000). The 2008 data were provided by the North Carolina Early Intervention Branch, Division of Public Health.
- ²⁵ *NC Early Intervention Program 2007–08 At-A-Glance*, North Carolina Department of Health and Human Services, Division of Public Health, Early Intervention Branch.
- ²⁶ L. Suarez, "The Nationwide Shortage of Subspecialty Pediatricians," *Diabetic and Microvascular Complications Today*, Sept./Oct. 2006:15–16.

Appendix 1. Generic Referral Form to the Children's Developmental Services Agency to Determine Children's Eligibility for Early Intervention Services

(Insert Letterhead Identification Here)

Referral Form Developmental Screening & Surveillance

Name of Child: _____

Date of Birth: ____/____/____ Age _____ Sex _____

Address: _____

Medicaid#: _____ Insurance _____ Social Security _____

Parent/ Guardian Name: _____

Home Phone: _____ Work Phone: _____

Race: _____ Primary Language: _____

Developmental/Interdisciplinary Referral:

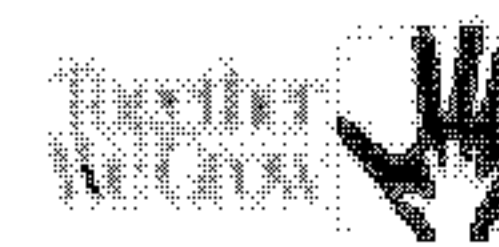
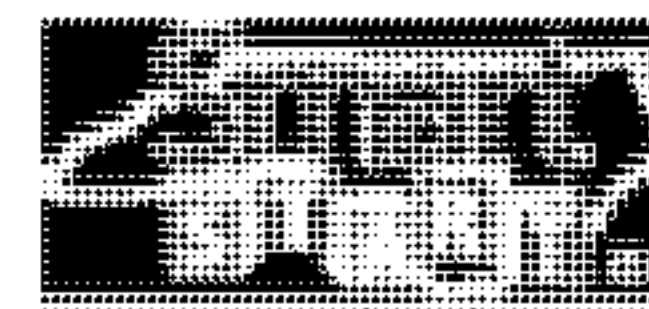
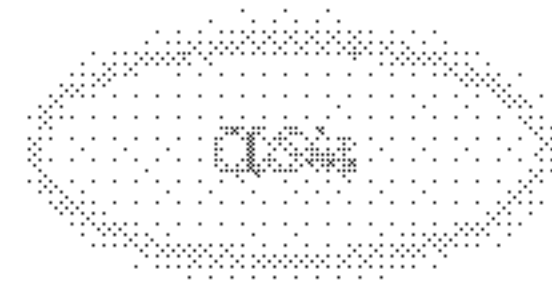
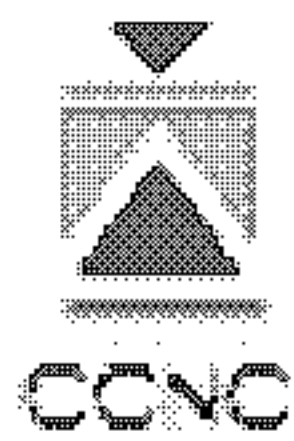
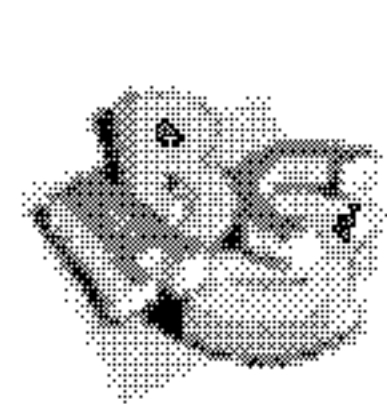
Concerns: _____

Screening Tool: ASQ PEDS MCHAT ASQ-SE Other _____
(Please Name)

The ASQ or PEDS and/or MCHAT scoresheet is attached, if completed.
I have discussed this referral with parent(s)


Referred By: _____
PCP Office: _____

Phone: _____
Fax: _____



Final: October 18, 2009

Appendix 2. Generic Notification Form and Confidentiality Release Form for the Exceptional Children Preschool Program

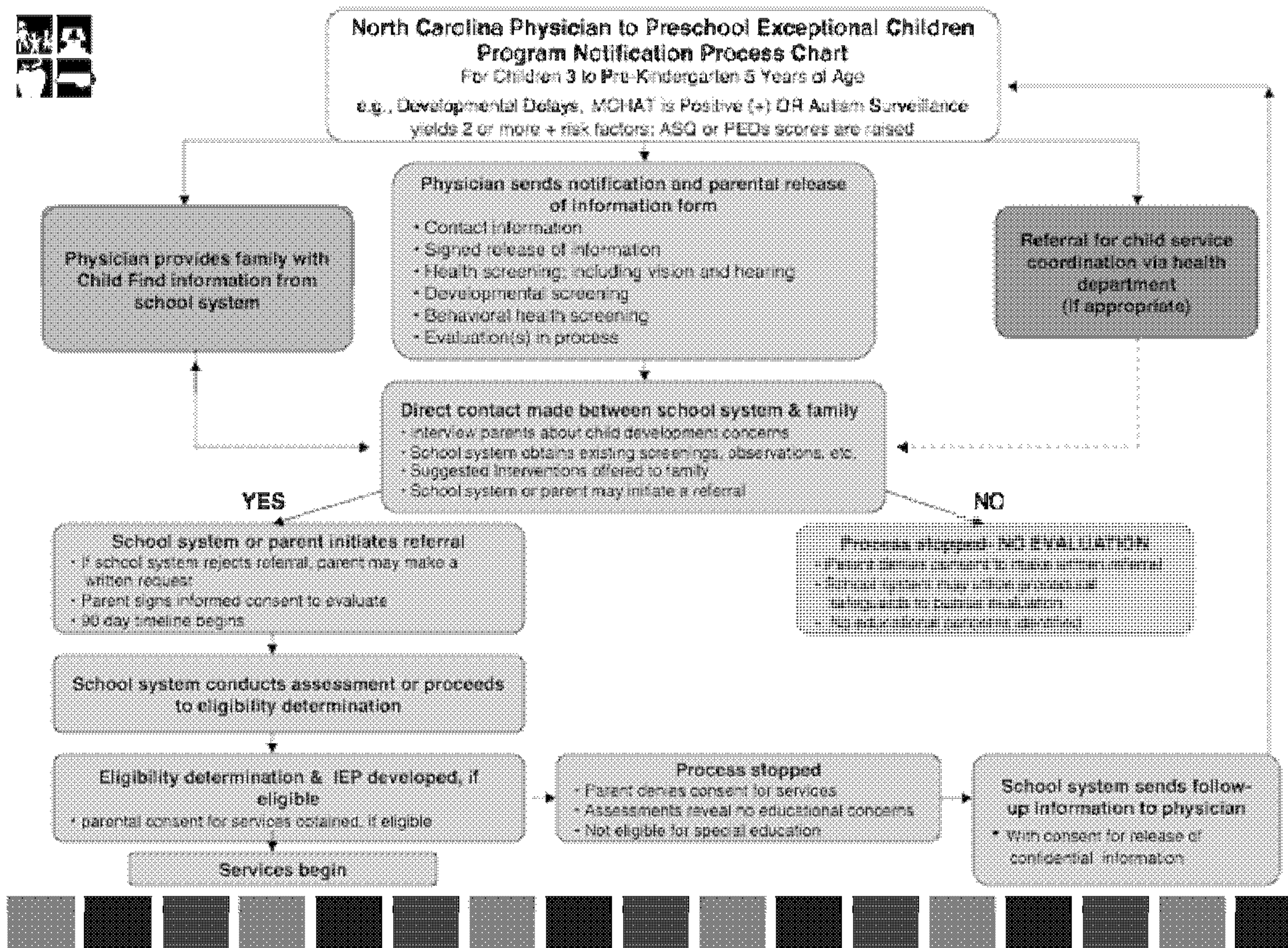


**Physician Notification and Parental Release of Confidential Information Form
to the Exceptional Children Preschool Program**

Directions: To be completed by the appropriate Primary Care Practice and/or Pediatrician (PCP) and sent to the appropriate Exceptional Children Preschool Program contact. Upon receipt, the school system will contact the family to set up a screen and/or referral meeting. The PCP is encouraged to provide the family with the contact name and number for the receiving school system.

| Child Contact Information | | |
|--|--|--|
| Child Name: | Date of Birth: | Gender: M F |
| Home Address Street: | City: | State: Zip: |
| Parent/Guardian Contact Information | | |
| Parent/Guardian: Street: City: State: NC Zip: Email: | Primary Language: <input type="radio"/> Interpreter is needed due to English as a second language Ethnicity: | <input type="radio"/> Interpreter needed due to deafness or a hearing impairment or other accommodation(s) due to disability (please specify): |
| Home Phone: () | Work Phone: () | Cell Phone: () |
| Physician Contact Information | | |
| Physician Name: | Address: | Office Phone: Office Fax: |
| Reasons for Notification to Preschool Program (Check all that apply) | | |
| Suspected delay in: <input type="radio"/> Motor skills <input type="radio"/> Cognitive skills <input type="radio"/> Social-Emotional skills <input type="radio"/> Communication skills <input type="radio"/> Behavioral skills <input type="radio"/> Speech-Language skills | <input type="radio"/> Autism <input type="radio"/> **Screen tool (please attach) <input type="radio"/> ASD <input type="radio"/> PED <input type="radio"/> MCHAT <input type="radio"/> ASD-SE | <input type="radio"/> Identified condition or diagnosis <input type="radio"/> Specific concerns <hr/> <hr/> |
| If parent(s) has agreed to pursue services from the Exceptional Children Preschool Program and is prepared to provide parental consent for release of confidential information at this time, please complete the information below. | | |
| Specific records to be released to and/or received from this office (please check): <input type="checkbox"/> School system evaluation results <input type="checkbox"/> Vision screening/evaluation results <input type="checkbox"/> Hearing screening/evaluation results <input type="checkbox"/> Developmental screening results <input type="checkbox"/> Health screening results <input type="checkbox"/> Social Emotional/ Behavioral Health Screening results <input type="checkbox"/> Other | Purpose of the disclosure: <ul style="list-style-type: none"> • Notification for preschool exceptional children program services • Educational/ instructional planning | Party to whom the disclosure will be made: School system name: _____ School system in which the private school is located: _____ |
| I give informed parental consent to disclose the confidential records listed above for the purpose(s) listed above, and to the part listed above: | | |
| Parent/Guardian Signature: _____ Date: _____ Unless otherwise revoked, this authorization expires one year from the date of signature | | |
| <input type="checkbox"/> I request a copy of the confidential records disclosed. | | |
| **Notation: ASQ: Ages and Stages Questionnaire ASQ:SE: Ages and Stages Questionnaire for Social and Emotional Development MCHAT: Modified Checklist for Autism in Toddlers PED: Parent's Evaluation of Developmental Status | | |
| To be completed by school system staff Date received by school system: Follow-up communication with family: | | |

Appendix 3. Flow Chart: What Happens When a Child Is Referred to the Exceptional Children Preschool Program for Early Intervention Testing and/or Services





**North Carolina Preschool Exceptional Children Program (children 3 to Pre-Kindergarten 5 years of age)
Notification Flow Chart Legend and Notes**

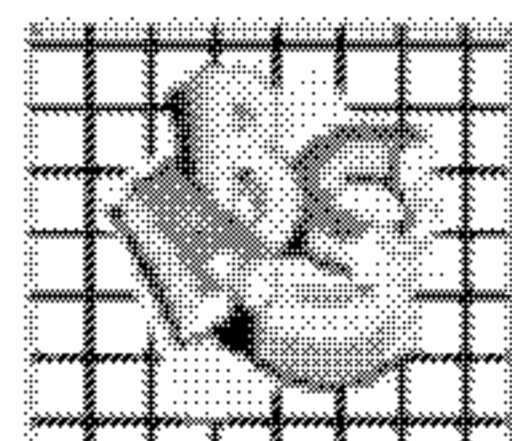
BACKGROUND INFORMATION:

- * As of October 2007, the American Academy of Pediatrics (AAP) recommended that all children should be screened for autism at age 18 months and again at age 2, even if there are no signs of developmental delay. When a positive response is obtained, follow-up action should include:
 - Request for simultaneous evaluation for hearing, autism and consideration for special education services.
 - Potential referral to a developmental and behavioral pediatrician, geneticist or neurologist for assistance with an etiologic workup and/or a search for coexisting conditions if indicated.
- * According to North Carolina *Policies Governing Services for Children with Disabilities Policies*, the following is in effect for the initial evaluation process for children ages 3 through 21:
 - Each school system (LEA) must conduct a full and individual initial evaluation in accordance with NC 1503-2.4 through NC 1503-2.7 before the initial provision of special education and related services can be provided (NC 1503-2.2(a)).
 - Either the parent of a child or an LEA may initiate a request for an initial evaluation to determine if the child is a child with a disability. Upon an oral request for an initial evaluation from a parent, the LEA shall provide assistance, as needed, in completing a written referral (NC 1503-2.2(b)); and
 - The initial evaluation process must be conducted; eligibility determined; and for an eligible child, the IEP developed; and placement completed within 90 days of receipt of a written referral (NC 1503-2.2(c)(1)).
- * According to the above noted *Policies*, only the parent or an LEA may initiate an official referral. Therefore, information received by the school system from the physician shall be referred to as "Notification" under CHILD FIND.

ACTION STEPS FOR CHILDREN 3 THROUGH 5 YEARS:

- * When Primary Care Practices identify developmental concerns, the Exceptional Children Preschool Program requests that the following information be sent to the school system:
 - Notification form with family contact information to appropriate preschool program staff.
 - Signed release of confidential information for communication from and to pediatrician/school system.
 - All screening information available, such as:
 - Health
 - Developmental/Autism
 - Vision and/or Hearing
 - Behavioral Health Services; and
 - Pending physician initiated evaluations which are in process.
- * The Primary Care Physician should:
 - Facilitate communication among the primary care practice, other entities conducting diagnostic assessments and the school.
 - Share available resources with the parent, school system, and other community partners.
 - Follow enclosed Flow Chart, as appropriate.

Appendix 4. Setting the Stage for Success: An Office Resource Guide



"Setting the Stage for Success" Developmental Screening and Surveillance

Getting Started

1) Assess current protocols: Developmental Screening and Surveillance

What are we currently using for developmental screening? A formal, standardized tool? _____ Informal Checklist? _____ Nothing? _____

Are we screening routinely at 6 months, 12 months, 18 or 24 months, 36 months, 48 months, and 60 months? Yes _____ No _____ If no, what ages are we missing? _____ Why are they missing? _____

2) Identify Physician Champion:

A Physician is the "voice" of the quality improvement initiative. They can help facilitate communication with MDs, office staff and other community groups, both formally and informally, about the screening and referral system.

3) Select a Developmental Screening Tool:

A variety of screening tools are available to providers. Please refer to www.dbpeds.org for a complete list. The ASQ and PEDS "have been put to the test in practices throughout NC" and practice staff has overwhelmingly said the ASQ and PEDS work in a busy primary care practice. You may order these screening tools by mail or on-line:

(ASQ) www.brookespublishing.com
Paul H. Brookes Publishing
P.O. Box 10624
Baltimore, MD 21285-0624
(May be photocopied)

(PEDS) <http://www.pedstest.com>
Elsworth & Vandermeer Press, LLC
P.O. Box 68164
Nashville, TN 37206
(Cannot be copied. Refills must be ordered.)

ABOUT THE AUTHORS

Sarah Klein has written about health care for more than 10 years as a reporter for publications including *Crain's Chicago Business* and *American Medical News*. She serves as a contributing writer to *Quality Matters*, a newsletter published by The Commonwealth Fund. She received a B.A. from Washington University and attended the Graduate School of Journalism at the University of California at Berkeley.

Douglas McCarthy, M.B.A., president of Issues Research, Inc., in Durango, Colorado, is senior research adviser to The Commonwealth Fund. He supports The Commonwealth Fund Commission on a High Performance Health System's scorecard project, conducts case studies of high-performing health care organizations, and is a contributing editor to *Quality Matters*. His 25-year career has spanned research, policy, operations, and consulting roles for government, corporate, academic, and philanthropic organizations. He has authored and coauthored reports and peer-reviewed articles on a range of health care-related topics. Mr. McCarthy received his bachelor's degree with honors from Yale College and a master's degree in health care management from the University of Connecticut. During 1996–97, he was a public policy fellow at the Hubert H. Humphrey Institute of Public Affairs at the University of Minnesota.

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Editorial support was provided by Joris Stuyck.



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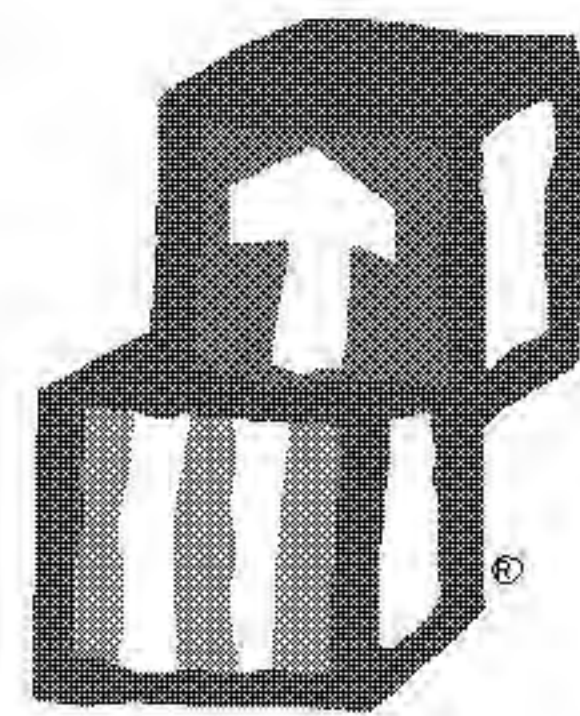
THE HEAD START PARENT, FAMILY, AND COMMUNITY ENGAGEMENT FRAMEWORK

PROMOTING FAMILY ENGAGEMENT
AND SCHOOL READINESS,
FROM PRENATAL TO AGE 8

U.S. Department of Health
and Human Services

Administration for Children
and Families

Office of Head Start



THE NATIONAL CENTER ON
Parent, Family, and
Community Engagement

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DEPARTMENT OF HEALTH & HUMAN SERVICES

ADMINISTRATION FOR CHILDREN AND FAMILIES
370 L'Enfant Promenade, S.W.
Washington, D.C. 20447

August 15, 2011

Dear Head Start Colleagues,

I am pleased to introduce the Head Start Parent, Family and Community Engagement (PFCE) Framework, the first of its kind. The Parent, Family and Community Engagement Framework provides programs with a research based, organizational guide for implementing relevant Head Start Program Performance Standards. The PFCE Framework marks the beginning of a new wave of technical assistance resources that will be made available to programs in the coming year through the National Center on Parent, Family and Community Engagement.

Because supporting children's school readiness is an ongoing partnership between staff and families, the PFCE Framework is a tool that all staff and families can use. I invite you to review this valuable resource and to consider ways to improve and promote parent and family engagement in your program. The PFCE Framework can be used in program-wide strategic planning, program design and management, systems of continuous improvement, professional development for staff, and with governing bodies and parent groups. It can be used to help improve program services or to inform community partners about Head Start parent and family engagement goals and the importance of those goals for school readiness.

Families play a critical role in helping their children be ready for school and for a lifetime of academic success, and Head Start and Early Head Start programs are valuable partners with families in this endeavor. Head Start Parent Involvement has continually evolved since its inception in 1965. The Head Start Parent, Family and Community Engagement Framework begins the next chapter in Head Start's long history of leading the field in engaging families and supporting children's ongoing learning and development.

Thank you for the work you do every day for children and families.

Sincerely,


Yvette Sanchez Fuentes
Director
Office of Head Start

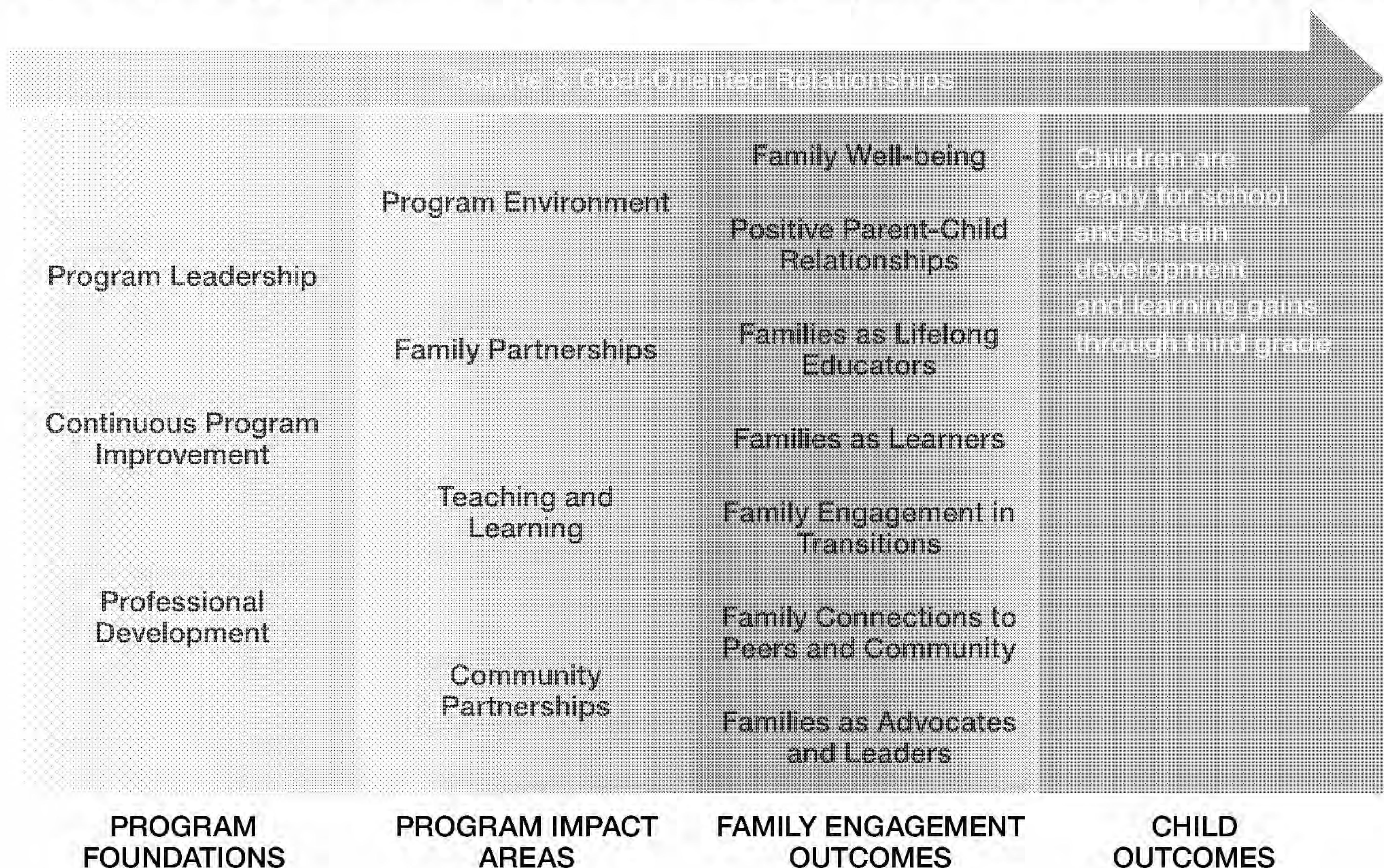
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THE HEAD START PARENT, FAMILY, AND COMMUNITY ENGAGEMENT FRAMEWORK ENGAGING FAMILIES—PRENATAL TO AGE 8

Parent and family engagement in Head Start/Early Head Start (HS/EHS) is about building relationships with families that support family well-being, strong relationships between parents and their children, and ongoing learning and development for both parents and children. The Parent, Family, and Community Engagement (PFCE) Framework is a road map for progress in achieving the kinds of outcomes that lead to positive and enduring change for children and families. The PFCE Framework was developed in partnership with programs, families, experts, and the National Center on Parent, Family, and Community Engagement. It is a research-based approach to program change that shows how an agency can work together as a whole—across systems and service areas—to promote parent and family engagement and children’s learning and development.

PARENT, FAMILY, AND COMMUNITY ENGAGEMENT FRAMEWORK

When parent and family engagement activities are systemic and integrated across program foundations and program impact areas, family engagement outcomes are achieved, resulting in children who are healthy and ready for school. Parent and family engagement activities are grounded in positive, ongoing, and goal-oriented relationships with families.



The first section of the PFCE Framework outlines the importance of a systemic, integrated and comprehensive approach to family engagement. Next, the PFCE Framework discusses parent and family engagement activities in the context of Program Foundations and Program Impact Areas. Essentially, when parent and family engagement activities are systemic and integrated across Program Foundations and Program Impact Areas, family engagement outcomes are achieved. The PFCE Framework goes on to describe seven Parent and Family Engagement Outcomes. For each of the seven outcomes, a definition is given, and examples of Program Foundations strategies and Program Impact Area strategies are provided. In addition, there are examples of family progress for each outcome area. Finally, the PFCE Framework includes ideas for how programs might use this document.

A SYSTEMIC, INTEGRATED AND COMPREHENSIVE APPROACH

Because parent, family, and community engagement practices cross into different service areas, PFCE goals, plans and activities must be

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systemic, integrated, and comprehensive across the entire HS/EHS organization.

By systemic, we mean that parent, family, and community engagement is anchored in leadership priorities, program management, continuous improvement systems, and staff development. By integrated we mean that by carrying out PFCE activities throughout the entire organization, programs are much more likely to make the kind of family engagement progress that best supports child outcomes. For example, directors, teachers, assistant teachers, family support staff, home visitors, and health and disabilities staff, all play a role in engaging families and supporting school readiness. By comprehensive, we mean that staff consider the strengths, interests and needs of each child and family, and connect families with services and resources to achieve their goals.

The PFCE Framework builds on many years of parent involvement in Head Start. For example, parent decision-making has always been an important part of parent involvement in Head Start. The PFCE Framework builds on this tradition and suggests that in many circumstances parent input (from parents who participate in policy council and parent committees as well as parents who do not) could be used in a systemic and integrated way. Further, program activities that promote family involvement have always been an important part of parent and family engagement in Head Start. Programs are more likely to make progress in achieving family engagement and school readiness goals, when these activities are tied to a systemic and integrated approach.

PROGRAM FOUNDATIONS

Head Start and Early Head Start organizations need strong foundations to make the kind of progress that leads to lasting change for families and enduring progress for children. The foundations for successful

parent and family engagement include the following: Program Leadership, Continuous Improvement and Professional Development of all staff.

PROGRAM LEADERSHIP *The director, the governing board, policy council, parent committees and management teams determine the way that Head Start and Early Head Start programs engage parents, families, and the community.* To begin, program leadership sets a clear vision and ambitious goals for PFCE. Program leadership makes sure that program systems (such as communication and human resources) integrate practices that help parent and family engagement to flourish. Leadership outlines strategic plans that bring systems, people, and activities together in a way that values staff and enhances parent and family engagement in the program.

CONTINUOUS IMPROVEMENT *Leadership is committed to continuously improving systems and activities to engage and support parents and families.* With a strategic PFCE vision and goals set by program leadership, programs can conduct staff and parent surveys and use data from surveys, intakes, assessments and family partnership processes to set benchmarks. From there, staff can review reports, assess program progress, make decisions, and change or refine PFCE goals and actions.

PROFESSIONAL DEVELOPMENT *PFCE training is important to all staff, but their professional development will focus uniquely around their roles in the program.* To have a solid foundation for achieving family engagement outcomes, professional development plans should be comprehensive and include training, supervision, recognition, and information about career options. Giving staff members regular opportunities to come together as a “community of learners” helps them find mutual support and ideas for turning training and information into action. It also helps them gain new insights from working in cross-service area teams, such as teaching, family services, and home visiting.

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PROGRAM IMPACT AREAS

With a solid PFCE foundation in place, program leadership and staff are set to work in partnership with parents, families, and the community on activities that promote family engagement and work toward family goals. To do this, programs align PFCE strategies across four impact areas: Program Environment, Teaching and Learning, Family Partnerships, and Community Partnerships.

PROGRAM ENVIRONMENT *Families feel welcomed, valued, and respected by program staff.* To make an impact on program environment, program leadership supports all staff to build relationships, both with each other and with families and communities. Staff and families work together to set expectations and support family goals and children’s learning and development in culturally and

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linguistically responsive ways. Two-way communication and relationship building with families are adapted to meet changing family and community circumstances. In addition, opportunities are provided for family support and development through the family partnership process and through intentional parent/family peer groups within the program and community.

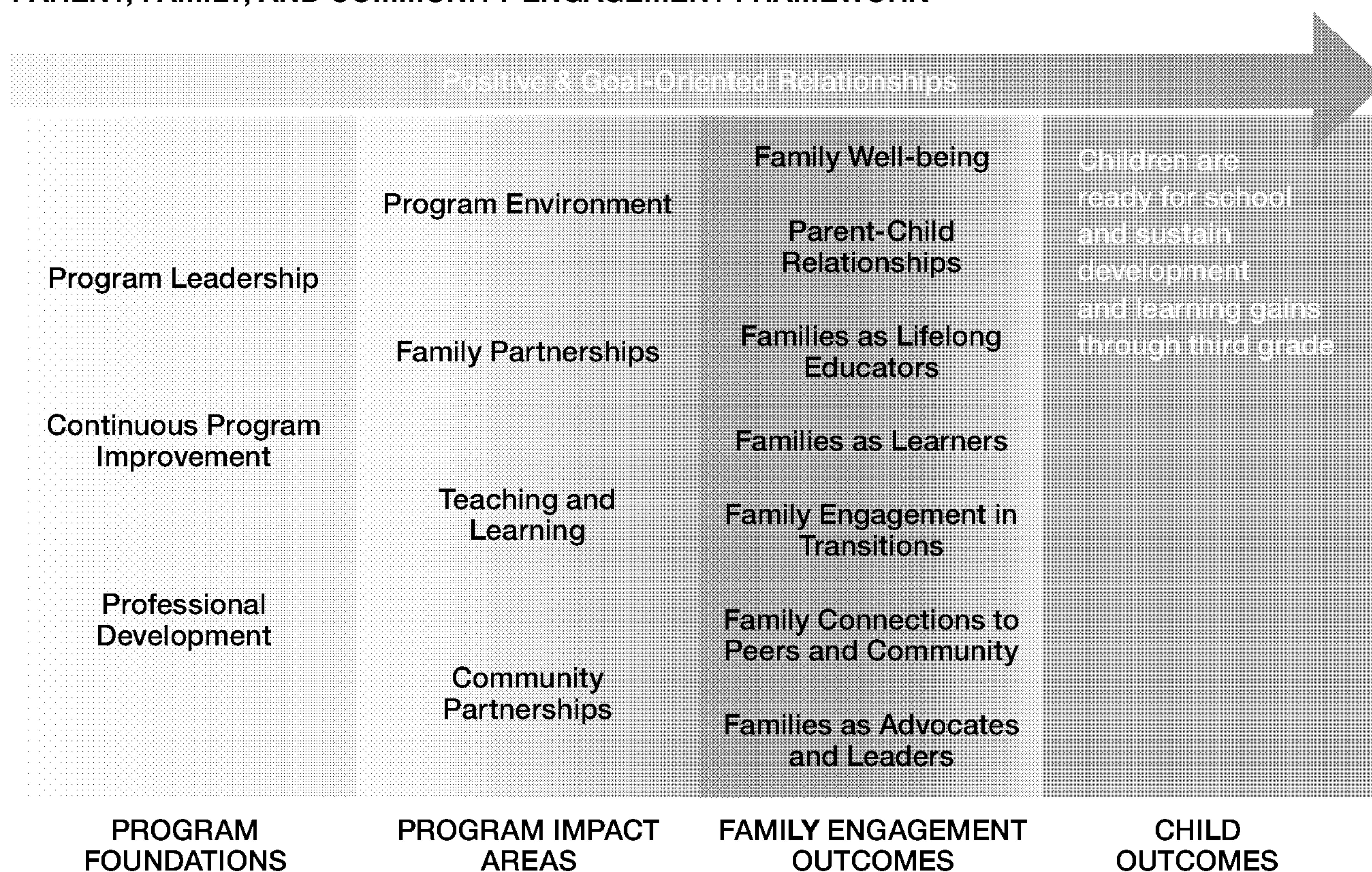
FAMILY PARTNERSHIPS *Families work with staff to identify and achieve their goals and aspirations.* To make an impact in the area of family partnerships, staff and families build ongoing, respectful and goal-oriented relationships. This means identifying and acting on family goals and aspirations and using program and community supports and resources to promote progress on family and child development goals.

TEACHING AND LEARNING *Families are engaged as equal partners in their children's learning and*

development. To make an impact in engaging families as equal partners in children's learning and development, staff and families work together to build strong relationships that support information sharing with each other about children's learning and developmental progress. Programs ensure that families have access to information about their child and that the information is understandable and meaningful. Parents share their knowledge about their child's interests and progress at home, and together staff and families use this information to set and work toward goals for the child in the classroom, home, and community.

COMMUNITY PARTNERSHIPS *Communities support families' interests and needs and encourage parent and family engagement in children's learning.* To make an impact in the area of community partnerships, staff and families collaborate with community, health,

PARENT, FAMILY, AND COMMUNITY ENGAGEMENT FRAMEWORK



mental health, social service, and school partners to build peer networks, link families and children to needed services, and support successful transitions for children and families.

PARENT AND FAMILY ENGAGEMENT OUTCOMES

Programs are more likely to achieve family engagement outcomes when PFCE foundations are in place and PFCE activities are occurring across impact areas. Parent and Family Engagement (PFE) Outcomes will support promising child outcomes such as enhanced school readiness skills, sustained learning, and developmental gains across early childhood education and into elementary school.

The PFE Outcomes include examples of program

strategies that are informed by both research and performance standards. This is not an exhaustive list of strategies. The assumption is that program strategies are locally and individually tailored. For example, program strategies would be individualized based on culture and language and different parent strengths, challenges, and perspectives — including those of fathers, mothers, grandparents, kith and kinship caregivers, LGBT parents, expectant parents, teen parents, guardians and others.

While all of the PFE Outcomes are relevant for each program, not all of the PFE Outcomes are relevant for each family. This means that while there are examples of progress for families included here, each family’s HS/EHS experience is uniquely determined by their own interests, needs and goals

| Head Start Parent and Family Engagement Outcomes | |
|---|---|
| 1. FAMILY WELL-BEING | Parents and families are safe, healthy, and have increased financial security. |
| 2. POSITIVE PARENT-CHILD RELATIONSHIPS | Beginning with transitions to parenthood, parents and families develop warm relationships that nurture their child’s learning and development. |
| 3. FAMILIES AS LIFELONG EDUCATORS | Parents and families observe, guide, promote, and participate in the everyday learning of their children at home, school, and in their communities. |
| 4. FAMILIES AS LEARNERS | Parents and families advance their own learning interests through education, training and other experiences that support their parenting, careers, and life goals. |
| 5. FAMILY ENGAGEMENT IN TRANSITIONS | Parents and families support and advocate for their child’s learning and development as they transition to new learning environments, including EHS to HS, EHS/HS to other early learning environments, and HS to kindergarten through elementary school. |
| 6. FAMILY CONNECTIONS TO PEERS AND COMMUNITY | Parents and families form connections with peers and mentors in formal or informal social networks that are supportive and/or educational and that enhance social well-being and community life. |
| 7. FAMILIES AS ADVOCATES AND LEADERS | Parents and families participate in leadership development, decision-making, program policy development, or in community and state organizing activities to improve children’s development and learning experiences. |

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they have for themselves and their children. It starts with meeting families where they are, engaging families in the opportunities and experiences they choose, and deciding what progress would mean together. It means recognizing barriers to progress and figuring out ways to deal with them. For example, what is the quality of program

partnerships with particular community agencies that might be useful connections for families? How much adversity are families facing? Are families meeting basic needs, having income and employment difficulties, or facing homelessness, depression, or family violence? What are the types of services and resources available (or not available) in the community that can help families? Progress is something that programs and families can define and determine together.

The following section includes examples of strategies for each PFE Outcome. Specifically, each outcome includes:

- the defined parent and family engagement outcome;
- examples of program strategies related to the PFCE Framework Foundations;
- examples of program strategies related to the PFCE Framework Impact Areas; and
- examples of progress for families.

1. Family Well-being

Parents and families are safe, healthy, and have increased financial security.

EXAMPLES OF STRATEGIES FOR PROGRAM PROGRESS

PROGRAM LEADERSHIP

- Ensure that systems, supports and resources are in place to address professional development, continuous improvement, program environment and partnerships related to family well-being.
- Incorporate goals related to family well-being into agency work plans and strategic planning.
- Ensure staff members have appropriate training and supervision and manageable caseloads.
- Develop relationships with community members and community organizations that support families' interests and needs.
- Promote cross-service area teamwork.
- Contract or hire a mental health consultant with appropriate credentials and experience to be a resource for staff and program needs around family well-being.

CONTINUOUS IMPROVEMENT

- Use the community assessment and self assessment surveys, the family partnership process, team meetings, and other tools to understand community and family needs and interests.
- Review individual and system-wide family successes, helpful referrals and effective staff practices to evaluate family services.
- Collect data for individual families and aggregate it so that programs can review the effectiveness of family services.

PROFESSIONAL DEVELOPMENT

- Develop knowledge of relationship building that is grounded in cross-cultural responsiveness and strengths-based perspectives.
- Gain knowledge about mental health, child development and a variety of parenting practices, including unique ways to engage fathers.
- Develop knowledge and skill in supporting families around financial literacy and financial stability.
- Reflect on daily practice and personal experience to increase self awareness and effective relationship-building with families.
- Develop knowledge of professional ethics around confidentiality, boundaries and self-determination.
- Develop skill in coordination and collaboration with community partners.

PROGRAM ENVIRONMENT

- Welcome all families—and all family structures, sizes and arrangements.
- Initiate relationships with families that are receptive, responsive and respectful.
- Include family-friendly spaces with pictures and materials that affirm and welcome all families.
- Engage in honest dialogue with families about their expectations and staff/program objectives.

FAMILY PARTNERSHIPS

- Use family partnership assessments as a tool for relationship building and as a basis for ongoing individualized family services.
- Help families identify their interests, articulate their strengths and needs and accomplish and/or develop goals.
- Use goal-oriented home visits to establish relationships with families and to identify and support their interests and needs through the family partnership process.
- Assist families in using resources and systems of support regularly and continuously over a period of time.

TEACHING AND LEARNING

- Participate in cross-service area teams and program meetings to ensure that information about services related to family and child well-being can inform teaching.

COMMUNITY PARTNERSHIPS

- Link families with support systems and resources and conduct purposeful follow up to determine their effectiveness.
- Participate in community meetings and initiatives that increase program capacity to respond to the needs and interests of families.

1. Family Well-being *(continued)*

Parents and families are safe, healthy, and have increased financial security.

EXAMPLES OF PROGRESS—PARENT AND FAMILY PERSPECTIVES

PARENTS AND FAMILIES:

- Have considered the benefits of participating in different program services and/or activities.
- Developed relationships with staff that are helpful in supporting the goals they have established for themselves and their children.
- Identified their individual family strengths to cope with difficulties and overcome adversity.
- Gained confidence to address any family specific needs and/or interests related to:
 - ◆ Safety
 - ◆ Housing stability
 - ◆ Health and mental health
 - ◆ Employment and job skills development
 - ◆ Budget and finances, financial literacy
 - ◆ Safety
- Accessed resources and systems of support that meet family interests, needs and goals.

2. Positive Parent-child Relationships

Beginning with transitions to parenthood, parents and families develop warm relationships that nurture their child's learning and development.

EXAMPLES OF STRATEGIES FOR PROGRAM PROGRESS

PROGRAM LEADERSHIP

- Ensure that systems, supports and resources are in place to address professional development, continuous improvement, program environment and partnerships related to supporting positive parent-child relationships.
- Incorporate goals related to positive parent-child relationships into agency work plans and strategic planning.
- Ensure staff members have appropriate training, effective supervision, and manageable caseloads to support families and their relationships with their infants, toddlers and preschool age children.
- Promote cross-service area teamwork.

CONTINUOUS IMPROVEMENT

- Use self assessments, related surveys and ongoing conversations with families to reflect on staff relationships with families and identify areas for improvement.
- Use self assessments and related surveys to better understand participants' parenting practices, and use this information to improve parenting education and parenting supports.

PROFESSIONAL DEVELOPMENT

- Gain knowledge about:
 - the needs of prenatal and postnatal pregnant women and their families;
 - the needs of parents who are parenting a child with a disability;
 - unique ways to engage fathers;
 - how mental health and wellness affects families;
 - communication styles and relationship building;
 - child development;
 - the effect of trauma on parent-child relationships; and
 - a variety of parenting practices.

2. Positive Parent-child Relationships *(continued)*

Beginning with transitions to parenthood, parents and families develop warm relationships that nurture their child's learning and development.

PROGRAM ENVIRONMENT

- Hold the child and family in high regard and partner effectively with different groups of parents.
- Provide opportunities that support parents' needs to connect with other parents for reflection, information, ideas and support.
- Support parent-child relationships in a way that values the culture and language of the family and recognizes how different cultural influences may influence family development.

FAMILY PARTNERSHIPS

- Provide opportunities for parents to learn about expectant parenting and prenatal health, the developing role of young parents (for adolescent parents), and/or about their roles as new mothers and fathers.
- Foster meaningful, reciprocal relationships between mother and child, and father and child in a manner that is both culturally receptive and responsive.
- Help families identify appropriate practices that complement the stages of their developing child.
- Support parents and families in ensuring the health and safety of their infants, toddlers and preschoolers.
- Support a father's efforts to connect with and be responsible for his child at all ages and stages of development.
- Support families in seeking support from mental health consultants or other community agencies when there are parent-child relationship challenges that require additional services.
- Foster strong co-parenting relationships as appropriate.

TEACHING AND LEARNING

- Engage with parents as equal partners in learning about their child while acknowledging parents' premier role as their child's first teacher.
- Foster meaningful, reciprocal relationships between mother and child, and father and child in a manner that is both culturally receptive and responsive.
- Talk together with families about the child's signals in ways that help families explore these signals and understand and respond to their child's behavior.
- Work together with families to help children overcome behavioral challenges.

COMMUNITY PARTNERSHIPS

- Engage community partners to help support the needs and goals of pregnant and expectant families and new parents.
- Engage community partners to help support the needs of families who are parenting during stressful and challenging times.

EXAMPLES OF PROGRESS—PARENT AND FAMILY PERSPECTIVES

PARENTS AND FAMILIES:

- Gained knowledge and experience around expectant parenting and prenatal health, the developing role of young parents (for adolescent parents), and/or about their roles as new mothers and fathers.
- Learned new ways to ensure the health and safety of their developing child.
- Gained knowledge about their children's social, emotional and cognitive development in the context of community and culture.
- Learned new ways to understand and respond to their child's behavior.
- Used positive parenting practices—such as attachment and nurturing relationships—that complement the stages of their child's development.
- Reflected on parenting experiences, practices and new strategies.

3. Families as Lifelong Educators

Parents and families observe, guide, promote and participate in the everyday learning of their children at home, school, and in their communities.

EXAMPLES OF STRATEGIES FOR PROGRAM PROGRESS

| | |
|---------------------------------|---|
| PROGRAM LEADERSHIP | <ul style="list-style-type: none">■ Ensure that systems, supports and resources are in place to address professional development and continuous improvement, program environment and partnerships related to families as lifelong educators.■ Incorporate goals related to families as lifelong educators into agency work plans and strategic planning.■ Collaborate with school systems to support and empower families in their continued role as their child's lifelong educators.■ Promote cross-service area teamwork. |
| CONTINUOUS IMPROVEMENT | <ul style="list-style-type: none">■ Use self assessments, related surveys and staff service integration meetings to better understand the effectiveness of family-staff relationships with respect to teaching and learning.■ Use information from the self assessment and related surveys to improve staff-family relationships and to strengthen family literacy practices. |
| PROFESSIONAL DEVELOPMENT | <ul style="list-style-type: none">■ Include teachers/teachers' assistants in parenting education sessions so parents and teachers can share information about child learning and development, and program curriculum. |
| PROGRAM ENVIRONMENT | <ul style="list-style-type: none">■ Welcome families to observe and participate in their child's classroom (or home-based) activities.■ Support and encourage parents to share tips on everyday learning practices with staff and other families. |
| FAMILY PARTNERSHIPS | <ul style="list-style-type: none">■ Support relationships between parents and their children as part of the foundation for interactions around early learning.■ Provide opportunities and support parents in working toward their own literacy goals. |
| TEACHING AND LEARNING | <ul style="list-style-type: none">■ Consistently connect with families to gather child information and parent observations to inform teaching.■ Share information about children's social, emotional, and cognitive development and the importance of the home language (with families of children who are dual language learners).■ Share information about approaches that promote child outcomes outlined in the Head Start Child Development and Early Learning Framework.■ Engage parents in conversations where child assessment data is shared and parents learn about children's progress.■ Use a database/management information system that is accessible to families and that assists teachers in sharing child assessment information in an understandable, family-friendly format. |
| COMMUNITY PARTNERSHIPS | <ul style="list-style-type: none">■ Support family experiences with community resources that support children's learning and development, such as libraries and museums.■ Share information with families about resources and services for children with disabilities. |

3. Families as Lifelong Educators *(continued)*

Parents and families observe, guide, promote and participate in the everyday learning of their children at home, school, and in their communities.

EXAMPLES OF PROGRESS—PARENT AND FAMILY PERSPECTIVES

PARENTS AND FAMILIES:

- Shared their knowledge of their children with program and teaching staff to inform teaching and learning.
- Identified their talents and strengths as parents and educators of their children.
- Enjoyed and celebrated their child's learning and developmental accomplishments.
- Learned more about the social-emotional development of their infants and toddlers.
- Learned about the value of the primary language for children's development and long-term academic success (for parents of dual language learners).
- Partnered with teachers/assistant teachers and used different approaches in the program, home and/or community that supported the essential learning outlined in the Head Start Child Development and Early Learning Framework.
- Learned about options for acquiring services and supports for their child's learning, developmental, or behavioral challenges.
- Gained confidence and competence in voicing, acting on, and achieving lifelong learning goals for their children.

4. Families as Learners

Parents and families advance their own learning interests through education, training and other experiences that support their parenting, careers, and life goals.

EXAMPLES OF STRATEGIES FOR PROGRAM PROGRESS

PROGRAM LEADERSHIP

- Ensure that systems, supports and resources are in place to address professional development, continuous improvement, program environment and partnerships related to families learning goals for themselves and their children.
- Incorporate goals related to family learning into agency work plans and strategic planning.
- Form agreements with education entities and organizations that support staff and families' education and training goals.

CONTINUOUS IMPROVEMENT

- Use community assessments, self assessments, family partnership agreements and related surveys on education and training services in the program and community to understand opportunities and challenges.
- Use information from community assessments, self assessments and related surveys to improve family options for GED, training, certificate, and degree programs.

PROFESSIONAL DEVELOPMENT

- Create "learning communities" for staff.
- Develop staff skills to support families in meeting their learning goals.
- Develop knowledge about different kinds of education and training opportunities available to families.
- Prepare staff to engage parents in meaningful and creative ways in parent meetings and trainings.

4. Families as Learners *(continued)*

Parents and families advance their own learning interests through education, training and other experiences that support their parenting, careers, and life goals.

| | |
|-------------------------------|--|
| PROGRAM ENVIRONMENT | <ul style="list-style-type: none">■ Welcome and support families as learners.■ Make information available that supports parents' personal growth and career development.■ Ensure that parent meetings and trainings are announced routinely, that announcements are inviting, and that language is not a barrier to parent participation.■ Provide opportunities for families to connect with other families in the program or community that are working to achieve similar learning/educational goals. |
| FAMILY PARTNERSHIPS | <ul style="list-style-type: none">■ Use the family partnership process to assist families with their education and training goals, and provide referrals to educational resources (GED, adult education, ESL, employment opportunities, workplace literacy, parenting skills, job training, job preparation skills, etc).■ Follow-up on referrals to ensure that families are enrolled and have the necessary supports to complete their education and/or training.■ Invite past program parents and community volunteers to share their educational and career experiences with families.■ Invite families to volunteer or apply for jobs in the program in ways that support their parenting, career or life goals. |
| TEACHING AND LEARNING | <ul style="list-style-type: none">■ Support parents as learners in parenting education programs that help parents learn more about their child's learning, development and behavior.■ Support family literacy activities between parents and children.■ Encourage families to observe and participate in child learning and development during home visits and in classrooms. |
| COMMUNITY PARTNERSHIPS | <ul style="list-style-type: none">■ Link families to community resources for internships, volunteer activities and other experiences that expand their knowledge and skills and build on their career interests.■ Form partnerships with educational resources in the community and beyond, including higher education institutions, to support families' learning interests and educational goals.■ Form partnerships with adult educators who creatively enhance education and training opportunities for families. |

EXAMPLES OF PROGRESS—PARENT AND FAMILY PERSPECTIVES

PARENTS AND FAMILIES:

- Identified their strengths as learners, and reflected on their parenting, career and life interests.
- Learned about experiences, training and educational opportunities that relate to their interests.
- Set learning goals that aligned with their interests and career aspirations.
- Enrolled in courses or training programs that led toward GED, certifications and/or other degrees.
- Participated in learning experiences that supported their parenting, career or life goals.
- Considered goals related to volunteer and employment options with Head Start and Early Head Start programs.

5. Family Engagement in Transitions

Parents and families support and advocate for their child’s learning and development as they transition to new learning environments, including EHS to HS, EHS/HS to other early learning environments, and HS to Kindergarten through Elementary School.

EXAMPLES OF STRATEGIES FOR PROGRAM PROGRESS

| | |
|---------------------------------|---|
| PROGRAM LEADERSHIP | <ul style="list-style-type: none"> ■ Ensure that systems, supports and resources are in place to address professional development, continuous improvement and partnerships related to child and family transitions. ■ Establish ongoing communications and Memorandas of Understanding between Head Start and the local educational agencies. |
| CONTINUOUS IMPROVEMENT | <ul style="list-style-type: none"> ■ Use the self assessment process, related surveys and K-12 data sources (where possible) to review transition activities and to better understand opportunities and challenges. ■ Use information from the self assessment, related surveys and other data sources to improve transition practices with families and community partners. |
| PROFESSIONAL DEVELOPMENT | <ul style="list-style-type: none"> ■ Conduct joint transition trainings across EHS/HS and local educational agencies. ■ Gain understanding about the realities public schools face and acknowledge both constraints and opportunities in building local partnerships (differences in policy, regulations, budgets, organizational design, etc). |
| PROGRAM ENVIRONMENT | <ul style="list-style-type: none"> ■ Welcome and engage families as partners in transition planning. ■ Create a culture of supporting families during transitions as they are the key to creating continuity for children. ■ Help families identify and understand quality criteria in early childhood settings as children make transitions from prenatal to postnatal services, new service options, new classrooms, or new home visitors. |
| FAMILY PARTNERSHIPS | <ul style="list-style-type: none"> ■ Use the family partnership process to help families develop transition plans for themselves and their children. ■ Provide families with information, training and connections to future early care and educational settings to help facilitate the transition process for parents and children (e.g., information about what families might expect of K-12 instruction and training about how to deal with disagreements between parent and teacher). ■ Ensure families know about their rights under federal and state laws, such as their rights under the Individuals with Disabilities Education Act (IDEA). |
| TEACHING AND LEARNING | <ul style="list-style-type: none"> ■ Ensure families have ongoing opportunities to discuss their observations and concerns about their child’s strengths and challenges prior to transitions from EHS to HS and HS to K-12. ■ Share information about activities and everyday interactions with children that promote school readiness as outlined by the Head Start Child Development and Early Learning Framework. ■ Ensure families have ongoing opportunities to discuss child assessment data so that families are prepared to initiate and/or participate in similar discussions with teachers in K-12. ■ Provide families with information about child development and the impact of transitions on children across early childhood and school settings. |
| COMMUNITY PARTNERSHIPS | <ul style="list-style-type: none"> ■ Coordinate services for children and families leaving Head Start through program-school partnerships. ■ Provide advocacy training and opportunities for families to develop and use advocacy skills in the context of their child’s lifelong learning. |

5. Family Engagement in Transitions *(continued)*

Parents and families support and advocate for their child’s learning and development as they transition to new learning environments, including EHS to HS, EHS/HS to other early learning environments, and HS to Kindergarten through Elementary School.

EXAMPLES OF PROGRESS—PARENT AND FAMILY PERSPECTIVES

PARENTS AND FAMILIES:

- Gained understanding of the social and emotional impacts of transitions on children.
- Learned about their role in creating continuity for children as they transition into kindergarten.
- Learned about the culture, norms and opportunities of their child’s future early care and education settings.
- Anticipated and recognized their child’s adaptive needs as changes and transitions occurred in early childhood education and school settings.
- Learned about how everyday interactions with preschool children are opportunities to promote school readiness as outlined in the Head Start Child Development and Early Learning Framework.
- Learned about their rights under federal and state laws, such as their rights under the Individuals with Disabilities Education Act (IDEA).
- Built upon their strengths as program/school advocates through participation in program supported transition activities.
- Accessed information about existing local parent-to-parent organizations, family peer networks, and parent-initiated school-community efforts in order to continue engagement in new settings.

6. Family Connections to Peers and Community

Parents and families form connections with peers and mentors in formal or informal social networks that are supportive and/or educational and that enhance social well-being and community life.

EXAMPLES OF STRATEGIES FOR PROGRAM PROGRESS

PROGRAM LEADERSHIP

- Ensure that systems and staff development facilitate opportunities for parents to develop relationships with their peers through meetings, trainings, support groups, mentoring programs or community referrals.
- Incorporate goals related to family connections to peers and community into agency work plans and strategic planning.

CONTINUOUS IMPROVEMENT

- Use the community assessment, self assessments, related surveys and ongoing relationships with families to understand the opportunities and challenges related to parent connections, peers, and community.
- Use information from community assessment, self assessments and related surveys to improve practices related to parent connections, peers and community.

PROFESSIONAL DEVELOPMENT

- Conduct staff training on facilitating peer activities that help parents and families:
 - enhance parent-child relationships;
 - strengthen their role as educators;
 - reflect and set learning goals;
 - learn about transitions; and
 - encourage parent leadership and advocacy.

6. Family Connections to Peers and Community *(continued)*

Parents and families form connections with peers and mentors in formal or informal social networks that are supportive and/or educational and that enhance social well-being and community life.

PROGRAM ENVIRONMENT

- Create safe and respectful environments where parents can lead and learn from each other and ask for the kinds of information that they find helpful as individuals and members of a group.
- Provide space and resources, if necessary, for monthly events chaired by parents, for parents.

FAMILY PARTNERSHIPS

- Facilitate (or refer parents to) parental support and/or educational groups where they can share their concerns (e.g. children's special needs).
- Talk with parents about the formal and informal social networks (support, amusement, help, education, etc) they have and explore interests or needs in forming new (or renewed) social connections.
- Individualize opportunities for peer-to-peer connections for different groups of parents (e.g., fathers or grandparents).
- Support parents interests and goals with skill-building volunteer opportunities in the program and community.

TEACHING AND LEARNING

- Encourage parent-to-parent support when participating in parent meetings about children's learning and development.

COMMUNITY PARTNERSHIPS

- Collaborate with community organizations that share parents' concerns and interests.
- Link families with meaningful support networks, peer-to-peer groups, and volunteer opportunities in the community.

EXAMPLES OF PROGRESS—PARENT AND FAMILY PERSPECTIVES

PARENTS AND FAMILIES:

- Connected with other parents and families to exchange knowledge and resources.
- Engaged in problem-solving and decision-making with staff, parents and families.
- Experienced the personal value of relationships, connections and experiences in the program and community.
- Developed a sense of self-efficacy through parent-to-parent experiences that support mothers, fathers, and other parenting caregivers in their relationships with one another.
- Gained a sense of empowerment through the validation that comes with peer-to-peer shared experiences.
- Volunteered in the program or in other community-based organizations.

7. Families as Advocates and Leaders

Families participate in leadership development, decision-making, program policy development, or community and state organizing activities to improve children's development and learning experiences.

EXAMPLES OF STRATEGIES FOR PROGRAM PROGRESS

PROGRAM LEADERSHIP

- Ensure that parents' opinions are heard and included in the program planning processes (e.g., policy council and parent committees, etc.).
- Ensure that systems and supports are in place to address professional development, continuous improvement, program environment and partnerships related to engaging families as advocates and leaders.
- Incorporate goals related to family advocacy and leadership into agency work plans and strategic planning.

CONTINUOUS IMPROVEMENT

- Conduct regular assessments on parent leadership and advocacy experiences to understand opportunities and challenges.
- Use related assessment data to improve practices related to parent leadership and advocacy.

PROFESSIONAL DEVELOPMENT

- Provide training on the multicultural principles, leadership development, and advocacy for staff and families.

PROGRAM ENVIRONMENT

- Create an environment that welcomes and affirms parent leadership and advocacy in the program.
- Work with parents to arrive at agreed upon understandings of how to partner and how to collaborate with each other within the program.

FAMILY PARTNERSHIPS

- Provide opportunities for parents to identify their strengths as leaders/advocates and to use them in the program and community.
- Share information with families about existing parent-to-parent organizations, family peer networks and/or parent-initiated school-community efforts in order to foster continuity in leadership and advocacy roles beyond Head Start.

COMMUNITY PARTNERSHIPS

- Provide parent mentoring opportunities that could include staff, alumni parents/families, elders, and professionals in the community to serve as a resource and support for parent leadership development.
- Partner with parents to engage advocacy groups that work on issues related to child, family and community needs.
- Form partnerships with parent-to-parent organizations or other K-12 parent groups to facilitate connections for HS/EHS families.

EXAMPLES OF PROGRESS—PARENT AND FAMILY PERSPECTIVES

PARENTS AND FAMILIES:

- Learned about their opportunities to engage in leadership and /or advocacy activities (eg. policy council).
- Built upon their strengths as leaders and/or advocates through parent-initiated participation in program-supported activities such as advocacy and leadership trainings, parent committees, policy councils, etc.
- Accessed information about existing parent-to-parent organizations, family peer networks and/or parent-initiated school-community efforts in order to continue to be leaders/advocates in the community and as their children transition into kindergarten.

(b)(6)

THE PARENT, FAMILY, AND COMMUNITY ENGAGEMENT FRAMEWORK: SUMMARY AND USES

Regardless of the particular strategies that programs and families choose, the necessary ingredients for program success must include a commitment toward goal-directed, positive, culturally responsive and respectful relationships with families and a system-wide, integrated, and comprehensive parent, family, and community engagement approach.

The PFCE framework can be used in program-wide strategic planning, program design and management, continuous improvement systems, professional development for staff and governing bodies, and program approaches to providing services. It can be used to inform community partners about Head Start parent and family engagement goals and the importance of those goals

(b)(6)

for school readiness. It lays the groundwork for the development of future parent and family engagement training and technical assistance materials for Head Start and Early Head Start programs that will be made available through the National Center on Parent, Family, and Community Engagement. ■

APPENDIX

RELATED ORGANIZATIONAL RESEARCH TO SUPPORT THE PFCE FRAMEWORK

Over the last decade, an important body of research in several fields makes the case for a systemic approach to interventions for children and families. This approach seeks to change several important elements in the way a program or organization works. Findings from the research suggest that programs with strong leadership and a supportive work environment create the conditions for effective staff practices and relationships with children and families. Effective programs do not operate in isolation. They depend on the support and resources of their communities in order to achieve the desired outcomes for children and families. Like an orchestra, several instruments of change must work together to produce the desired result.

RELATED PARENT AND FAMILY ENGAGEMENT OUTCOMES RESEARCH

The body of research that focuses on parent and family engagement as key contributors to family well-being and child success has grown significantly since the creation of Head Start in 1965. In order to highlight the significance of this research across the seven family engagement outcomes, the National Center on Parent, Family, and Community Engagement (NCPFCE) will be developing a series of materials that describe this multidisciplinary research base and its implications for implementing system wide practices that are considered evidence-based, evidence-informed, or best practices. In addition, the research support for building parent and family engagement and community partnerships that enhance children's early learning and developmental outcomes will be part of the NCPFCE program readiness guide for parent, family, and community engagement.

Early Childhood Program Student Learning Outcomes

The following page provides the agreed upon minimum statewide student learning outcomes for the Early Childhood Education AAS Program. These program competencies/student learning outcomes are an extension to the curriculum standard program description. The curriculum standard program description can be found at the following link:

http://www.nccommunitycolleges.edu/Programs/docs/Curric_Standards/55/A55220_Early_Child_Educ_FA09v3.pdf

Program Student Learning Outcomes for the Early Childhood Education Program were initially developed, voted on and approved by the NC-CCCE (North Carolina Community College Childhood Educators association) to assist faculty across the state in further honing in on overall program outcomes that related to core course content and the curriculum standard program description. The effort was to provide consistency in student learning outcomes across all 58 community colleges and to assist faculty in striving to meet additional state and national standards (NAEYC accreditation standards, NC B-K standards, etc).

During the Fall 2010 CCCE meeting, the CCCE voted to make the Early Childhood Associate Degree program outcomes the same as the National Association for the Education of Young Children (NAEYC) Early Childhood Associate Degree Accreditation Standards (and their key elements).

The NC-CCCE asks that faculty teaching in the Early Childhood Education AAS program strive to adhere to the stated program student outcomes at a minimum. Individual college programs are welcome to add additional program competencies locally and/or enhance the stated program competencies if desired.

NC Community College
Early Childhood Education AAS Program
Student Learning Outcomes

All early childhood associate degree graduates should be able to:

1. Promote Child Development and Learning (NAEYC Standard 1)

Key Elements

- Know and understand young children's characteristics and needs
- Know and understand the multiple influences on development and learning
- Use developmental knowledge to create healthy, respectful, supportive, and challenging learning environments

2. Build Family and Community Relationships (NAEYC Standard 2)

Key elements

- Know about and understand diverse family and community characteristics
- Support and engage families and communities through respectful, reciprocal relationships
- Involve families and communities in their children's development and learning

3. Observe, Document and Assess to Support Young Children and Families (NAEYC Standard 3)

Key elements

- Understand the goals, benefits, and uses of assessment
- Know about and use observation, documentation, and other appropriate assessment tools and approaches
- Understand and practice responsible assessment to promote positive outcomes for each child
- Know about assessment partnerships with families and with professional colleagues

4. Use Developmentally Effective Approaches to Connect with Children and Families (NAEYC Standard 4)

Key elements

- Understand positive relationships and supportive interactions as the foundation of their work with children
- Know and understand effective strategies and tools for early education
- Use a broad repertoire of developmentally appropriate teaching/learning approaches
- Reflect on their own practice to promote positive outcomes for each child

5. Use Content Knowledge to Build Meaningful Curriculum (NAEYC Standard 5)

Key elements

- Understand content knowledge and resources in academic disciplines
- Know and use the central concepts, inquiry tools, and structures of content areas or academic disciplines
- Use their own knowledge, appropriate early learning standards, and other resources to design, implement, and evaluate meaningful, challenging curricula for each child.

6. Become a Professional (NAEYC Standard 6)

Key elements

- Identify and involve oneself with the early childhood field

- Know about and uphold ethical standards and other professional guidelines
- Engage in continuous, collaborative learning to inform practice
- Integrate knowledgeable, reflective, and critical perspectives on early education
- Engage in informed advocacy for children and the profession

Standards adopted from **NAEYC Standards for Early Childhood Professional Preparation Programs**, Position Statement Approved by the NAEYC Governing Board July 2009

Standards for Birth-Kindergarten Teacher Candidates

Standard 1: BK teacher candidates have a comprehensive knowledge of typical as well as atypical patterns of child development.

BK teacher candidates demonstrate an understanding of age-related characteristics that permit predictions about what experiences are most likely to promote children's development and learning across all domains. They recognize that each domain is important and that children's development is integrated or holistic, with progress in one domain influencing development in all of the others. They recognize that children of various ages, abilities, and cultural, linguistic, or socio-economic backgrounds will demonstrate varying degrees of strengths across developmental domains.

- Understand interrelated domains: approaches to learning, emotional and social development, health and physical development, language development and communication, cognitive development
- Demonstrate awareness of categories and characteristics of disabilities in young children
- Demonstrate awareness of how cultural, linguistic, and socio-economic factors influence learning and development
- Articulate and apply theory and research to practice (e.g. articulate how children are learning what they need through play.)

Standard 2: BK teacher candidates foster relationships with families that support children's development and learning.

BK teacher candidates understand that families are the first and most important teachers and key decision makers for their children. BK teacher candidates understand diverse family structures and functioning styles, family systems and human ecological theories, family structures, functioning styles, and stages of family and adult development. B-K teacher candidates apply this knowledge while working with young children and their families.

- Acknowledge families as the first and most important teachers and key decision makers for their children
- Demonstrate awareness of diverse family structures and functioning styles
- Apply evidence-based knowledge of family systems and human ecological theories and the stages of family and adult development
- Demonstrate skills in partnering with families to promote the child's development and learning by exchanging information, making collaborative decisions, and cooperatively implementing and evaluating program plans for the child
- Demonstrate knowledge of issues relating to families who have children with disabilities

Standard 3: Birth-Kindergarten teacher candidates build community partnerships in support of children and families.

BK teacher candidates are aware of resources that are available to children and families and support them in accessing services and materials to meet family and educational goals. BK teacher candidates inform families of their rights, available resources, and strategies to negotiate service systems and transitions. They collaborate with families to make decisions and support families to become advocates, thus promoting children's development in the context of the larger community.

- Demonstrate knowledge of the philosophical, historical, and legal issues in the fields of child development, early childhood education, early childhood special education, and early intervention
- Are aware of resources, range of services, and program and transition options available to children and families

- Implement procedures for supporting families in decision making
- Support families in becoming advocates for their children
- Collaborate with related service professionals within a variety of settings (e.g., classroom, home, agencies, etc.)

Standard 4: BK teacher candidates use authentic, ongoing assessment of children’s abilities to plan, implement, and evaluate programs that build upon each child’s unique strengths.

Birth-Kindergarten teacher candidates use varied and multiple methods of appropriate assessment procedures (e.g., observation, documentation, formal and informal evaluation, interview, record review) and sources of information (e.g., parents, teachers, caregivers, relatives) collected over time, to support individual learning and instruction, identify children who need additional services, plan programs, and monitor progress. Partnering with families, teachers use multiple measures to assess children within typical daily activities within the natural environment (including school and home), using familiar materials. They use assessment results to inform ongoing decisions about curriculum and instructional practices.

- Implement a child- and family-centered, team-based evaluation process
- Address each child’s unique strengths and needs through authentic, developmentally appropriate, culturally and linguistically responsive, multidimensional assessment methods.
- Reflect upon results of assessments to determine program planning and implementation.
- Use task analysis to determine goals and objectives, select learning outcomes, prioritize and sequence tasks, determine instructional strategies, select and arrange learning environments, and construct performance assessments and evaluation.
- Use the assessment process to make decisions about eligibility for program services, settings, and the identification of appropriate IEP/IFSP goals, instructional strategies, ongoing progress monitoring, program evaluation, program impact, and outcomes.
- Integrate IEP or IFSP goals throughout the daily routines and activities in a developmentally appropriate way.
- Use a variety of authentic assessment approaches to determine children’s responses to teaching and intervention prior to identification for special education services.
- Demonstrate knowledge of appropriate assessment materials that are used during the assessment process for identification of children with disabilities
- Demonstrate knowledge of foundational strategies to use with young children who have disabilities (e.g., task analysis, level of assistance, communication strategies, and assistive technology, both low tech and high tech)

Standard 5: B-K teacher candidates create and adapt environments and intentionally plan and implement an integrated curriculum that facilitates every child’s construction of knowledge and provides a strong foundation for lifelong learning.

B-K teacher candidates address the growth, development, and learning of the whole child, with particular emphasis on promoting positive approaches to learning. They provide a comprehensive and effective curriculum across developmental domains and academic content. They adapt environments and curriculum for children with disabilities or other special needs. BK teacher candidates:

- use play and active learning processes as a foundation for ALL young children’s learning.
- plan a suitable balance between child-initiated and adult-initiated activities.
- create and adapt integrated, meaningful, challenging, and engaging and developmentally supportive leaning experiences.
- embed IFSP/IEP goals and objectives into curriculum activities.
- implement and adapt developmental and functional curricula across all domains (including cognitive,

- physical, emotional-social, and language) in response to ALL young children's strengths, interests, needs and differing ability levels.
- integrate content from disciplines that set the stage from subsequent academic development to include emergent reading, writing, mathematics, science, technology, social studies, and the arts (visual art, music, movement, drama, dance).
 - create and adapt developmentally supportive environments with attention to curriculum, interactions, teaching practices, and learning materials.
 - create, manage, and adapt environments with developmentally appropriate interpersonal, spatial, and temporal organization.
 - understand that social and emotional learning is taking place at all times and that children are simultaneously engaged in social, emotional, and cognitive tasks.
 - design indoor and outdoor spaces with many types and levels of challenge and stimulation and schedule opportunities for physical development each day.

BK teacher candidates provide an integrated curriculum derived from Infant-Toddler Guidelines, Foundations for Early Learning, and the Kindergarten Standard Course of Study which includes the following areas:

Emotional/Social Development: To support the emotional/social growth and development of children, BK teacher candidates

- promote children's awareness of personal uniqueness, including cultural and racial identity.
- provide opportunities for the development of self-confidence and social skills, and promote positive interpersonal interaction between children and adults as well as among children.
- foster children's increasing competence in regulating, recognizing, and expressing emotions, verbally and non-verbally.
- support children's ability to form and maintain relationships.

Physical Development, Health, Nutrition and Safety: BK teacher candidates embed opportunities for large and small motor development and promote health, nutrition, and safety within daily outdoor and indoor activities. They

- teach and model hygienic practices
- encourage development and opportunities to practice personal care and self-help skills
- have knowledge of creating a safe environment that supports self care and hygiene
- develop classroom safety rules and model safe practices
- create an environment and schedule that provides materials and daily opportunities for a variety of gross and fine motor activities
- model and discuss healthy eating habits and frequent exercise

Cognitive Development (including Emergent Language and Literacy, Mathematics, Science, Social Studies, and the Arts)

Emergent Language and Literacy: BK teacher candidates understand the developmental sequence and use a wide range of learning experiences to facilitate children's

- development of receptive and expressive oral language
- literacy acquisition including print concepts, alphabetic principles, and phonemic awareness
- emergent written expression

Emergent Mathematics: BK teacher candidates understand the developmental sequence and use a wide range of learning experiences to facilitate children's construction of

- basic concepts of number and operations.
- spatial sense and understanding of measurement and geometry.

- understanding of patterns, relationships, and functions.
- basic principles of data analysis, including probability, experimentation and observation to make predictions.
- multiple strategies of mathematical processing
- representation of mathematical concepts

Emergent Science: BK teacher candidates understand the developmental sequence and use a wide range of child directed exploration and experimentation to facilitate development of

- perceptual functioning and motor skills in order to maintain safety during learning, play, and daily routines, including appropriate use of equipment and tools
- thinking skills relevant to observing, describing, questioning, sequencing, predicting, comparing, and contrasting
- understanding of the nature of science, the process of scientific inquiry, and the relationship between science and daily life.
- fundamental understanding of the physical world, of living organisms, and of the immediately perceptible earth environment

Emergent Social Studies: BK teacher candidates understand the developmental sequence and use a wide range of learning experiences to facilitate children’s understanding of

- culture and cultural diversity
- time, continuity, and change (e.g., sequence of daily events, changes in body and environment)
- technology and economic development (e.g., wants and needs)
- individuals, groups and institutions—their development and identities (e.g., awareness and appreciation of similarities and differences among individuals, families, etc.)
- civic ideals and practices—power, authority and governance (e.g., fairness and social justice)

Emergent Creative Arts: BK teacher candidates understand the developmental sequence and use a wide range of learning experiences to facilitate children’s

- creative expression through the visual arts, dance and creative movement, music, and drama
- representation of ideas
- familiarity with and appreciation of a variety of art forms and artists
- integration of arts to support learning in all content areas (including cultural diversity)
- apply creativity to problem solving, risk-taking, and critical thinking

North Carolina's Kindergartners & Schools

Summary Report

April 2001

(b)(6)

Fall 2000
North Carolina
School Readiness Assessment
FPG Child Development Center
University of North Carolina at Chapel Hill

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Frank Porter Graham Child Development Center
University of North Carolina at Chapel Hill

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For more information about the Fall 2000 North Carolina School Readiness Assessment, visit the project web site at www.fpg.unc.edu/~SchoolReadiness

This report and the executive summary are available online at our project web site. You may order additional hard copies of this report at our web site or by contacting
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Executive Summary

SCHOOL READINESS is a popular topic nationally and within North Carolina. Legislators, policy makers, and educators who face increasing pressures for accountability have called for the assessment of children as they enter school. They want to know, "Are we getting children ready for

school?" This question is deceptively simple and requires a complex answer. It also leaves out an important second question about school readiness: "How well are schools prepared to meet the needs of children as they enter school?" This report provides information about two pieces of the school readiness puzzle: children and schools.

The Executive Summary presents key findings from the Fall 2000 North Carolina School Readiness Assessment (NC SRA). The Fall 2000 NC SRA gathered information about school readiness from a statewide representative sample of 1034 kindergartners and 189 public schools. The purpose of the assessment was to take a "snapshot" of school readiness at the state level.

North Carolina has defined school readiness as

- (a) the **condition of children** as they enter school, based on five areas of development and learning: health and physical development, social and emotional development, approaches toward learning, language development and communication, and cognition and general knowledge; and
- (b) the **capacity of schools** to educate all children who come to kindergarten, regardless of their condition. Kindergarten teachers, classrooms, and principals are important in determining schools' readiness for children.

Condition of Children

This section briefly summarizes findings for each of the five areas of children's development and learning that are important components of school readiness. Differences between children at risk and not at risk for school failure are also highlighted. For this report, risk was determined by family income.

What did the data tell us about North Carolina's kindergartners?

1. Children entered kindergarten with a wide range of skills.
2. As a group, North Carolina kindergartners' skills in the five areas of development and learning were about the same as or lower than kindergartners nationally.
3. North Carolina kindergartners from lower-income families entered school at a significant disadvantage. Children from lower-income families had much lower skills in each of the five areas of development and learning at the beginning of school than children from higher-income families.

Health and Physical Development. North Carolina kindergartners varied in their parent-reported health status and motor skills. On average, kindergartners were in very good health and demonstrated age-appropriate motor skills. The health of children from lower-income families was significantly worse than the health of children from higher-income families. Children from lower-income families also had significantly lower motor skills than children from higher-income families.

Social Development. North Carolina kindergartners demonstrated a wide range of social skills. In general, the social skills of NC kindergartners were about as well developed as those of kindergartners nationally. Children from lower-income families in North Carolina had significantly lower social skills and more problem behaviors than children from higher-income families.

Approaches Toward Learning. Overall, North Carolina kindergartners were similar to their peers nationally in demonstrating positive approaches toward learning (e.g., eagerness to learn and creativity). Children from lower-income families were rated by their parents as demonstrating these positive characteristics significantly less often than children from higher-income families.

Language Development and Communication. On average, North Carolina kindergartners' language and communication skills were lower than the national average. More NC kindergartners scored very low on language measures than would be expected based on national norms. The language and communication skills of children from lower-income families were significantly lower than those of children from higher-income families.

General Knowledge and Math Development. North Carolina kindergartners generally knew the names of basic colors. Children varied widely in their math skills when they entered school. On average, North Carolina kindergartners' math skills were below the national average. More NC kindergartners scored very low on math measures than would be expected based on national norms. Kindergartners from lower-income families had significantly lower math skills than children from higher-income families.

Capacity of Schools

Highlights of the findings regarding the capacity of schools to educate all kindergartners effectively are presented here, organized into four sections: teachers, classrooms, principals, and schools. Comparisons are made between schools serving a high proportion and low proportion of kindergartners from lower-income families.

Teachers. North Carolina kindergarten teachers had about as much teaching experience as their peers nationally. However, far fewer NC teachers had a Master's degree or higher. Whereas almost all kindergarten teachers in North Carolina were teaching within their area of license, only a small percentage had a license that required extensive early childhood development training. Compared to teachers nationally, NC teachers were doing a better job helping children and families make the transition into school. Kindergarten teacher education and licensure did not differ for low-poverty and high-poverty schools.

Classrooms. North Carolina's average kindergarten class size of 21 was similar to classrooms nationwide, with classrooms in high-poverty schools significantly smaller than those in low-poverty schools (20 vs. 22). However, the average NC kindergarten class size was larger than the class size of 18 set as a goal by the U.S. Department of Education.¹ Kindergartners engaged in a variety of learning activities each week and, in general, had access to adequate materials in their classroom learning centers. The quantity and quality of learning center materials were the same or worse in high-poverty schools compared to low-poverty schools.

Principals. North Carolina principals had at least a Master's degree, and many had taken additional coursework. More NC principals had education beyond a Master's degree than their peers nationally. Although almost all principals had spent some time teaching, few had actually taught kindergarten. About half the principals had not received much early childhood education training recently. Principal education and early childhood training did not differ for high-poverty and low-poverty schools.

Schools. Schools varied in the types of services provided to kindergartners. In general, kindergartners from both high-poverty and low-poverty schools had the same type of professional services available to them. High-poverty schools were more likely to provide on-site prekindergarten programs for 4-year-olds at risk for later school difficulties, possibly because they had access to federal Title I funds to support these services.

What did the data tell us about North Carolina's schools?

1. In general, North Carolina schools were similar to schools nationally on most aspects of their capacity to meet the needs of kindergartners.
2. The capacity of high-poverty schools was generally the same as the capacity of low-poverty schools, but may not be good enough to meet the needs of kindergartners at risk for school failure.

Recommendations

The findings from the Fall 2000 NC SRA suggest that we still have work to do to ensure that each child enters school ready to succeed and that schools have the capacity to educate all kindergartners. Some recommendations are provided below.

- ❖ **Prioritize high quality services for children birth through five who are at risk for school failure.** To reduce the gap in skills between children at risk and those not at risk for school failure, North Carolina must provide high quality services and supports to these children and their families each year of their lives before they enter school. Many states, for example, are starting new prekindergarten programs for 4-year-olds at risk for school failure. These prekindergarten programs are designed as high quality educational programs to improve children's school readiness skills. The Fall 2000 NC SRA data certainly suggest the need for efforts, like prekindergarten, to strengthen children's skills. However, preparing children for school starts at birth—not just the year before they come to school. We need to provide services and supports for young children at risk and their families each year from birth through age five.
- ❖ **Continue to improve the quality of all early care and education programs in North Carolina.** About half of NC children were in some type of center-based early care and education program the year before kindergarten, and many were likely in these programs for more than one year. We know that children's development and learning is positively affected if these programs are of high quality.² Smart Start efforts have improved the quality of care and have been shown to be related to school readiness.³ The Fall 2000 NC SRA data suggest that all children, not just those at risk for school failure, could benefit from high quality early care and education efforts. North Carolina should continue to improve its early care and education system in order to strengthen the skills of entering kindergartners.
- ❖ **Provide extra resources and supports for children at risk when they enter school.** North Carolina must continue to provide high quality services for children at risk when they enter and as they move through the public school system. Without extra help, these children will likely fall even further behind their peers from higher-income families.

- ❖ **Continue to improve the capacity of North Carolina public schools to educate all kindergartners.** Being at or above the national average on key school characteristics still leaves much room for improvement in meeting the needs of all children when they come to kindergarten. For example, the average NC kindergarten class size was higher than the class size of 18 set as a goal by the U.S. Department of Education.⁴ Compared to kindergarten teachers nationally, fewer NC kindergarten teachers had Master's degrees. The racial and ethnic composition of kindergarten teachers should more closely reflect the racial and ethnic composition of their students. Finally, we could do more to support the successful transition of children and families as they move into the public school system.
- ❖ **Support families in their roles as parents and children's first teachers.** Families are critical to their child's success and should have access to information and support in their important roles. We should, for instance, provide information to families about developmentally appropriate ways to extend their child's learning during everyday routines. Early childhood programs and public schools should work to build strong positive relationships with families and provide the support families request.
- ❖ **Focus on improving children's early language and math skills.** The Fall 2000 data suggest that North Carolina kindergartners' language and math skills were lower than average. To improve children's skills in these areas, we must provide appropriate early learning opportunities for children before they enter public school. These efforts must continue when children enter the public school system. The challenge for families and teachers (both early childhood and public school teachers) is to promote children's learning in ways that are appropriate for their ages and developmental levels.
- ❖ **Support children's development and learning in each of the five areas.** Although it is important to pay close attention to language and math development, we must not ignore the other areas—health and physical development, social development, and approaches toward learning. Each of the five areas is important, and children's development in one area is affected by their development in another. Families, early childhood programs, and public schools need to support children's development in all five areas.

Introduction

SCHOOL READINESS is an important issue facing the nation. The first Education Goal states, “all children in America will start school ready to learn.”⁵ Since the establishment of this goal, the issue of children’s preparedness for school has drawn increased attention from legislators, policy makers, and educators who face accountability pressures. The national Goal 1 (Ready to Learn) subgroup defined school readiness and recommended assessment principles and guidelines, but did not adopt a national school readiness assessment.⁶ Thus, we do not have regularly reported national information about children’s skills as they enter school. In the late 1990s, the U.S. Department of Education began a national study of children, following them from kindergarten through fifth grade. This study provided national information about children’s school readiness skills in 1998–99. Whenever possible, findings from North Carolina’s Fall 2000 School Readiness Assessment are compared to findings from this national study of kindergartners.

Because there is no national school readiness assessment, some states have developed their own. As of 1999, 13 states conducted statewide screenings or assessments for children entering kindergarten; an additional 16 states were working on school readiness initiatives, but no state had a formal definition of school readiness.⁷

School readiness is an important issue in North Carolina. North Carolina’s First in America, State Board of Education, and Smart Start goals have each emphasized school readiness.⁸ In 1999, the Ready for School Goal Team, a state task force of members from the early childhood and public school communities, was charged with developing a definition of school readiness and a plan for assessing school readiness statewide.⁹ The North Carolina definition of school readiness and the task force’s assessment plan are described briefly below.

Definition of School Readiness

North Carolina has defined school readiness as

- a) the condition of children when they enter school, and
- b) the capacity of schools to educate all children.

The **condition of children** when they enter school includes the following five areas of development and learning.

- ❖ Health and Physical Development includes children’s physical development and abilities.
- ❖ Social and Emotional Development includes children’s feelings about themselves and others, ability to form positive relationships with adults and children, ability to understand the perspective and feelings of others, and skills needed to get along well in a group setting.
- ❖ Approaches Toward Learning includes curiosity, enjoyment of learning, confidence, creativity, attention to task, reflection, and interests.
- ❖ Language Development and Communication includes verbal and nonverbal skills to convey and understand others’ meaning as well as early literacy skills.
- ❖ Cognition and General Knowledge includes basic knowledge about the world and other thinking skills like early math and basic problem-solving skills.

The **capacity of schools** to educate all children includes four cornerstones.

- ❖ Knowledge of growth and development of children.
- ❖ Knowledge of strengths, interests, and needs of each child.
- ❖ Knowledge of the social and cultural contexts in which each child and family lives.
- ❖ Ability to translate knowledge into developmentally appropriate practice.

Schools are responsible for accepting and addressing the learning needs of all children who are old enough to enter kindergarten. They need to help children and families make a successful transition into kindergarten.¹⁰ Teachers and administrators must have the knowledge, resources, and supports to ensure that they are ready to teach all children—those who come to school with many skills and those who have few.

Additionally, teachers and administrators in ready schools establish a nurturing atmosphere, use a curriculum that provides meaningful contexts for learning and addresses the five areas of development described above, and support practices that address the unique ways in which young children learn. Ready schools build strong positive relationships with families. They create partnerships with preschool teachers, community programs, and higher education to ensure that they are able to

Caution

School readiness as described here should not be confused with eligibility for school. All children who meet the legal age requirement (i.e., are 5 by October 16) are eligible—indeed, they are legally entitled—to enter kindergarten.

educate all children. North Carolina's definition of ready schools is similar to the National Education Goals Panel description of ready schools.¹¹

Families and communities provide important support for each piece of the school readiness puzzle. As children's first teachers, parents' relationships and interactions with their children form the critical foundation for lifelong learning. Parents should have access to information and support in this important role. They should also have access to high quality out-of-home early care and education programs for their children. Nationally, 81% of 4-year-olds are cared for by someone other than their parents.¹² Many of these children attend center-based early care and education programs. Research has shown that children who attend high quality child care centers have better school outcomes than those who attend lower quality care.¹³ Thus, families need access to high quality care and education programs for their young children. Communities are responsible for providing support for young children and their families, including health care and early care and education. Communities must also provide resources to ensure that their schools are "ready" for all children.

School Readiness Assessment

North Carolina's school readiness task force made several assessment recommendations, including the creation of a new statewide assessment for the purpose of accountability in the broad sense. Assessment of children as they enter kindergarten provides the best source of data for examining the overall impact of early, before-school experiences provided by families, early child care and education programs, and communities on children's preparedness for school. Assessment of schools provides valuable information about how well schools are prepared to serve kindergartners. If conducted regularly, the assessment will allow us to monitor statewide trends over time. This new assessment, the North Carolina School Readiness Assessment (NC SRA), was pilot tested in the fall of 2000.

The Fall 2000 NC SRA was designed to provide a "snapshot" of the condition of children and the capacity of schools to educate all children in North Carolina. As such, it provides a statewide description of school readiness. The NC SRA does not provide information that will help guide kindergarten instruction or identify children who might have disabilities. The task force made separate recommendations for these two other assessment purposes. (See *School Readiness in North Carolina report*.)¹⁴

Purpose and Organization of Report

The purpose of this report is to describe key findings from the Fall 2000 North Carolina School Readiness Assessment. Information about two pieces of the school readiness puzzle—children and schools—is presented in this report. Comparisons are provided for any NC SRA measure for which national data are available. The first section describes the condition of children as they enter school, organized by the five domains of development and learning. Because family and community circumstances place some children at greater risk of school failure than others, descriptions of children at risk and not at risk for school failure are also provided. The second section of the report describes key indicators of schools' capacity to meet the needs of all kindergartners. Comparisons are made between schools that serve a large proportion of children at risk and schools that do not. The final section draws conclusions and makes recommendations based on the findings.

Study Description

Participants

The Fall 2000 NC SRA gathered information about school readiness from a random sample of elementary school principals, kindergarten teachers, parents, and children just entering kindergarten. The sample is representative of kindergartners and public schools in the state and includes 1034 kindergartners from 568 different classrooms at 189 public schools. Schools were randomly selected and varied in their geographical location, proportion of enrolled children from lower-income families, and school performance as estimated by third grade test scores. Approximately 5 kindergarten children were randomly chosen from each selected school. The sample included children with and without disabilities. It also included children who spoke English or Spanish as their primary language. Children repeating kindergarten were not included. A more detailed description of the sampling procedures is provided in the technical report.¹⁵

Assessments

A variety of measures were used to assess two pieces of the school readiness puzzle—children and schools. NC SRA staff developed surveys for principals, teachers, and parents. The principal and teacher surveys focused on schools' capacity to educate kindergartners. Questions addressed class size, education and experience, activities and materials, kindergarten transition practices, professional development opportunities, and school services. Information about kindergarten transition practices was also obtained from the parent survey.

Information about the condition of children was gathered from parents, kindergarten teachers, and children. Questions on the parent survey addressed children's health, health insurance coverage, motor skills, approaches toward learning, previous child care experiences, and family demographics. Kindergarten teachers were asked to rate children's social skills and problem behaviors. NC SRA staff assessed children's language and math skills during one-on-one activities with the children. A complete description of the assessment battery used in Fall 2000 is available on the NC SRA web site.¹⁶

Procedures for Gathering Information

NC SRA staff visited children early in the school year (about the seventh week) to obtain an accurate picture of the condition of children near the time they entered school. During our visit, we gave teachers a social skills rating scale to complete for each participating child and sent a parent survey home with each participating child. In October, we mailed surveys about schools' readiness for children to principals and kindergarten teachers of the participating children. Principals, teachers, and parents were eager to share their thoughts about school readiness. Sixty-six percent of parents returned surveys; 95% of teachers returned surveys; 92% of teachers rated children's social skills; and 88% of principals returned surveys. The information provided by these individuals was used to create population estimates that are included in this report.

Defining Risk

If North Carolina wants all children to be successful in school, then we must look beyond the general descriptions of children and schools. We should examine differences between children at risk and not at risk for school failure and the schools that serve them. Years of research have demonstrated that children from lower-income families have poorer educational outcomes than children from higher-income families.¹⁷ For this report, risk was determined by family income. Specifically, children whose teachers reported that they were eligible for free or reduced-price school lunch were defined as at risk for school failure. Children from families with an income up to 185% of the poverty level are eligible for free or reduced-price lunch at schools that participate in the National School Lunch Program. For the period July 1, 2000, through June 30, 2001, 185% of the poverty level was determined to be an annual income of \$31,543 for a family of four.¹⁸ The terms *at risk* and *lower income* are used in this report to refer to North Carolina children who qualify for free or reduced-price lunch.

National comparisons about the skills of children at risk for school failure included in this report were obtained from the U.S. Department of Education's national study of children (ECLS-K).¹⁹ In this national study, risk was defined as the receipt of public assistance. This definition of risk was more strict (i.e., required a lower family income) than that used for the Fall 2000 NC SRA, which means that North Carolina considered more children at risk than did the national study. Although different definitions of risk were used in the two studies, comparisons are still useful in understanding lower-income vs. higher-income differences in North Carolina.

In this report, we also examine characteristics of schools that served a high proportion of kindergartners at risk for school failure. We used free and reduced-price lunch eligibility as our definition of risk. *High-poverty schools*^a were defined as those with half or more of the kindergartners eligible for free or reduced-price lunch. *Low-poverty schools* were defined as those with less than half of the kindergartners eligible for free or reduced-price lunch.

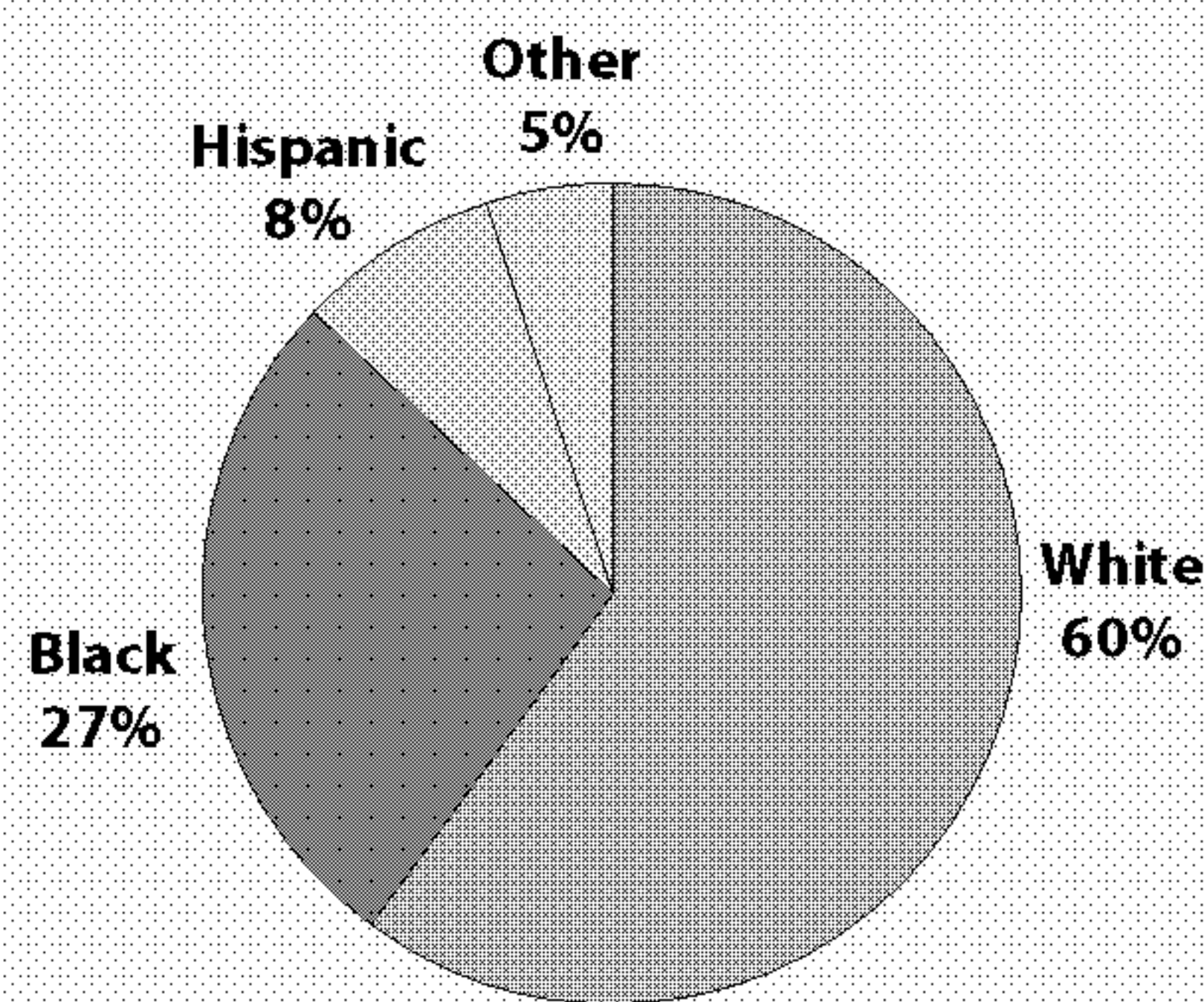
Criteria other than family income can be used to define risk. Future reports will examine in more detail various risk factors and their relationship to school readiness.

Condition of Children

This section begins by describing basic characteristics of kindergartners. Findings from each of the five domains of development and learning are then presented.

Who Are North Carolina's Kindergartners?

Figure 1
Racial & Ethnic Composition of NC Kindergartners



On average, kindergartners were about 5½ years old at the beginning of the school year. About half of the children were female. The racial and ethnic composition of North Carolina's kindergarten population is shown in Figure 1. About 6% of children spoke Spanish as their primary language, and another 1% spoke some other language besides English or Spanish. Principals reported that 7% of kindergartners received special education or related services.

Forty percent of North Carolina's kindergartners were at risk for school difficulties because they were from lower-income families. Approximately 14% of kindergartners' mothers did not have a high school diploma. Twenty percent of kindergartners' mothers had a Bachelor's degree or higher.

Table 1
Care Arrangements for Children the Year Before Kindergarten

| | |
|------------------------|-----|
| Parent only | 31% |
| Child care center | 33% |
| Relative | 9% |
| Head Start | 6% |
| Public preschool | 6% |
| Babysitter | 5% |
| Half-day preschool | 5% |
| Family child care home | 3% |
| Unknown (not parent) | 3% |

Parents reported that approximately 69% of North Carolina kindergartners were cared for by someone other than a parent for at least 10 hours a week during the year before they entered kindergarten. (See Table 1.) This proportion was similar for North Carolina children from lower-income and higher-income families. Nationally, 81% of 4-year-olds were cared for by someone other than a parent.²⁰ Child care center was the most frequent nonparental care arrangement for both lower-income and higher-income children (20% and 39%).

Health and Physical Development

Children's health and physical development are critical to their school success. The Fall 2000 NC SRA included measures of children's general health status, health insurance coverage, and motor skills.

Overall, the health of North Carolina kindergartners as rated by their parents was very similar to their peers nationally. Eighty-five percent (85%) of kindergartners in NC were rated as having very good or excellent health. Nationally, 83% of kindergartners were rated as having very good or excellent health.²¹ Fewer North Carolina kindergartners from lower-income families (76%) were in very good or excellent health compared to kindergartners from higher-income families (91%). This difference was significant.^b A difference in health status between lower-income and higher-income children has also been found nationally.²²

According to parent reports, approximately 6% of kindergartners in North Carolina did not have any health insurance coverage. A higher percentage of lower-income than higher-income children were uninsured (9% vs. 5%).

Most North Carolina kindergartners demonstrated age-appropriate motor skills according to their parents:

- ❖ 95% could button their own clothes,
- ❖ 86% could mostly write and draw rather than scribble, and
- ❖ 88% could walk without tripping, stumbling, or falling easily.

Significantly fewer lower-income than higher-income children were able to write and draw rather than scribble (80% vs. 90%) and walk without tripping, stumbling, or falling easily (83% vs. 93%).

Summary

North Carolina kindergartners varied in their parent-reported health status and motor skills. On average, kindergartners were in very good health and demonstrated age-appropriate motor skills. The health of children from lower-income families was significantly worse than the health of children from higher-income families. Children from lower-income families also had significantly lower motor skills than children from higher-income families.

Social Development

Children's ability to interact well with other children and adults is an important part of school. The Fall 2000 NC SRA included teacher ratings of kindergartners' social skills and problem behaviors.

Table 2
Percentage of Kindergartners
Who Very Often...

| | NC | U.S. |
|---------------------|-----|------|
| Make friends easily | 63% | 77% |
| Accept peer ideas | 41% | 74% |
| Fight with others | 4% | 10% |
| Get angry easily | 6% | 11% |

North Carolina kindergartners varied widely in both their social skills and problem behaviors. The NC average score of 97 for social skills was lower than the national average^c of 100. The NC average score of 98 for problem behaviors was about the same as the national average (higher scores indicate more problem behaviors). Compared to national norms,^d about the same number of NC kindergartners had very low^e social skills (18% in NC vs. 16% nationally) and fewer NC kindergartners had very high^f problem behaviors (11% in NC vs. 16% nationally).

Figure 2
Social Skills by Family Income

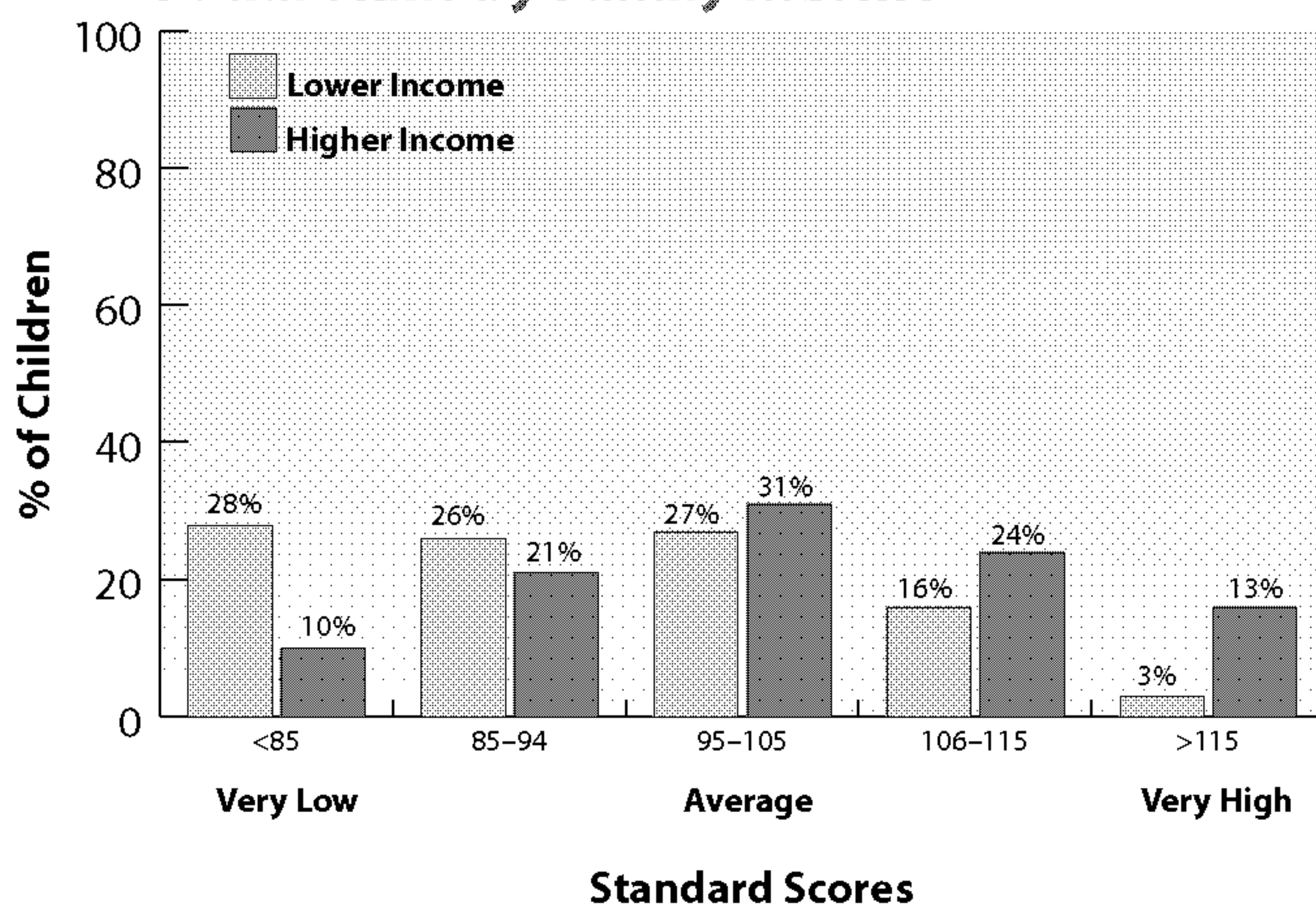
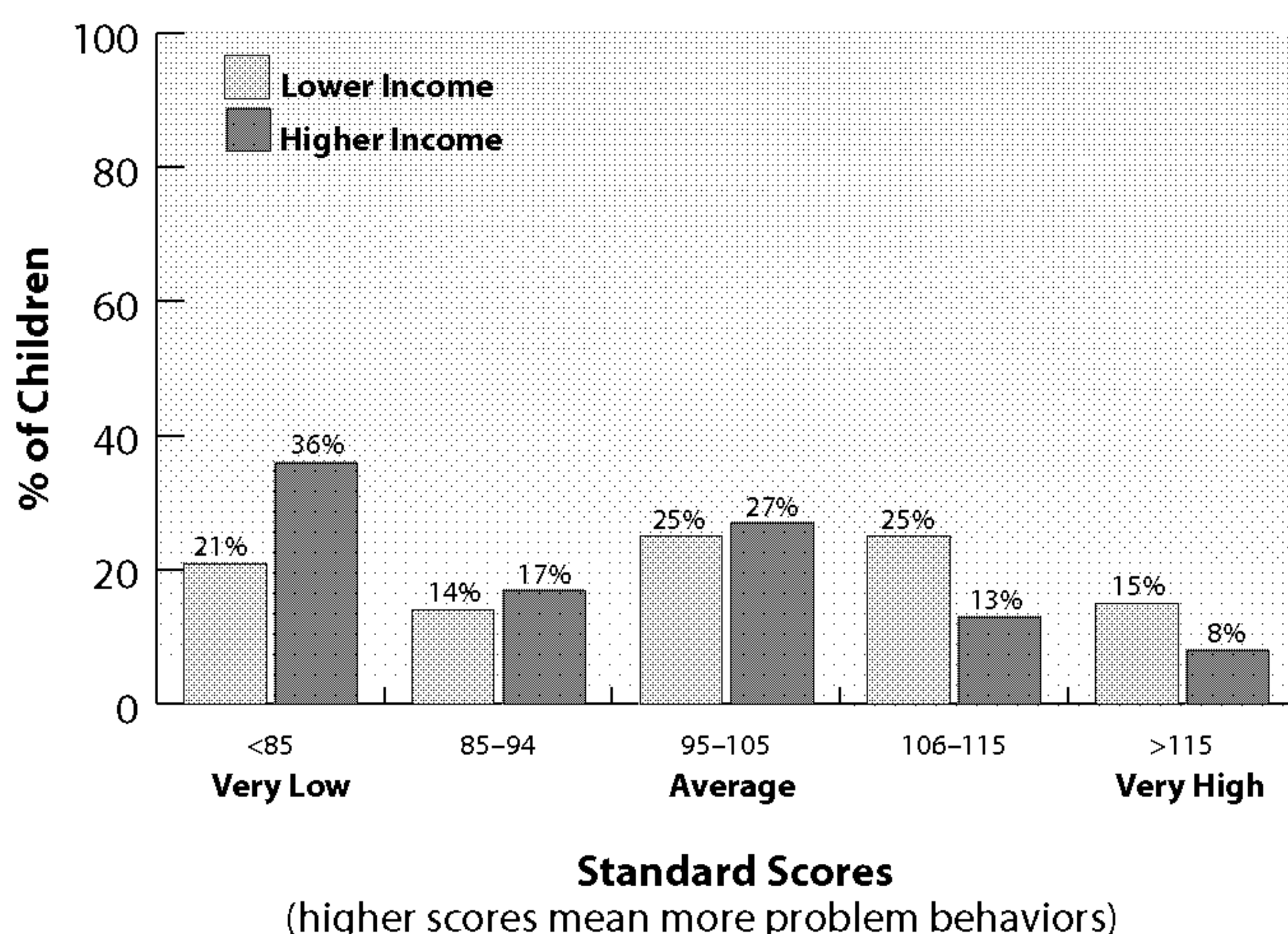


Figure 3
Problem Behaviors by Family Income



We compared NC data with U.S. data from the ECLS-K study for certain social skill and problem behavior items.²³ Overall, fewer North Carolina kindergartners were rated by their teachers as making friends easily and accepting peer ideas than kindergartners nationally. (See Table 2.) On the positive side, fewer North Carolina children were rated as fighting often with others or getting angry easily compared to kindergartners nationally. Because these are teacher-reported data, differences between kindergartners in North Carolina and the ECLS-K national study may be due to differences in children's skills or differences in teachers' expectations. Most likely, both factors account for the difference.

Children's risk status was related to both social skills and problem behaviors. Children from lower-income families were rated by teachers as having significantly fewer positive social skills (Figure 2) and significantly more problem behaviors (Figure 3) than children from higher-income families.

Summary

North Carolina kindergartners demonstrated a wide range of social skills. In general, the social skills of NC kindergartners were about as well developed as those of kindergartners nationally. Children from lower-income families in North Carolina had significantly lower social skills and more problem behaviors than children from higher-income families.

Approaches Toward Learning

This domain includes characteristics important in developing lifelong learners—eagerness to learn, creativity, persistence, pride in own work, asking for help when needed, and enjoyment of school. In the Fall 2000 NC SRA, parents rated the frequency with which their child demonstrated each of these characteristics.

Overall, kindergartners in North Carolina were as eager to learn and creative as their peers nationally.²⁴ (See Table 3.) North Carolina kindergartners were rated by their parents as less likely than their national peers to try hard. This difference may be due to differences in the children, differences in parents' expectations, or both. North Carolina kindergartners at risk for school difficulties were rated lower by their parents on these positive approaches toward learning items than children who were not at risk. (See Figure 4.)

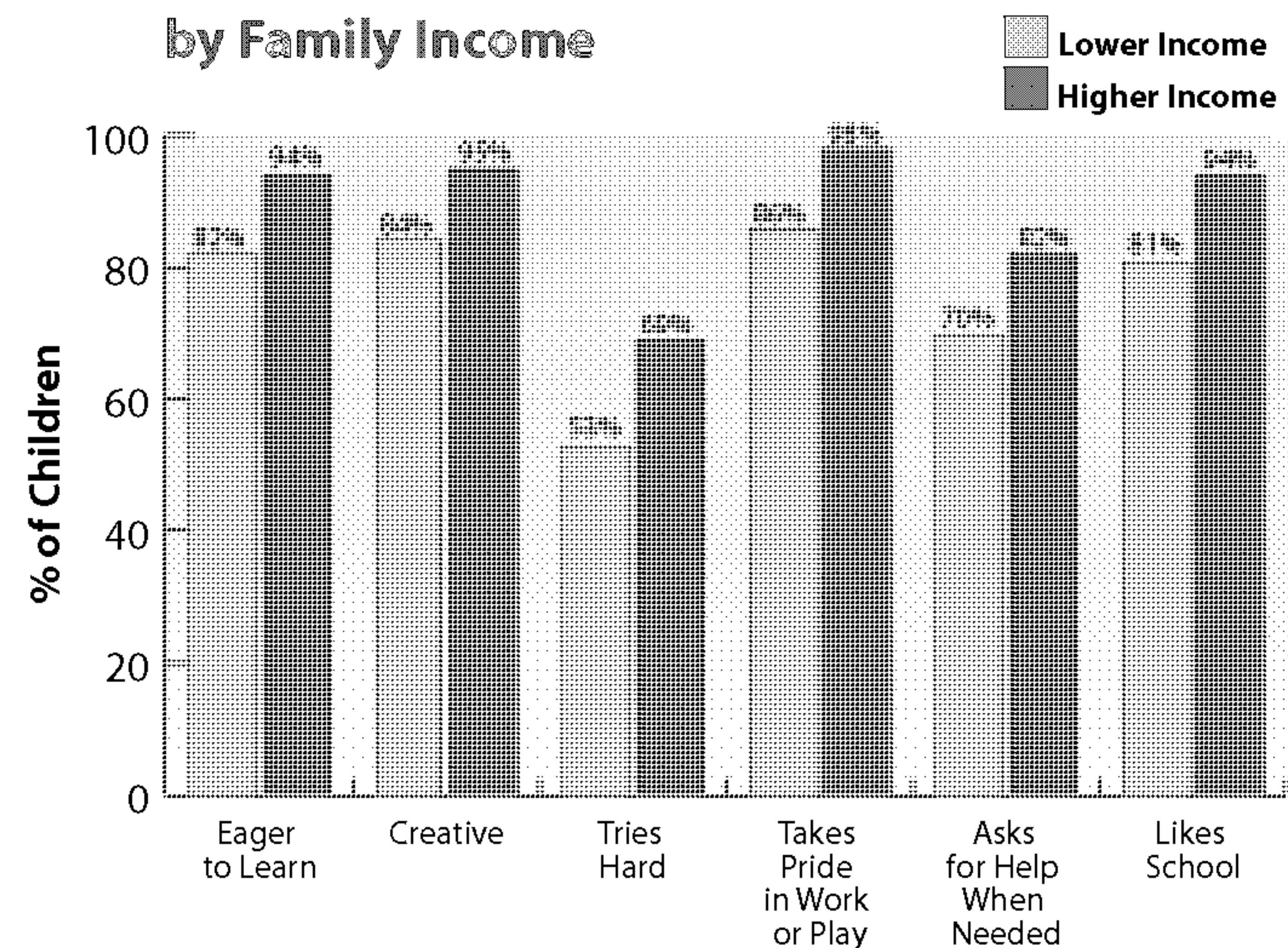
Summary

Overall, North Carolina kindergartners were similar to their peers nationally in demonstrating positive approaches toward learning (e.g., eagerness to learn and creativity). Children from lower-income families were rated by their parents as demonstrating these positive characteristics significantly less often than children from higher-income families.

Table 3
Percentage of Kindergartners Who Often or Very Often...

| | NC | U.S. |
|---------------------|-----|------|
| Seem eager to learn | 89% | 92% |
| Show creativity | 91% | 85% |
| Try hard (persist) | 63% | 73% |

Figure 4
Approaches Toward Learning by Family Income



Language Development and Communication

Several measures of children’s language skills provided information about children’s understanding of spoken words, their ability to name letters of the alphabet, their ability to break spoken words into parts (i.e., phonemic awareness), and their understanding of story and print concepts. Children’s performance in each of these areas is presented in this section.

North Carolina kindergartners varied in their understanding of spoken words. The average score of 97 on this measure was lower than the national average of 100.

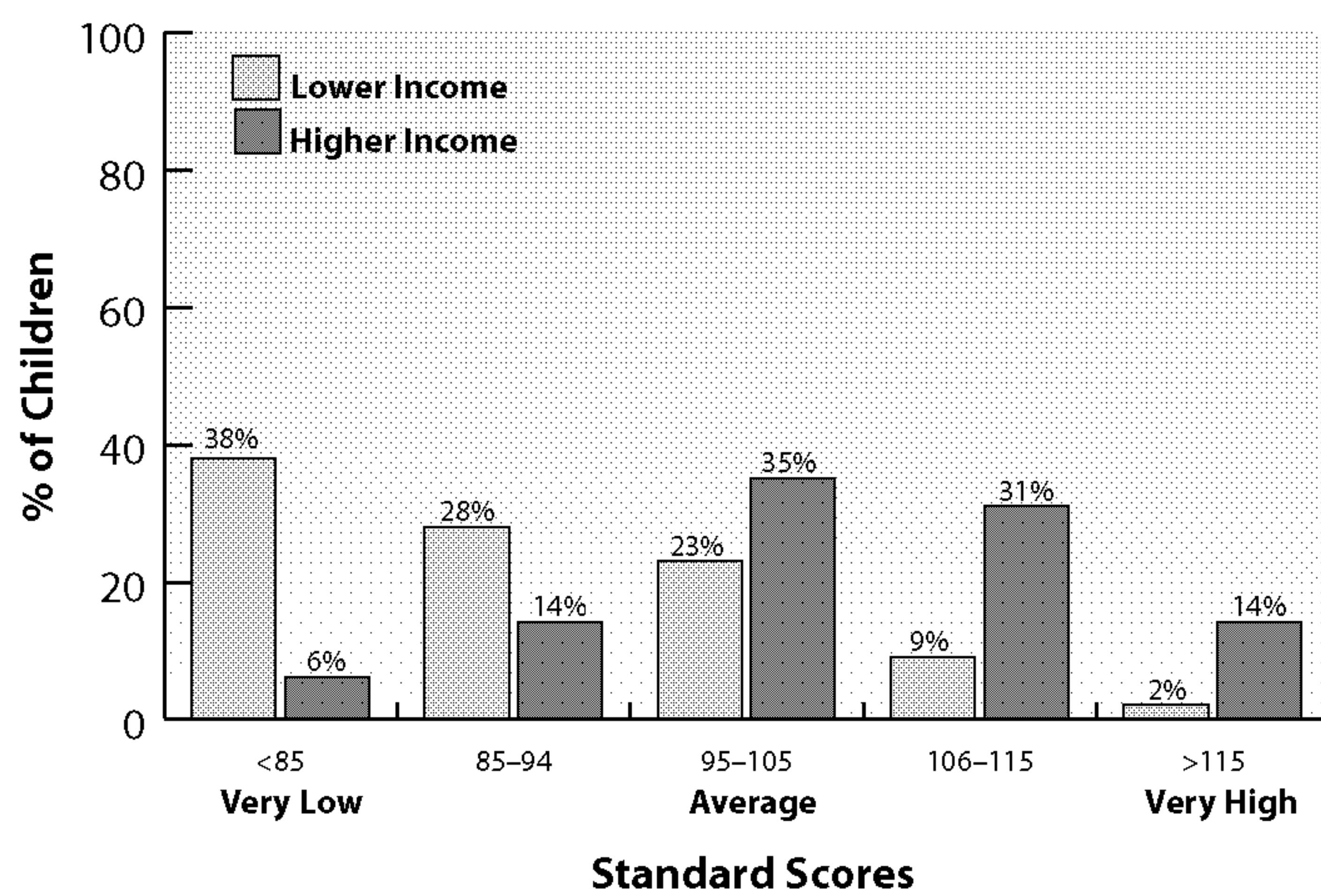
More North Carolina children scored very low and fewer children scored very high when compared to national norms. (See Table 4.)

Table 4
Understanding of Spoken Words

| | NC | National Norms ^d |
|--------------------------------|-----|-----------------------------|
| % with very low scores (<85) | 21% | 16% |
| % with very high scores (>115) | 8% | 16% |

This pattern was also evident in a measure of children’s ability to recognize letters of the alphabet and simple words. North Carolina kindergartners varied in these skills. Some children could not correctly identify any letters of the alphabet that were shown to them while others could read words. North Carolina’s average score of 93 on this measure was lower than the national average of 100. Compared to national norms, more NC kindergartners had very low scores (28% in NC vs. 16% nationally) and fewer NC kindergartners had very high scores (4% in NC vs. 16% nationally).

Figure 5
Understanding of Spoken Words by Family Income



On a measure of phonemic awareness, 39% of NC kindergartners could not answer correctly any items. Of those kindergartners who were able to answer at least 1 item correctly, the average number of correct items was 2. Based on national norms, children between the ages of 5 and 5½ years should be able to answer correctly an average of 3 items. Although NC kindergartners were below average on this phonemic awareness measure, it is important to realize that many children this age are just beginning to master this skill.²⁵

The NC SRA also included information about kindergartners’ understanding of books. Many children (87%) could identify the front of a book. More than half (64%) understood that one reads from left to right.

Language and communication skills differed greatly between children from lower-income and higher-income families. These differences were significant for each skill measured—children’s understanding of spoken words, their ability to name letters

of the alphabet, their ability to break spoken words into parts (i.e., phonemic awareness), and their understanding of story and print concepts. Figure 5 provides an example of the wide gap in skills between children from lower-income families and those from higher-income families. The ECLS-K national study of kindergartners also reported income differences in children’s language and communication skills.²⁶

Summary

On average, North Carolina kindergartners’ language and communication skills were lower than the national average. More NC kindergartners scored very low on language measures than would be expected based on national norms. The language and communication skills of children from lower-income families were significantly lower than those of children from higher-income families.

General Knowledge and Math Development

The Fall 2000 NC SRA included measures of children’s knowledge of color names and early math skills. Two different math assessments were administered to kindergartners. These assessments measured children’s basic math skills such as counting and understanding concepts like big. A composite math score (the average of the two assessment scores) is reported.

Many North Carolina kindergartners (78%) could name 10 basic colors. Almost all children (91%) could either name or find 10 basic colors. About twice as many children from lower-income families could not name or find all 10 basic colors as compared to children from higher-income families (14% vs. 6%).

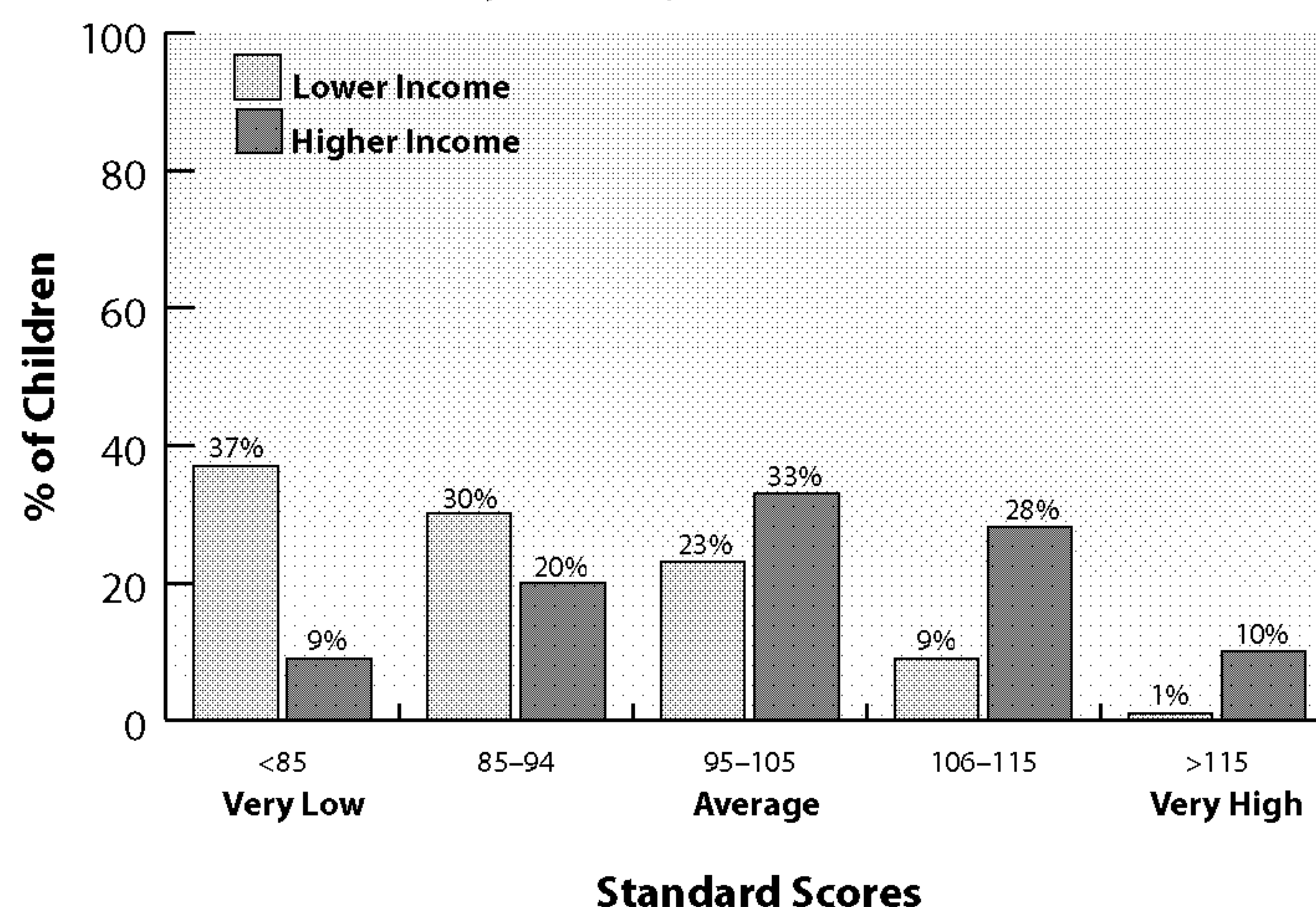
Children’s math skills varied widely. The average score of 95 was below the national average of 100. More NC kindergartners scored very low and fewer scored very high compared to national norms. (See Table 5.)

As shown in Figure 6, many more children from lower-income families had very low math scores compared to children from higher-income families. Additionally, far fewer children from lower-income families had very high math scores compared to children from higher-income families. Income differences in math skills were also evident in the ECLS-K national study of kindergartners.²⁷

Table 5
Math Skills

| | NC | National Norms ^d |
|--------------------------------|-----|-----------------------------|
| % with very low scores (<85) | 22% | 16% |
| % with very high scores (>115) | 6% | 16% |

Figure 6
Math Skills by Family Income



Summary

North Carolina kindergartners generally knew the names of basic colors. Children varied widely in their math skills when they entered school. On average, North Carolina kindergartners' math skills were below the national average. More NC kindergartners scored very low on math measures than would be expected based on national norms. Kindergartners from lower-income families had significantly lower math skills than children from higher-income families.

Capacity of Schools

North Carolina recognizes that schools are an important part of “readiness.” Schools must be able to educate effectively all children who enroll in kindergarten. This section of the report describes key characteristics of kindergarten teachers, classrooms, principals, and schools. Characteristics of schools serving a high proportion of lower-income kindergartners are highlighted throughout the section.

Teachers

Kindergarten teachers play an important role in helping children make the transition to school and facilitating their learning. In the fall of 2000, 97% of kindergarten teachers in North Carolina were female; 88% were White and 11% were Black. Approximately 25% of kindergarten teachers had earned a Master’s degree or higher. This number is lower than national figures of 40% to 47% of kindergarten teachers with a Master’s degree or higher.²⁸ With the state’s incentives for obtaining advanced certification from the National Board for Professional Teaching Standards, it is possible that more North Carolina teachers have been working toward national certification instead of a Master’s degree.

Almost all kindergarten teachers in North Carolina (95%) were licensed to teach at the kindergarten level. A much smaller percentage of teachers (11%) was licensed in an area that requires extensive coursework in early childhood development (i.e., Birth-Kindergarten or PreK-K add-on license). NC kindergarten teachers had taught preschool or kindergarten for an average of 11 years, very similar to the national average.²⁹ Forty-one percent of kindergarten teachers had no more than 5 years of experience. (See Figure 7.) Kindergarten teacher education and licensure were similar for low-poverty and high-poverty schools.

Figure 7
Teaching Experience of
NC Kindergarten Teachers

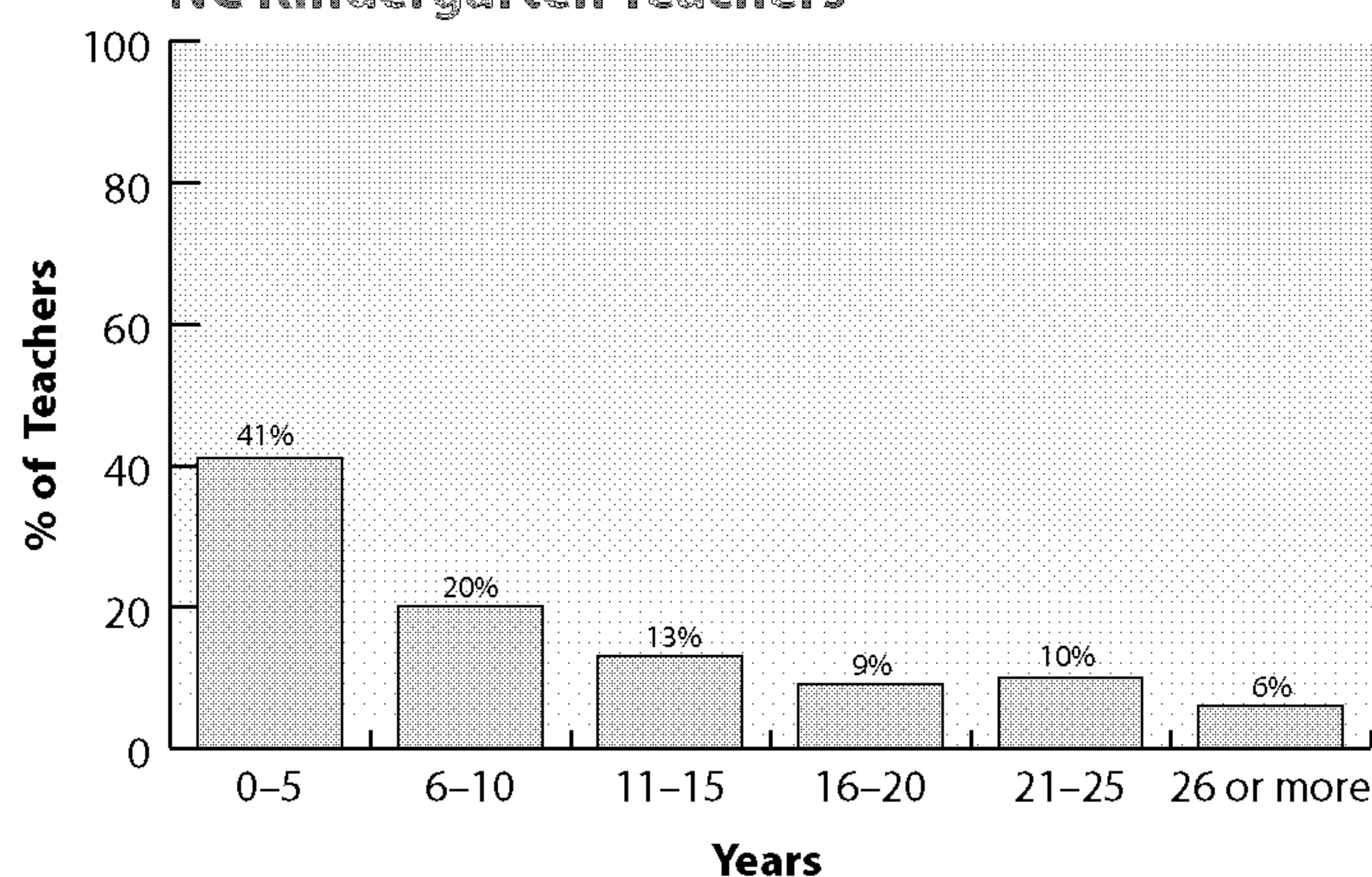


Table 6
Kindergarten Transition Practices Used
with Some or All Students

| | NC | U.S. |
|---|-----------|-------------|
| Open house before school starts | 84% | 62% |
| Written records of child's past experiences | 77% | 74% |
| Regular meetings among school & early childhood community | 35% | 29% |
| Preschoolers visit kindergarten classroom | 33% | 39% |
| Kindergarten teacher visits preschools | 10% | 17% |
| Informal contacts with preschool teachers | 40% | NA |

Kindergarten teachers across the state used a variety of strategies to help children and families prepare for school entry. As evident in Table 6, North Carolina's kindergarten teachers reported engaging in most of these transition practices more frequently than kindergarten teachers nationally.³⁰ The frequency of all but two of these transition activities was the same for high-poverty and low-poverty schools. Preschool teachers were significantly more likely to bring children to visit kindergarten classrooms in high-poverty rather than low-poverty schools (41% vs. 24%), and kindergarten teachers in high-poverty schools were significantly more likely to visit preschools than teachers in low-poverty schools (13% vs. 4%).

Parents also provided important information about kindergarten transition activities. Almost all parents (96%) reported meeting their child's teacher during the early part of the school year. This number is very similar to national figures. More North Carolina parents reported that they had received written information about preparing their child for kindergarten than parents of kindergartners nationally (93% vs. 66%).³¹

Summary

North Carolina kindergarten teachers had about as much teaching experience as their peers nationally. However, far fewer NC teachers had a Master's degree or higher. Whereas almost all kindergarten teachers in North Carolina were teaching within their area of license, only a small percentage had a license that required extensive early childhood development training. Compared to teachers nationally, NC teachers were doing a better job helping children and families make the transition into school. Kindergarten teacher education and licensure did not differ for low-poverty and high-poverty schools.

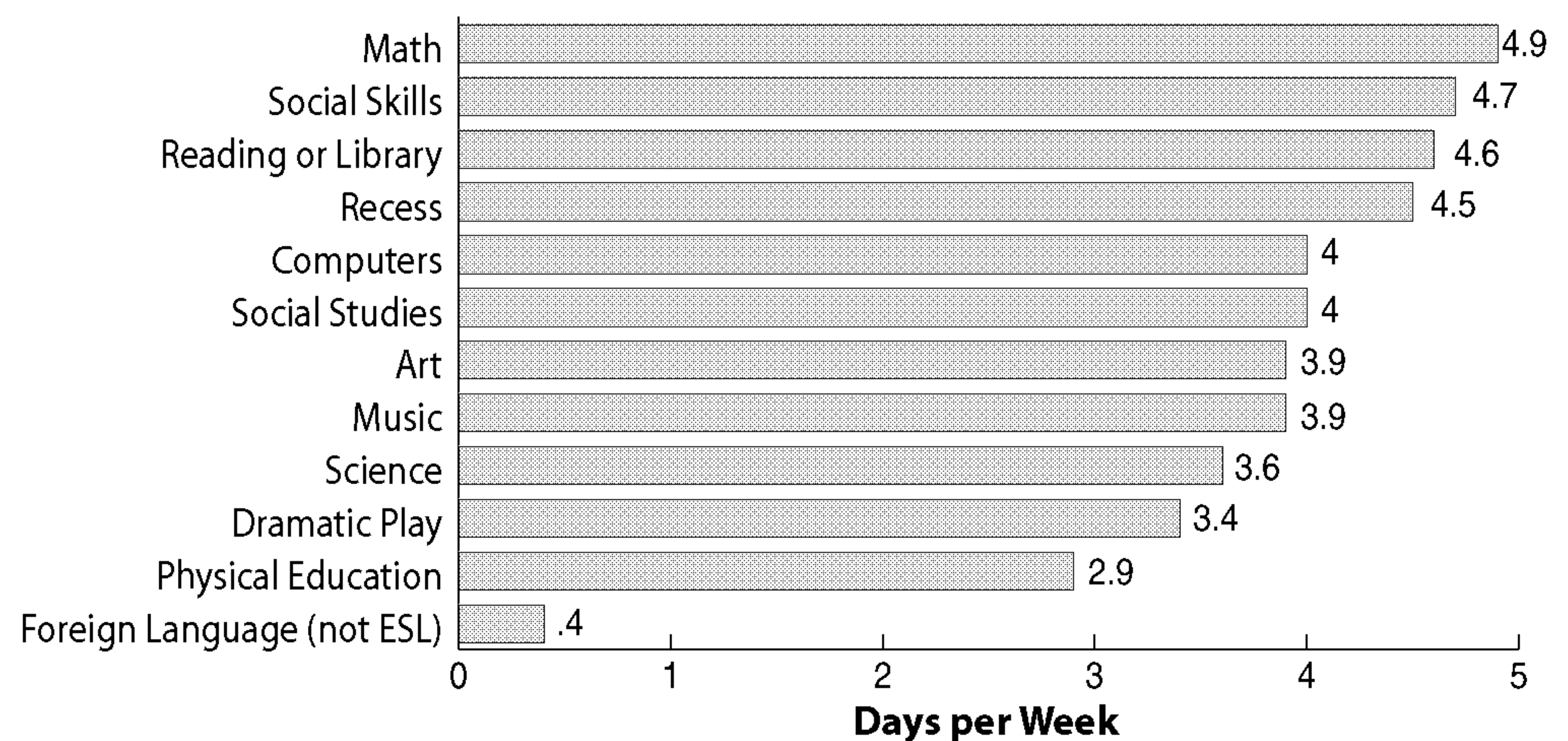
Classrooms

The classroom environment is a critical part of schools' readiness for children. NC kindergarten programs in public schools were full day, five days a week. Kindergarten class size in North Carolina ranged from 13 to 28 students. The average North Carolina kindergarten classroom had 21 students, only 1 more than the national average of 20 students.³² The average class size for high-poverty schools was significantly smaller than for low-poverty schools (20 vs. 22). However, these class sizes were larger than the class size of 18 set as a goal by the U.S. Department of Education.³³

Almost all NC kindergarten classrooms (99%) had a teacher assistant. In 95% of these classrooms, the assistant worked full time. The average child to adult ratio in kindergarten was 11 children per adult.

North Carolina kindergartners were exposed to many learning activities at school. Teachers reported that math, social skills, reading, and recess were covered about every day. The frequency of classroom activities is shown in Figure 8.

Figure 8
Frequency of Classroom Activities



Teachers also provided information about the learning centers in their classrooms. The availability of learning centers in North Carolina kindergartens was generally high and closely matched national availability.³⁴ Kindergarten teachers rated the quantity and quality of most learning center materials as adequate or excellent, but some centers were rated as having better materials than others. (Note that this information is about learning center materials. Teachers were not asked to rate the quantity and quality of other classroom materials.) Overall, teachers rated math, reading, fine motor, and block center materials as the best. Materials for science/nature centers were rated as less adequate. Teachers contributed an average of \$425 of their own money to purchase classroom materials in the past year. The quantity and quality of learning center materials were the same or worse for high-poverty than for low-poverty schools. (See Table 7.)

Table 7
Percentage of Classrooms with Excellent Learning Center Materials

| | Overall | High Poverty | Low Poverty |
|---------------|---------|--------------|-------------|
| Math | 48% | 45% | 50% |
| Reading | 42% | 33%* | 48% |
| Fine motor | 41% | 37% | 43% |
| Blocks | 39% | 29%* | 47% |
| Computer | 32% | 32% | 33% |
| Art | 26% | 17%* | 31% |
| Dramatic play | 26% | 21% | 30% |
| Sand/Water | 26% | 22% | 29% |
| Writing | 22% | 12%* | 28% |
| Listening | 21% | 13%* | 26% |
| Music | 11% | 11% | 11% |
| Science | 9% | 5% | 12% |

*Significantly fewer high-poverty than low-poverty classrooms with materials rated as excellent

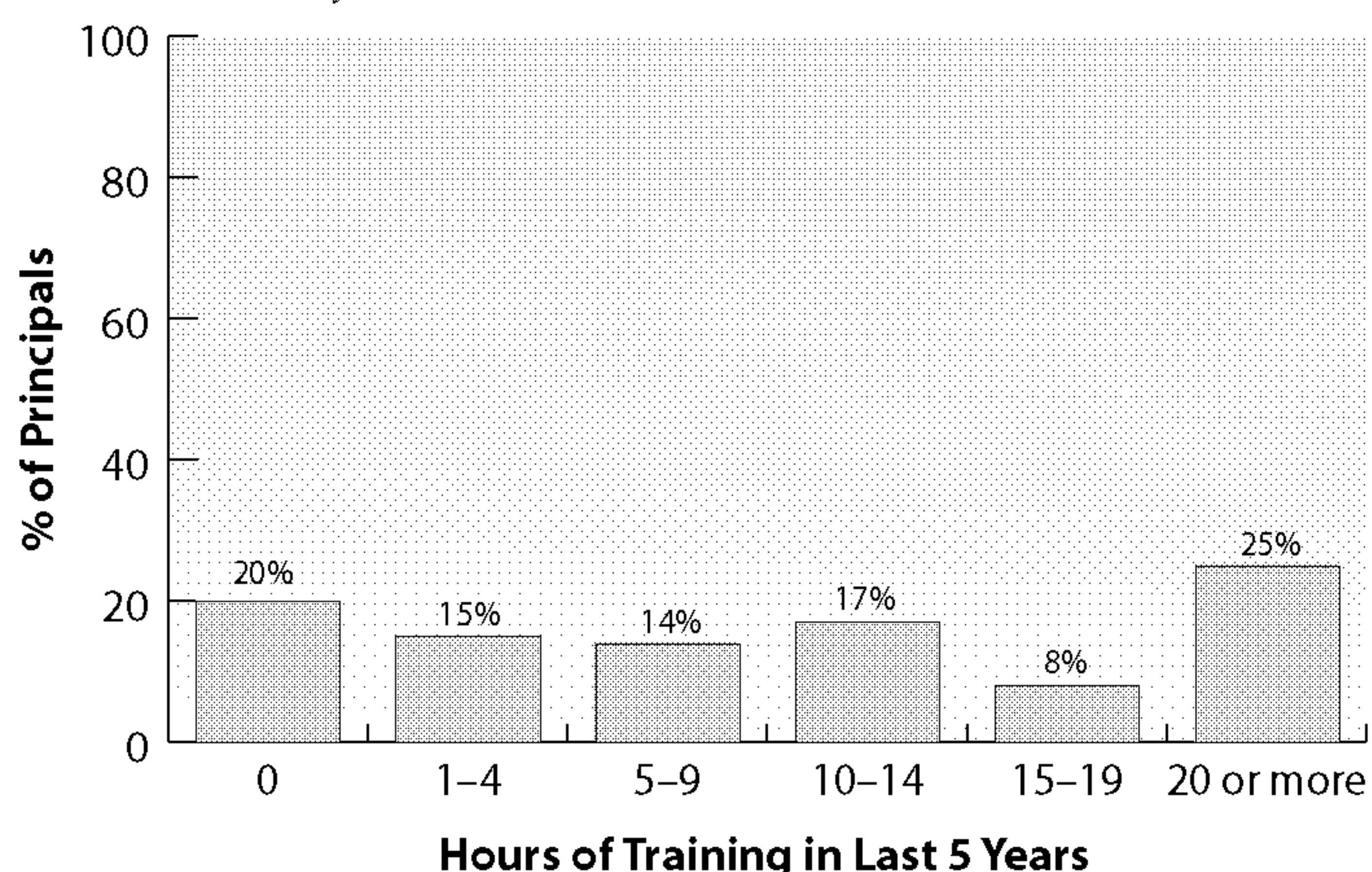
Summary

North Carolina's average kindergarten class size of 21 was similar to classrooms nationwide, with classrooms in high-poverty schools significantly smaller than those in low-poverty schools (20 vs. 22). However, the average NC kindergarten class size was larger than the class size of 18 set as a goal by the U.S. Department of Education.³⁵ Kindergartners engaged in a variety of learning activities each week and, in general, had access to adequate materials in their classroom learning centers. The quantity and quality of learning center materials was the same or worse in high-poverty schools compared to low-poverty schools.

Principals

Elementary school principals provide leadership and support for the teachers and staff who work with kindergartners. In North Carolina, 56% of principals were female; 80% were White and 19% were Black. All principals had a Master's degree and about 7% had earned a Doctorate degree. More principals in North Carolina had education beyond a Master's degree (e.g., Education Specialist) compared to their peers nationally (51% in NC vs. 34% in U.S.).³⁶ Principal education did not differ for high-poverty and low-poverty schools.

Figure 9
NC Principals' Recent Training
in Early Childhood Education



Principals had, on average, 11 years of experience as principals, higher than the national average of 9 years.³⁷ North Carolina's principals had an average of 13 years of teaching experience compared to the national average of 11 years.³⁸ Approximately 47% of NC principals were licensed to teach at the kindergarten level, but only 17% had actually taught either preschool or kindergarten.

Continuing education and in-service training allow education professionals to stay current with knowledge in the field. Although 25% of North Carolina's principals had 20 or more hours of early childhood education training in the last five years, 20% of principals had not had any early childhood education training in the last five years. (See Figure 9.) Principals' early childhood training did not differ for high-poverty and low-poverty schools.

Summary

North Carolina principals had at least a Master's degree, and many had taken additional coursework. More NC principals had education beyond a Master's degree than their peers nationally. Although almost all principals had spent some time teaching, few principals had actually taught kindergarten. About half of the principals had not received much early childhood education training recently. Principal education and early childhood training did not differ for high-poverty and low-poverty schools.

Schools

School resources such as buildings and services contribute to the school's ability to meet the needs of all students. Approximately 39% of North Carolina's elementary schools had at least one building that was 40 years old or older.

Schools provided a range of services for children outside the normal K-12 age range and traditional school day. In North Carolina, 31% of schools with kindergarten programs offered before- or after-school care for students. Approximately 30% of schools had on-site prekindergarten programs for at-risk 4-year-olds and 8% offered prekindergarten for at-risk 3-year-olds. About half of the high-poverty schools (47%) offered prekindergarten for at-risk 4-year-olds compared to 24% of the low-poverty schools. The significantly higher percentage of pre-kindergarten programs in high-poverty schools was possibly because they had access to federal Title I funds to support these services.

Schools also varied somewhat in the type of professional services available to kindergartners. Most schools had speech and language therapists and counselors. Fewer schools had a drama teacher, reading specialist, or curriculum specialist available to kindergartners. (See Table 8.) Only 76% of the schools that served at least one kindergartner who spoke English as a second language had an English as a Second Language (ESL) teacher. Most professional services were equally available in high-poverty and low-poverty schools. Only occupational and physical therapists were significantly less likely to be available in high-poverty schools than in low-poverty schools.

Summary

Schools varied in the types of services they provided to kindergartners. In general, kindergartners from both high-poverty and low-poverty schools had the same type of professional services available to them. High-poverty schools were more likely to provide on-site prekindergarten programs for 4-year-olds at risk for later school difficulties, possibly because they had access to federal Title I funds to support these services.

Table 8
Percentage of Schools with Professional Services Available to Kindergartners

| | |
|-----------------------------|-----|
| Speech & language therapist | 99% |
| Counselor | 96% |
| Music teacher | 93% |
| School psychologist | 93% |
| Special education teacher | 92% |
| PE teacher | 92% |
| School nurse | 87% |
| Art teacher | 83% |
| Social worker | 79% |
| Occupational therapist | 79% |
| Physical therapist | 72% |
| ESL teacher | 61% |
| Curriculum specialist | 50% |
| Reading specialist | 43% |
| Drama teacher | 7% |

Conclusions

The Fall 2000 North Carolina School Readiness Assessment provides a comprehensive set of data that will help both the early childhood and public school communities better understand their strengths and areas for improvement. The Fall 2000 NC SRA may be most useful, though, as a baseline from which to compare change over time. The Ready for School Goal Team proposed that this statewide assessment be conducted regularly to monitor progress over time. These Fall 2000 data provide the starting point for monitoring change.

North Carolina Kindergartners

What did the data tell us about North Carolina's kindergartners? Key points are summarized in this section.

Children entered kindergarten with a wide range of skills. Anyone who has been around a group of young children knows that they vary in their skills and abilities. We should expect this, and the Fall 2000 data confirmed this. The challenge for North Carolina is two-fold. First, we must accept this variability as normal for children entering school. Schools must be prepared to address the diverse needs of kindergartners. Children should not be expected to have a certain level of skills before they come to school. We should also not keep out of school children with low skills. Every child in North Carolina who is 5 years old by October 16 is legally entitled to—and could benefit from—school. Our second challenge is to provide opportunities for every young child to build his or her skills in each of the five areas of development and learning before coming to school. Knowing that children vary in their skills does not excuse us from doing something about it.

As a group, North Carolina kindergartners' skills in each of the five areas of development and learning were about the same as or lower than kindergartners nationally. On average, NC kindergartners' health status, approaches toward learning, and social development were about the same as kindergartners nationally. NC kindergartners' language and math skills were lower than kindergartners nationally. We must provide early learning opportunities for children to develop their skills in all areas. These learning opportunities should be available at home and in the early care and education programs that so many young children attend.

North Carolina kindergartners from lower-income families entered school at a significant disadvantage compared to their peers from higher-income families. Years of research have demonstrated that children from lower-income families have poorer educational outcomes than children from higher-income families.³⁹ NC kindergartners from lower-income families had much lower skills in each of the five areas of development and learning at the beginning of school than children from higher-income families. North Carolina is not unique in facing this problem. Nationally, kindergartners from lower-income families have lower school readiness skills. The fact that this is a national problem does not dismiss us from our responsibility to do something about it. As a final note, it is important to remember that these are *group* differences. Not all children from lower-income families had low skills.

North Carolina Schools

What did the data tell us about North Carolina's schools? Two main findings are summarized below.

In general, North Carolina schools were similar to schools nationally on most aspects of their capacity to meet the needs of kindergartners. Compared to national data about schools, North Carolina did as well or better in many areas of school preparedness for children. In particular, the average kindergarten class size in NC was about the same as the national average. Compared to their peers nationally, more NC teachers engaged in activities to help children and families make a smooth transition into kindergarten. More NC principals had coursework beyond a Master's degree than their peers nationally.

The capacity of high-poverty schools was generally the same as the capacity of low-poverty schools, but may not be good enough to meet the needs of kindergartners at risk for school failure. Overall, schools serving a high proportion of lower-income kindergartners had similar characteristics to those serving a low proportion of lower-income kindergartners. For example, teacher and principal education, services offered, and kindergarten transition activities were generally the same in high-poverty schools as in low-poverty schools. While it is good that the capacity of schools was generally similar for high-poverty and low-poverty schools, one could argue that the capacity of high-poverty schools should be better than that for low-poverty schools if we want to help children at risk catch up to their peers.

High-poverty schools were better than low-poverty schools on class size and pre-school services for 4-year-olds at risk for school failure. Reducing class size is important, but it is uncertain whether an average reduction of two students per class is enough to impact student learning.⁴⁰ About half of high-poverty schools offered on-site prekindergarten programs for children at risk. High-poverty schools may have been more likely to provide prekindergarten programs because they had

access to federal funding that could be used to support such services. As a final note, we cannot draw conclusions about the extent of prekindergarten services available in the community for children at risk because we only obtained information on school-based prekindergarten services.

The Fall 2000 NC SRA provides stark data that show us how wide the gap is in children's skill levels before they enter the K-12 public school system. Providing the same educational services for everyone may not guarantee success for each child. Some schools need extra resources and support if they are to be successful in reducing the gap in children's skills.

NC's School Readiness Assessment

The Fall 2000 NC SRA provides a general description of the condition of children as they enter school and the capacity of schools to educate all kindergartners in North Carolina. The demographic characteristics of the children, teachers, and principals in the sample were very similar to those of all students, teachers, and principals in the state as reported by the NC Department of Public Instruction.⁴¹ The Fall 2000 NC SRA demonstrated that gathering information on a *sample* of children and schools, rather than *all*, is an accurate and efficient way of describing school readiness at the state level.

The statewide assessment will be most useful if conducted on a regular basis to monitor trends over time. This assessment also could help North Carolina evaluate the effectiveness of existing early childhood initiatives like Smart Start as well as new initiatives like public prekindergarten. Lessons learned from the Fall 2000 assessment should be used to strengthen future assessments. For example, the next statewide assessment should include direct measures of children's health in addition to parent-reported information. It should also obtain data on national certification of kindergarten teachers. Finally, observations of kindergarten classrooms would provide important additional information about classroom practices.

The Fall 2000 NC SRA provided data representative of kindergartners and public schools in the state of North Carolina, not of children and schools in each county. The Ready for School Goal Team recommended that the North Carolina School Readiness Assessment be conducted not only at the state level but also in each of North Carolina's 100 counties. If implemented, this assessment would provide each community with specific information about how well their children and schools are doing. A county-level assessment would provide valuable feedback to communities as they work to improve services for all children and especially for those who are at risk of school failure.

Recommendations

The findings from the Fall 2000 NC SRA suggest that we still have work to do to ensure that each child enters school ready to succeed and that schools have the capacity to educate all kindergartners. Some recommendations are provided below.

- ❖ **Prioritize high quality services for children birth through five who are at risk for school failure.** To reduce the gap in skills between children at risk and those not at risk for school failure, North Carolina must provide high quality services and supports to these children and their families each year of their lives before they enter school. Many states, for example, are starting new prekindergarten programs for 4-year-olds at risk for school failure. These prekindergarten programs are designed as high quality educational programs to improve children's school readiness skills. The Fall 2000 NC SRA data certainly suggest the need for efforts, like prekindergarten, to strengthen children's skills. However, preparing children for school starts at birth—not just the year before they come to school. We need to provide services and supports for young children at risk and their families each year from birth through age five.
- ❖ **Continue to improve the quality of all early care and education programs in North Carolina.** About half of NC children were in some type of center-based early care and education program the year before kindergarten, and many were likely in these programs for more than one year. We know that children's development and learning is positively affected if these programs are of high quality.⁴² Smart Start efforts have improved the quality of care and have been shown to be related to school readiness.⁴³ The Fall 2000 NC SRA data suggest that all children, not just those at risk for school failure, could benefit from high quality early care and education efforts. North Carolina should continue to improve its early care and education system in order to strengthen the skills of entering kindergartners.
- ❖ **Provide extra resources and supports for children at risk when they enter school.** North Carolina must continue to provide high quality services for children at risk when they enter and as they move through the public school system. Without extra help, these children will likely fall even further behind their peers from higher-income families.

❖ **Continue to improve the capacity of North Carolina public schools to educate all kindergartners.** Being at or above the national average on key school characteristics still leaves much room for improvement in meeting the needs of all children when they come to kindergarten. For example, the average NC kindergarten class size was higher than the class size of 18 set as a goal by the U.S. Department of Education.⁴⁴ Compared to kindergarten teachers nationally, fewer NC kindergarten teachers had Master's degrees. The racial and ethnic composition of kindergarten teachers should more closely reflect the racial and ethnic composition of their students. Finally, we could do more to support the successful transition of children and families as they move into the public school system.

How can this report be used to promote school readiness?

1. Discuss the report with local school officials and Smart Start partnership members.
2. Invite families to talk about their views of school readiness and ideas for supporting children and families' transition into public school.
3. Organize a group of preschool and kindergarten teachers to discuss kindergarten transition.
4. Ask local school officials and Smart Start members what they are doing for children at risk for school failure. Offer to help.

❖ **Support families in their roles as parents and children's first teachers.** Families are critical to their child's success and should have access to information and support in their important roles. We should, for instance, provide information to families about developmentally appropriate ways to extend their child's learning during everyday routines. Early childhood programs and public schools should work to build strong positive relationships with families and provide the support families request.

❖ **Focus on improving children's early language and math skills.** The Fall 2000 data suggest that North Carolina kindergartners' language and math skills were lower than average. To improve children's skills in these areas, we must provide appropriate early learning opportunities for children before they enter public school. These efforts must continue when children enter the public school system. The challenge for families and teachers (both early childhood and public school teachers) is to promote children's learning in ways that are appropriate for their ages and developmental levels.

❖ **Support children's development and learning in each of the five areas.** Although it is important to pay close attention to language and math development, we must not ignore the other areas—health and physical development, social development, and approaches toward learning. Each of the five areas is important, and children's development in one area is affected by their development in another. Families, early childhood programs, and public schools need to support children's development in all five areas.

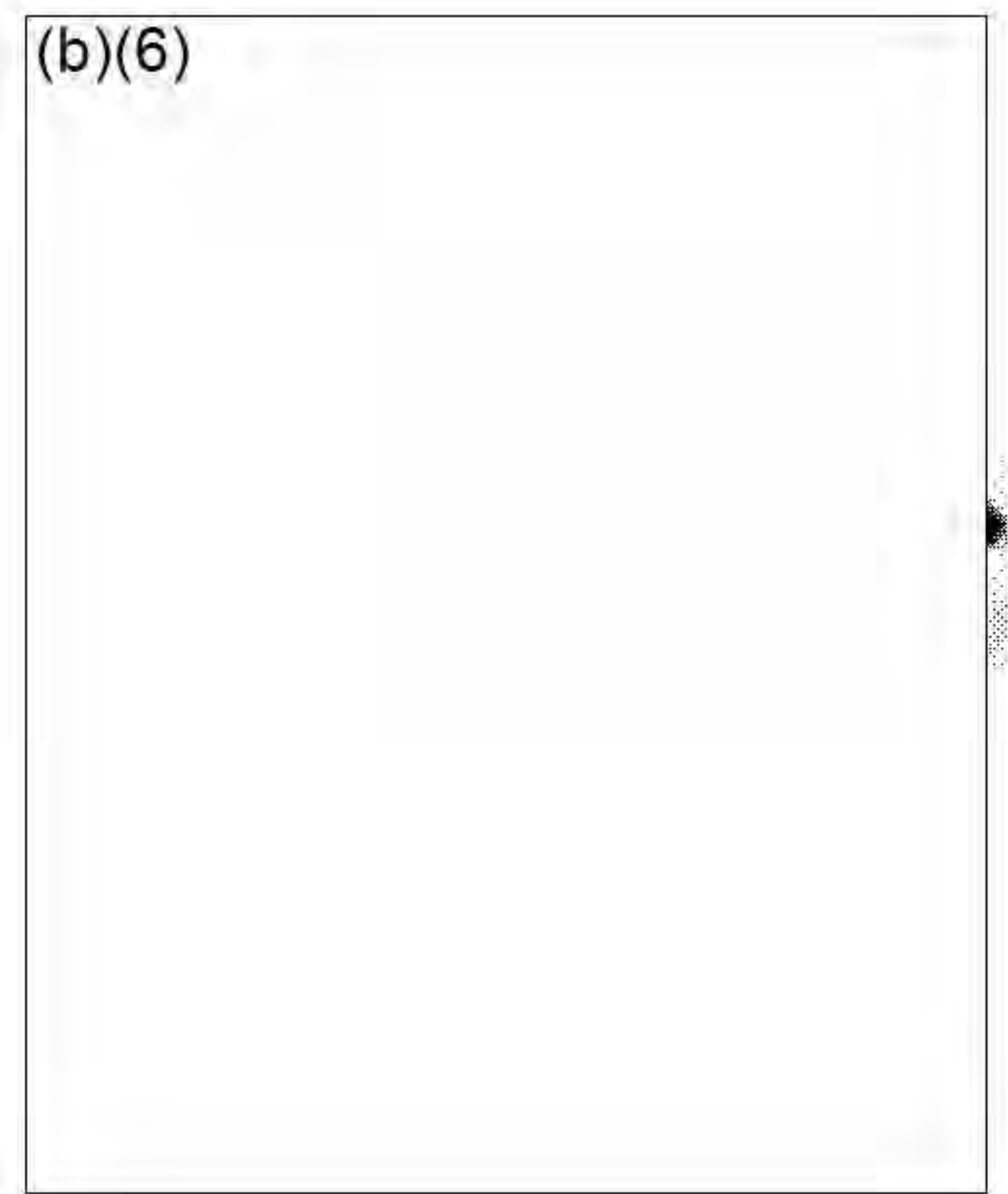
Notes

- ^a High-poverty schools as defined in this report are not the same as and should not be confused with low wealth counties. Many more factors besides free and reduced-price lunch are considered in designating a county as low wealth. The NC Department of Public Instruction's *Allotment Policy Manual for FY 2000-01* describes in more detail criteria for defining low wealth counties. This manual is available at <http://www.ncpublicschools.org/fbs/allotmentmanual2001.pdf>.
- ^b Throughout the report, the term *significant* means statistically significant at $p < .05$.
- ^c Throughout the report, *national average* refers to the overall mean of the standard scores for the national standardization sample for each measure. The average, or mean, for children of all income levels was set at 100 with a standard deviation of 15 for these measures. Scores on these measures can range from 40 to 160, with most scores falling between 70 and 130.
- ^d *National norms* are based on the national standardization samples of the measures. These norms were set so that 16% of the children had scores less than 85 and an additional 16% had scores greater than 115.
- ^e Throughout the report, *very low* refers to standard scores less than 85.
- ^f Throughout the report, *very high* refers to standard scores greater than 115.

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North Carolina

K-2 Literacy Assessment



North Carolina Department of Public Instruction

Revised 2009

North Carolina K-2 Literacy Assessment

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NC K-2 Literacy Assessment: Comparing 2005 to 2009

| Current NC K-2 Literacy Assessment (2005) | Revised NC K-2 Literacy Assessment (2009) | Rationale for the Change |
|---|--|---|
| Letter and Sound Identification | | |
| <ul style="list-style-type: none"> Was not included in the assessment | <ul style="list-style-type: none"> Added to the assessment | <ul style="list-style-type: none"> Many schools and districts were including this component in locally developed assessments to help guide instruction |
| Book and Print Awareness | | |
| <ul style="list-style-type: none"> Primarily used as a kindergarten assessment. Teachers had to select a book from their classroom library to use during the assessment Teachers had to create a script to use with the book that they selected to complete the assessment | <ul style="list-style-type: none"> Designed to be used during the first 2 years of school. A book is included to be used during the assessment. A script is included that matched the book to use when completing the assessment. | <ul style="list-style-type: none"> The skills that are assessed are aligned with both the kindergarten and first grade <i>Standard Course of Study</i>. Teachers had difficulty locating a book that had all of the assessed components included. Using the same script enhances the validity and reliability of the assessment. |
| Phonemic Awareness | | |
| <ul style="list-style-type: none"> Primarily used as a K-1 assessment. A sequence of 8 skills groups assessed. Each skill group had between 5 and 10 items to assess. | <ul style="list-style-type: none"> Designed to be used in grades K-2. A sequence of 15 skill groups assessed. Each skill group contains 6 items to assess. Picture cards are included for some skill groups. | <ul style="list-style-type: none"> The skills that are assessed are aligned with the K-2 <i>Standard Course of Study</i>. Six items in each skill group gives enough evidence to show understanding of the skill and will be less time consuming for teachers. Picture cards can be used with students that have difficulty with language. |

| Current NC K-2 Literacy Assessment (2005) | Revised NC K-2 Literacy Assessment (2009) | Rationale for the Change |
|--|---|--|
| Running Record | | |
| <ul style="list-style-type: none"> • Leveled books from a variety of publishers and distributors. • Leveled books used a variety of numerical leveling systems. | <ul style="list-style-type: none"> • Leveled books from 2 publishers and one distributor. • Leveled books use Fountas and Pinnell levels (A-N). | <ul style="list-style-type: none"> • The books are easier to locate and can be purchased in sets if schools and school districts choose to purchase them. • Fountas and Pinnell levels are widely used by most publishers of guided reading texts. |
| Fluency | | |
| <ul style="list-style-type: none"> • A separate assessment was completed on a book at the independent level. • Primarily assessed quantitatively (number of Words Correct per Minute) on all students. | <ul style="list-style-type: none"> • The assessment is completed during the running record assessment at the instructional level. • Assessed qualitatively on all students. • Assessed quantitatively beginning at text level G (typically first grade). | <ul style="list-style-type: none"> • Assessing fluency on a separate text is unnecessary and time consuming for teachers. • It is important to assess not only the Words Correct per Minute (WCPM), but also how the oral reading sounds. |
| Oral Retell | | |
| <ul style="list-style-type: none"> • Rubric descriptors were different for fiction and nonfiction. | <ul style="list-style-type: none"> • Rubric descriptors are the same for fiction and nonfiction text. | <ul style="list-style-type: none"> • The expectation of the student should not be different based on the type of text they read. The retelling should include sufficient information related to the text. |
| Writing about Reading (optional assessment) | | |
| <ul style="list-style-type: none"> • Was not included in the assessment. | <ul style="list-style-type: none"> • Added to the assessment. | <ul style="list-style-type: none"> • This component can be used with students that may have difficulty with oral expression during the <i>Oral Retell</i> component. |

| Current NC K-2 Literacy Assessment (2005) | Revised NC K-2 Literacy Assessment (2009) | Rationale for the Change |
|--|--|---|
| Primary Spelling Inventory | | |
| <ul style="list-style-type: none"> Was included in the Targeted Assessment section | <ul style="list-style-type: none"> Added to the assessment. | <ul style="list-style-type: none"> This assessment yields important instructional information on how students understand how words work. |
| Writing Continuum | | |
| <ul style="list-style-type: none"> Contained language that was confusing to teachers and parents. | <ul style="list-style-type: none"> Uses teacher and parent friendly language. Is clearly aligned with the Features of Writing. | <ul style="list-style-type: none"> It is important that teachers and parents understand the language used so it can guide instruction. Aligning the K-2 Writing Continuum to the Features of Writing provides a more seamless transition between grades K-2 and grades 3-8. |

Tips for the 2009 K-2 North Carolina Literacy Assessment

General Guidelines:

1. Review and discuss document as a K-2 team.
2. Consider suggested timeline (pages 6-8) for summative assessments. Decide how the components can be used or adapted to meet the individual needs of your students.
3. Decide how you will secure and store your leveled text. These texts are only to be used for interim/benchmark and summative assessments.
4. Discuss organization of additional materials included in the assessment package.
 - a. Storage boxes
 - b. Notebooks
 - c. Dividers
 - d. Clear plastic sheets
 - e. Folders
 - f. Calculator
 - g. Pencils
 - h. Stopwatch/timer
5. Discuss organization of student data.
 - a. K-2 Literacy Folders (purchased from NCDPI)
 - b. LEA/school developed folders
 - c. Teacher developed folders
6. Make and store/organize copies of all necessary recording forms.
 - a. Folders
 - b. Notebooks
 - c. Clear plastic sheets
 - d. Storage boxes
 - e. Dividers

Specific Component Guidelines:

1. Letter and Sound

- a. Review *Guidelines for Administration*.
- b. Print and laminate *Letter Cards* on heavy cardstock.

2. Book and Print Awareness

- a. Review *Guidelines for Administration*.
- b. Print and laminate *Administration Guide sheet*.
- c. Print and bind *No Sandwich*.
- d. Create masking cards.

3. Phonemic Awareness

- a. Review *Guidelines for Administration*.
- b. Print and laminate *Picture cards* for tasks 4 and 11 on cardstock.

4. Running Records

- a. Review *Guidelines for Administration*.
- b. Review *Recording System*.
- c. Review *Conventions for Taking a Running Record*.
- d. Print and laminate the *Conversion Table* on cardstock.
- e. Be prepared with calculator and pencils.

5. Fluency

- a. Review *Guidelines for Administration*.
- b. Print and laminate rubrics on cardstock.
- c. Be prepared with a stopwatch/timer.

6. Oral Retell

- a. Review *Guidelines for Administration*.
- b. Print and laminate rubric on cardstock.
- c. Print and laminate fiction and non-fiction retelling prompts on cardstock.

7. Writing about Reading

- a. Review *Guidelines for Administration*.
- b. Be prepared with appropriate level writing paper.

8. Primary Spelling Inventory

- a. Review *Guidelines for Administration*.
- b. Print and laminate *Sentences for Administration* on cardstock.

9. Writing Continuum

- a. Review all directions and exemplars.
- b. Print and laminate *North Carolina K-2 Writing Continuum* on cardstock.
- c. Print and laminate *North Carolina K-2 Writing Continuum and the Features of Writing*.

Important Reminders

- Be sure to pay close attention to the **directions for reassessing student progress** included in each component.
- Assessment does not need to take place outside the classroom environment.
- Assessment can be completed within the classroom after procedures for management have been established and reinforced.

North Carolina K-2 Literacy Assessment

Introduction

The NC K-2 Literacy Assessment is intended to assess the reading and writing skills of students in kindergarten, first, and second grade. It is intended to be a process for *formative, interim/benchmark, and summative assessment*.

Formative assessment is a process used by teachers and students during instruction that provides feedback to adjust ongoing teaching and learning to help students improve their achievement of intended instructional outcomes. Formative assessment is found at the classroom level and happens minute-to-minute or in short cycles.

Interim/benchmark assessment is an assessment given to students periodically throughout the year to determine how much learning has taken place up to a particular point in time. These assessments provide information for programs and instructional support.

Summative assessment is a measure of achievement to provide evidence of student competence or program effectiveness. Summative assessments are found at the classroom, district, and state level and can be graded and used in accountability systems. The information gathered from summative assessments is evaluative and is used to categorize students so performance among students can be compared.

Each component in the assessment contains specific directions for administration and recording forms. It is important that directions are clearly understood and followed to maintain consistent validity and reliability of the process and product.

The purchase of summative books and support materials to implement the NC K-2 Literacy Assessment will be the responsibility of each school or school system.

North Carolina K-2 Literacy Assessment

North Carolina State Board Policy

HSP-C-016:

“The State Board of Education requires that schools and school districts implement assessments at grades K, 1, and 2 that include documented, on-going individualized assessments throughout the year and a summative evaluation at the end of the year. These assessments monitor achievement of benchmarks in the *North Carolina Standard Course of Study*. They may take the form of the state-developed materials, adaptations of them, or unique assessments adopted by the local school board. Grades K, 1, and 2 assessments should be implemented by all schools by the 2000-2001 school year.”

The intended purposes of these assessments are (1) to provide information about the progress of each student for instructional adaptations and early interventions, (2) to provide next-year teachers with information about the status of each of their incoming students, (3) to inform parents about the status of their children relative to grade-level standards at the end of the year, and (4) to provide the school and school district information about the achievement status and progress of groups of students (e.g., by school and grade level) in grades K, 1, and 2.

North Carolina K-2 Literacy Assessment

Legislation

§ 115C-105.27. Development and approval of school improvement plans.

(b) The strategies for improving student performance:

(1a) Shall, if the school serves students in kindergarten or first grade, include a plan for preparing students to read at grade level by the time they enter second grade. The plan shall require kindergarten and first grade teachers to notify parents or guardians when their child is not reading at grade level and is at risk of not reading at grade level by the time the child enters second grade. The plan may include the use of assessments to monitor students' progress in learning to read, strategies for teachers and parents to implement that will help students improve and expand their reading, and provide for the recognition of teachers and strategies that appear to be effective at preparing students to read at grade level;

§ 115C-174.11. Components of the testing program.

(a) Assessment Instruments for First and Second Grades. – The State Board of Education shall adopt and provide to the local school administrative units developmentally appropriate individualized assessment instruments consistent with the Basic Education Program for the first and second grades, rather than standardized tests. Local school administrative units may use these assessment instruments provided to them by the State Board for first and second grade students, and shall not use standardized tests except as required as a condition of receiving a federal grant under the Reading First Program.

Suggested Timelines for Interim and Summative Assessment

Kindergarten

| Assessment Component | Beginning of Year | Middle of Year | End of Year |
|--|-------------------|----------------|--|
| Letter and Sound Identification | √ | √ | if needed |
| Book and Print Awareness | √ | √ | if needed |
| Phonemic Awareness | ---- | Tasks 1 and 2 | Tasks 1 and 2 if needed Tasks 3 and 4 |
| Running Record (including Oral Retell and Qualitative Fluency) | if needed | √ | √ |
| Spelling Inventory | ---- | ---- | √ |
| Writing | √ | √ | √ |

This chart shows a **suggested** timeline for interim and summative assessment. As teachers complete formative assessments throughout the year, it may be adjusted based on the individual needs of the student.

Suggested Timelines for Interim and Summative Assessment

First Grade

| Assessment Component | Beginning of Year | Middle of Year | End of Year |
|---|--|--|---------------------------------------|
| Letter and Sound Identification | if needed | if needed | ---- |
| Book and Print Awareness | if needed | if needed | if needed |
| Phonemic Awareness | Tasks 1-4 if needed Tasks 5 and 6 | Tasks 1-6 if needed Tasks 7 and 8 | Tasks 1-8 if needed Tasks 9-11 |
| Running Record (including Oral Retell, Quantitative and Qualitative Fluency) | √ | √ | √ |
| Spelling Inventory | √ | √ | √ |
| Writing | √ | √ | √ |

This chart shows a *suggested* timeline for interim and summative assessment. As teachers complete formative assessments throughout the year, it may be adjusted based on the individual needs of the student.

Suggested Timelines for Interim and Summative Assessment

Second Grade

| Assessment Component | Beginning of Year | Middle of Year | End of Year |
|--|-------------------------------------|---|----------------------|
| Letter and Sound Identification | if needed | if needed | if needed |
| Book and Print Awareness | if needed | if needed | if needed |
| Phonemic Awareness | Tasks 1-11 if needed Task 12 | Tasks 1-12 if needed Tasks 13-15 | Tasks 1-15 if needed |
| Running Record (including Oral Retell, Quantitative and Qualitative Fluency) | √ | √ | √ |
| Spelling Inventory | √ | √ | √ |
| Writing | √ | √ | √ |

This chart shows a *suggested* timeline for interim and summative assessment. As teachers complete formative assessments throughout the year, it may be adjusted based on the individual needs of the student.

Alignment to the North Carolina English Language Arts SCOS for grades K-2

The *NC SCOS* is a framework for teachers to guide instructional goals. In order to be successful in the 21st century, it is expected that students receive instruction above and beyond the goals and objectives. Some of the objectives are focused on skills that will be explicitly assessed using the NC K-2 Literacy Assessment, and some are focused on behaviors that will be observed during instructional time and formative assessment. As we revise our *Standard Course of Study* and move towards *Essential Standards*, we will revise this component to align with the new standards.

The chart located on the preceding page is to serve as a guide for educators as they plan for instruction and assessment.

English Language Arts objectives explicitly assessed during interim and summative assessment

| Objective | Kindergarten | First grade | Second grade |
|------------------|---|--|--|
| 1.01 | <ul style="list-style-type: none"> • Book and Print Awareness | <ul style="list-style-type: none"> • Phonemic Awareness Tasks | |
| 1.02 | <ul style="list-style-type: none"> • Letter and Sound Identification • Phonemic Awareness Tasks | | |
| 1.03 | <ul style="list-style-type: none"> • Letter and Sound Identification • Phonemic Awareness Tasks | <ul style="list-style-type: none"> • Running Record (self-corrections) | |
| 1.04 | <ul style="list-style-type: none"> • Running Record | | |
| 2.01 | <ul style="list-style-type: none"> • Running Record (oral retell) | <ul style="list-style-type: none"> • Running Record (oral retell and fluency) | <ul style="list-style-type: none"> • Running Record (oral retell) |
| 2.06 | | | <ul style="list-style-type: none"> • Running Record (oral retell) |
| 2.07 | | <ul style="list-style-type: none"> • Running Record | <ul style="list-style-type: none"> • Running Record (oral retell) |
| 2.08 | | | <ul style="list-style-type: none"> • Running Record (nonfiction oral retell) |
| 2.09 | <ul style="list-style-type: none"> • Running Record (oral retell) | | |
| 3.01 | <ul style="list-style-type: none"> • Running Record (oral retell) | <ul style="list-style-type: none"> • Running Record (oral retell) | <ul style="list-style-type: none"> • Running Record (oral retell) |
| 3.02 | | | <ul style="list-style-type: none"> • Running Record (oral retell) |
| 3.03 | | | <ul style="list-style-type: none"> • Running Record (oral retell) |
| 4.01 | <ul style="list-style-type: none"> • Writing sample | <ul style="list-style-type: none"> • Writing sample | <ul style="list-style-type: none"> • Writing sample |
| 4.02 | <ul style="list-style-type: none"> • Writing sample | <ul style="list-style-type: none"> • Writing sample | <ul style="list-style-type: none"> • Writing sample |
| 4.03 | <ul style="list-style-type: none"> • Writing sample | <ul style="list-style-type: none"> • Writing sample • Running Record (oral retell) | <ul style="list-style-type: none"> • Running Record (oral retell and fluency) |
| 4.05 | <ul style="list-style-type: none"> • Writing sample | <ul style="list-style-type: none"> • Writing sample | |
| 4.06 | <ul style="list-style-type: none"> • Writing sample | | |
| 5.01 | | <ul style="list-style-type: none"> • Writing sample | <ul style="list-style-type: none"> • Writing sample |
| 5.02 | <ul style="list-style-type: none"> • Writing sample | <ul style="list-style-type: none"> • Writing sample | <ul style="list-style-type: none"> • Writing sample |
| 5.03 | | | <ul style="list-style-type: none"> • Writing sample |
| 5.04 | | <ul style="list-style-type: none"> • Writing sample | <ul style="list-style-type: none"> • Writing sample |
| 5.05 | | <ul style="list-style-type: none"> • Writing sample | |
| 5.06 | | | <ul style="list-style-type: none"> • Writing sample |

Letter and Sound Identification

Purpose of Letter and Sound Identification is to:

- Assess student's ability to recognize letters and the sounds of letters.
- Yield information for instructional planning for students and classrooms.

Once a student has demonstrated understanding of letter names and sounds, they do not need to be re-assessed on these items. *A student does not need to demonstrate an understanding of all letters and sounds before they begin receiving instruction in reading and learning to read.*

Setting:

- Sit beside of or across from the child in a quiet atmosphere

Materials:

- Letter Cards (1 for uppercase, 1 for lowercase)
- Letter and Sound ID Recording form

Guidelines for Administration:

- Place the Letter Card in front of the student and ask, "Do you know what these are?"
- Point to each letter (going across) and ask the student:
 - "Can you tell me the name of this letter and what sound it makes?"
 - "What sound does it make?"
- *If necessary use a blank sheet of paper to cover up the rows beneath the row you are assessing in order to keep the student focused on 1 single row of letters.*
- Use the Letter and Sound ID Recording form to record student responses.
 - For vowels and letters that produce more than 1 sound, record the sound the student produces (/ă/ for "short a," /ā/ for "long a," /s/ for "soft c," /k/ for "hard c"). After the student produces the sound, ask the student, "Do you know another sound that the letter makes?" ***The student only needs to produce 1 sound to receive credit for the item.***
- Add up the total of correct items and record the number on the bottom of the form.
- This procedure should be used for assessing both upper and lower case letters.

Sounds **do not need to be assessed on both upper and lower case letters. If the student produces the sound on the lowercase letter, they do not need to produce it again. However if they are unable to produce it on the lowercase, ask if they can produce it while assessing uppercase letters and note this on the recording form.*

A E X M Q U

G B F J T R

V N C Y K O

I W D L S P

Z H

a e x m q u

g b f j t r

v n c y k o

i w d l s p

z h

Letter and Sound Identification Recording Form

Name _____

Recorder _____

Record a \checkmark for each correct response. If an incorrect response is given, record the response the student gave (ie. "P" for the letter D). If the student is unable to provide a response, record a dash (-) in the box.

| | | | |
|------------------------------------|------|------|------|
| Do you know what these are? | Date | Date | Date |
| | | | |

| | Date | Date | Date | | Date | Date | Date | | Date | Date | Date |
|-----------------|------|------|------|-----------------|------|------|------|-----------------|------|------|------|
| Uppercase | | | | Lowercase | | | | Sound | | | |
| A | | | | a | | | | Aa | | | |
| E | | | | e | | | | Ee | | | |
| X | | | | x | | | | Xx | | | |
| M | | | | m | | | | Mm | | | |
| Q | | | | q | | | | Qq | | | |
| U | | | | u | | | | Uu | | | |
| G | | | | g | | | | Gg | | | |
| B | | | | b | | | | Bb | | | |
| F | | | | f | | | | Ff | | | |
| J | | | | j | | | | Jj | | | |
| T | | | | t | | | | Tt | | | |
| R | | | | r | | | | Rr | | | |
| V | | | | v | | | | Vv | | | |
| N | | | | n | | | | Nn | | | |
| C | | | | c | | | | Cc | | | |
| Y | | | | y | | | | Yy | | | |
| K | | | | k | | | | Kk | | | |
| O | | | | o | | | | Oo | | | |
| I | | | | i | | | | Ii | | | |
| W | | | | w | | | | Ww | | | |
| D | | | | d | | | | Dd | | | |
| L | | | | l | | | | Ll | | | |
| S | | | | s | | | | Ss | | | |
| P | | | | p | | | | Pp | | | |
| Z | | | | z | | | | Zz | | | |
| H | | | | h | | | | Hh | | | |
| Total | | | | Total | | | | Total | | | |
| Comments | | | | Comments | | | | Comments | | | |
| | | | | | | | | | | | |

Book and Print Awareness

Purpose of Book and Print Awareness is to:

- Understand the necessary foundational skills that facilitate learning to read and write at the independent level.
- Yield information for instruction for beginning readers before beginning school or after a time of instruction.

Setting:

- Sit beside the child in a quiet atmosphere as if you were sharing the book together.
- After the first item is given, the book should be placed between you and the child.

Materials:

- *No Sandwich* book
- Book and Print Awareness Individual Checklist
- Administration Guide sheet
- Masking Cards 3"x1" (one set of 2)

Guidelines for Administration:

- Use the book *No Sandwich*.
- Follow the Administration Guide sheet. Follow these instructions exactly to ensure that the student understands the directions and that you keep the instructions clear and precise.
- If the child does not understand the task, repeat the question. If the child is unable to respond, continue to the next item.
- Record any significant information about the child's knowledge/performance in the comments section.
- Identify any items that need to be a focus for instruction and assessment.

Scoring:

- Use checks to mark correct responses. Use a dash (-) to mark incorrect responses or no response.
- Use the comment section to record your observations.
- Score one point for each correct response.
- Total the number of correct responses.
- **When a correct response is given the student does not need to be assessed on that item again.**

Book and Print Awareness Administration Guide
No Sandwich

| | |
|---|--|
| <p>SAY THIS FIRST: <i>I'm going to read you a story but I want you to help me.</i></p> | <p>TEXT:</p> |
| <p>Hand the student the book vertically by the outside edge, spine towards the child.</p> <p>Item 1: Test: For orientation of book Say: <i>"Show me the front of this book."</i> Score: 1 point for correct response.</p> <p>Item 2: Test: Title of the book Say: <i>"Show me the title of this book."</i> Read the title of the book to the student. Score: 1 point for correct response.</p> | |
| <p>Page 2</p> <p>Item 3: Test: Concept that print not picture, carries a message. Say: <i>"I'll read the story. You help me. "Show me where to start reading?"</i> <i>"Where do I begin to read?"</i> Read text on page 2 Score: 1 point for print. 0 for picture.</p> | <p>Page 2</p> <p>It was time for lunch. I went to the kitchen and sat at the table.</p> |
| <p>Page 4</p> <p>Item 4: Test: For directional rules Say: <i>"Show me where to start."</i> Score: 1 point for top left.</p> <p>Item 5: Test: Moves left to right on any line. Say: <i>"Which way do I go?"</i> Score: 1 point for left to right</p> <p>Item 6: Test: Return sweep. Say: <i>"Where do I go after that?"</i> Score: 1 point for return sweep to left, or for moving down the page.</p> <p>Item 7: Test: Word-by-word pointing. Say: <i>"Point while I read it."</i> Read the text on the page slowly but fluently. Score: 1 point for exact matching.</p> | <p>Page 4</p> <p>I waited for my sandwich. I waited and waited. Mom did not bring me a sandwich.</p> |

Book and Print Awareness Administration Guide: Page 2

No Sandwich

| | |
|---|---|
| <p>Page 6</p> <p>Item 8: Test: Concept of first and last Say: <i>"Show me the first part of this page."</i> <i>"Show me the last part of this page."</i> Score: 1 point if BOTH are correct in any sense that is, applied to the whole text or to a line, or to a word, or to a letter.</p> | <p>Page 6</p> <p>Mom made me a bowl of soup. The soup smelled very good. It was hot and I was hungry.</p> |
| <p>Page 8</p> <p>Item 9: Test: A left page is read before a right page. Say: <i>"Where do I start reading?"</i> Score: 1 point for indicating the left page.</p> <p>Page 9</p> <p>Item 10: Test: Punctuation Say: <i>"What's this for?"</i>(point to or trace with a pencil) (comma) Score: 1 point</p> | <p>Page 8</p> <p>I dipped my spoon into the soup.</p> <p>Page 9</p> <p>It was too hot, so I blew and blew.</p> |
| <p>Page 10</p> <p>Item 11: Test: Capital and lower case letters within continual text. Say: <i>"Find a little/lowercase/small letter like this."</i> Point to capital T. Score: 1 point</p> | <p>Page 10</p> <p>The soup was tasty with lots of noodles and big pieces of chicken.</p> |
| <p>Page 12</p> <p>Item 12: Test: Punctuation Say: <i>"What's this for?"</i>(point to or trace with a pencil) (exclamation point) Score: 1 point</p> | <p>Page 12</p> <p>I tasted it again. My soup was just right!</p> |
| <p>Page 14</p> <p>Item 13: Test: Punctuation Say: <i>"What's this for?"</i>(point to or trace with a pencil) (question mark) Score: 1 point</p> <p>Item 14: Test: Punctuation Say: <i>"What's this for?"</i> (point to or trace with a pencil) (quotation marks) Score: 1 point</p> | <p>Page 14</p> <p><i>"Where is my peanut butter and jelly sandwich?"</i> I called to mom. My mom is the best.</p> |

Book and Print Awareness Administration Guide: Page 3

No Sandwich

| | |
|--|--|
| <p>Page 16</p> <p>Item 15: Punctuation Test: Say: "What's this for?"(point to or trace with a pencil) (period) Score: 1 point</p> | <p>Page 16</p> <p>She made my peanut butter and jelly sandwich into little stars and hearts.</p> |
| <p>Page 18</p> <p>Item 16: Test: Words that contain the same letters in a different order.</p> <p>Read the text on page 18. Say: "Show me 'my'." "Show me 'am'."</p> | <p>Page 18</p> <p>Now, my lunch is complete. I will eat and eat until I am full.</p> |
| <p>Page 20</p> <p>Have two masking cards that the child can hold and slide easily over the line of text to block out words and letters. To start, lay the cards on the page but leave all print exposed.</p> <p>SAY: We are going to use these cards as a window. I am going to ask you to open and close the window, watch me as I do this. Close the window over ALL the text. Then, open the window so that ALL the text is exposed.</p> <p>Item 17: Test: Letter Concepts</p> <p>Cards are in the open position exposing all print. Say: "This page says:" "What a wonderful lunch."</p> <p>Cards are in the open position exposing all the print. Say: "Push the cards so that you can see just one letter."</p> <p>Cards are in the open position exposing all the print. Say: "Push the cards so that you can see just two letters." Score: 1 point if both are correct.</p> | <p>Page 20</p> <p>What a wonderful lunch.</p> |

| | |
|---|--|
| <p>Cards are in the open position exposing all the print. Say: "Push the cards so that you can see just one word." Say: "Push the cards so that you can see just two words." Score: 1 point if both are correct.</p> <p>Cards are in the open position exposing all the print. Say: "Show me the first letter of a word." Say: "Show me the last letter of a word." Score: 1 point if both are correct.</p> <p>Cards are in the open position exposing all the print. Say: "Show me a capital letter." Score: 1 point if correct</p> | |
|---|--|

**Book and Print Awareness Assessment
Individual Checklist**

Name: _____

Recorder: _____

| PAGE | Point value | SCORE/ Date | ITEM | COMMENT(S) |
|---|------------------|----------------|---|------------|
| cover | 1 | | 1. Front of Book | |
| cover | 1 | | 2. Title of book | |
| 2 | 1 | | 3. Concept that print not picture carries a message. | |
| 4 | 1 1 1 1 | | 4. For directional rules 5. Moves left to right on any line 6. Return sweep 7. Word-by-word pointing | |
| 6 | 1 | | 8. First Concept Last Concept | |
| 8 | 1 | | 9. A left page is read before a right page. | |
| 9 | 1 | | 10. Punctuation (comma) | |
| 10 | 1 | | 11. Capital and lower case letters within continual text. | |
| 12 | 1 | | 12. Punctuation(exclamation point) | |
| 14 | 1 1 | | 13. Punctuation(question mark) 14. Punctuation (quotation marks) | |
| 16 | 1 | | 15. Punctuation (period) | |
| 18 | 1 | | 16. Words that contain the same letter in a different order. | |
| 20 | 1 1 1 1 | | 17. Letter concepts a. One/two letters b. One /two words c. First/last letter d. Capital letter | |
| Total number of correct responses: 20(points) | | | Child's number correct: _____ | |

Phonemic Awareness

Purpose of Phonemic Awareness is to:

- Assess student's ability to manipulate sounds.
- Help students develop knowledge and understanding of sounds through the exposure of oral and written language.
- Make students aware that language is made up of individual words, and that words are made of syllables and syllables are made up of phonemes.

Materials:

- Recording Forms
- Pictures (as needed)

Guidelines for Administration:

- Find a quiet setting.
- Sit facing the student.

This assessment should be given orally to students.

1. Orally recognizes rhyme
2. Orally generates rhyme
3. Orally identifies beginning sounds
4. *Orally identifies words that begin the same
5. Blends onset and rime
6. Segments onset and rime
7. Orally blends phonemes into words
8. Orally segments words into phonemes
9. Orally divides words into syllables
10. Orally identifies ending sounds
11. *Orally identifies words that end the same
12. Orally substitutes one phoneme for another
13. Phoneme deletion of final sound
14. Phoneme deletion of initial sound
15. Phoneme substitution of medial sound

***Picture cards may be used for these tasks.**

NOTE: Once a student has demonstrated understanding of a specific skill it is not necessary to re-assess this student on the same skill.

This is the developmental sequence for Phonemic Awareness. However, if a student demonstrates understanding of a certain skill in this sequence, continue to teach the other skills.

In addition these are observable skills and teachers may informally assess students as they complete work in literacy stations, during guided reading instruction or during large group instruction.

Phonemic Awareness Assessment

Name: _____

Space has been provided for 3 assessments throughout the year if needed.

****Students do not need to be re-assessed on tasks that they have demonstrated understanding of.***

1. Orally recognizes rhyme.

Teacher: “Cat, bat, do these words rhyme?” Tell the student the correct answer.

Teacher: “Ball, horse, do these words rhyme?” Tell the student the correct answer.

Teacher: “Now we will do some more just like this. I am going to say two words and you are going to tell me if they rhyme.” Continue on to the assessed items.

Check in the box for the correct response. Record the child’s response if it is incorrect.

| Date | | | |
|--------------|-----------|-----------|-----------|
| run-sun | | | |
| old-blow | | | |
| bat-fan | | | |
| dog-bus | | | |
| hook-book | | | |
| bunny-funny | | | |
| Total | /6 | /6 | /6 |

2. Orally generates rhyme.

Teacher: “Can you think of a word that rhymes with mop?” Accept any word, including a nonsense word.

Teacher: “Flop, hop, and stop all rhyme with mop.”

Teacher: “Now we will do some more just like this.” Continue on to the assessed items.

Check in the box for correct response. Record the child’s response if it is incorrect.

| Date | | | |
|--------------|-----------|-----------|-----------|
| cat | | | |
| ring | | | |
| snake | | | |
| man | | | |
| love | | | |
| mom | | | |
| Total | /6 | /6 | /6 |

3. Orally identifies beginning sounds.

Teacher: "Listen while I say a word: duck. What sound do you hear at the beginning of the word duck?" Allow the student to answer.

Teacher: "Duck starts with /d/."

Teacher: "Now we will do some more just like this." Continue on to the assessed items.

Check in the box for correct response. Record the child's response if it is incorrect.

| | | | |
|--------------|-----------|-----------|-----------|
| Date | | | |
| cup | | | |
| man | | | |
| rose | | | |
| lake | | | |
| foot | | | |
| dog | | | |
| Total | /6 | /6 | /6 |

4. Orally identifies words that begin the same.

Teacher: "Listen while I say a word: turtle. What word begins the same as turtle: rabbit, tiger?" Allow the student to answer.

Teacher: "Turtle and tiger both begin with a /t/."

Teacher: "Now we will do some more just like this." Continue on to the assessed items.

Check in the box for the correct response. Record the child's response if it is incorrect.

| | | | |
|---------------|-----------|-----------|-----------|
| Date | | | |
| map-rug-man | | | |
| cat-can-bed | | | |
| bed-fox-boat | | | |
| fish-fox-pie | | | |
| house-fly-hat | | | |
| pig-bug-pie | | | |
| Total | /6 | /6 | /6 |

5. Blending onset and rime.

Teacher: "If I say /c/ /ap/, what word am I saying? Allow the student to answer.

Teacher: "The word I said was cap."

Teacher: "Now we will do some more just like this." Continue on to the assessed items.

Check in the box for correct response. Record the child's response if it is incorrect.

| | | | |
|--------------|-----------|-----------|-----------|
| Date | | | |
| /g/ /ame/ | | | |
| /c/ /up/ | | | |
| /s/ /at/ | | | |
| /t/ /oss/ | | | |
| /m/ /op/ | | | |
| /p/ /ine/ | | | |
| Total | /6 | /6 | /6 |

6. Segmenting onset and rime.

Teacher: "I'm going to say a word: top."

Teacher: "Can you tell me the beginning sound and then tell me the rest of the word?" Allow the student to answer.

Teacher: "When we break the word top into two parts we say, /t/ /op/."

Teacher: "Now we will do some more just like this." Continue on to the assessed items.

Check in the box for correct response. Record the child's response if it is incorrect.

| Date | | | |
|----------------|-----------|-----------|-----------|
| some /s/ /ome/ | | | |
| mat /m/ /at/ | | | |
| fit /f/ /it/ | | | |
| fun /f/ /un/ | | | |
| boat /b/ /oat/ | | | |
| can /c/ /an/ | | | |
| Total | /6 | /6 | /6 |

7. Orally blends phonemes (sounds) into words.

Teacher: "Listen as I say /p/ /u/ /p/." What word did I say?" Allow the student to answer.

Teacher: "The word I said was pup."

Teacher: "Now we will do some more just like this." Continue on to the assessed items.

Check in the box for correct response. Record the child's response if it is incorrect.

| Date | | | |
|-----------------|-----------|-----------|-----------|
| /g/ /ō/ | | | |
| /s/ /t/ /ar/ | | | |
| /f/ /a/ /t/ | | | |
| /m/ /ē/ | | | |
| /b/ /oa/ /t/ | | | |
| /p/ /a/ /s/ /t/ | | | |
| Total | /6 | /6 | /6 |

8. Orally segments words into phonemes (sounds).

Teacher: Listen as I say a word: cat."

Teacher: "If I separate that word into sounds I would say /c/ /a/ /t/."

Teacher: "Now we will do some more just like this. Repeat each word slowly so I can hear each separate sound." Continue on to the assessed items.

Check in the box for correct response. Record the child's response if it is incorrect.

| Date | | | |
|----------------------|-----------|-----------|-----------|
| me /m/ /ē/ | | | |
| play /p/ /l/ /ā/ | | | |
| red /r/ /e/ /d/ | | | |
| map /m/ /a/ /p/ | | | |
| like /l/ /ī/ /k/ | | | |
| skip /s/ /k/ /i/ /p/ | | | |
| Total | /6 | /6 | /6 |

9. Orally divides words into syllables.

Teacher: "How many syllables do you hear in the word paper?" Allow the student to answer.

Teacher: "There are 2 syllables in the word paper."

Teacher: "Now we will do some more just like this." Continue on to the assessed items.

Check in the box for the correct response. Record the child's response if it is incorrect.

| | | | |
|----------------------|-----------|-----------|-----------|
| Date | | | |
| rabbit (2) | | | |
| alligator (4) | | | |
| fish (1) | | | |
| beaver (2) | | | |
| elephant (3) | | | |
| kangaroo (3) | | | |
| Total | /6 | /6 | /6 |

10. Orally identifies ending sound.

Teacher: "Listen while I say a word: goat. What sound do you hear at the end of the word goat?" Allow the student to answer.

Teacher: "Goat ends with /t/."

Teacher: "Now we will do some more just like this." Continue on to the assessed items.

Check in the box for correct response. Record the child's response if it is incorrect.

| | | | |
|--------------|-----------|-----------|-----------|
| Date | | | |
| cup | | | |
| rose | | | |
| yarn | | | |
| foot | | | |
| wind | | | |
| sail | | | |
| Total | /6 | /6 | /6 |

11. Orally identifies words that end the same.

Teacher: "Listen while I say a word: man. What word ends the same as man: apple, can?" Allow the student to answer.

Teacher: "Man and can both end with a /n/."

Teacher: "Now we will do some more just like this." Continue on to the assessed items.

Check in the box for correct response. Record the child's response if it is incorrect.

| | | | |
|-------------------------|-----------|-----------|-----------|
| Date | | | |
| car-apple-star | | | |
| house-horse-boat | | | |
| pig-fox-rug | | | |
| pin-man-ball | | | |
| boat-horse-hat | | | |
| map-cup-can | | | |
| Total | /6 | /6 | /6 |

12. Orally substitutes one phoneme for another.

Teacher: "Listen as I say a word: boy. If I change the first sound in boy to /t/, my new word is toy."

Teacher: "Listen as I say a word: hit. If I change the last sound in hit to /p/, what is the new word?" Allow the student to answer.

Teacher: "My new word would be hip."

Teacher: "Now we will do some more just like this." Continue on to the assessed items.

Check in the box for correct response. Record the child's response if it is incorrect.

| Date | | | |
|---|-----------|-----------|-----------|
| Change the last sound in hop to /t/. What's the new word? (hot) | | | |
| Change the last sound in bus to /n/. What's the new word? (bun) | | | |
| Change the first sound in pig to /b/. What's the new word? (big) | | | |
| Change the first sound in tub to /r/. What's the new word? (rub) | | | |
| Change the last sound in can to /p/. What's the new word? (cap) | | | |
| Change the first sound in hand to /l/. What's the new word? (land) | | | |
| Total | /6 | /6 | /6 |

13. Phoneme Deletion of Final Sound

Teacher: "Listen as I say a word: hops. If I leave off the /s/, my new word is hop."

Teacher: "Listen as I say a word: sunny. If I leave off the /ē/, what is the new word?" Allow the student to answer.

Teacher: "My new word would be sun."

Teacher: "Now we will do some more just like this." Continue on to the assessed items.

Check in the box for correct response. Record the child's response if it is incorrect.

| Date | | | |
|--|-----------|-----------|-----------|
| "Say the word dogs, but leave off the /s/." (dog) | | | |
| "Say the word rake, but leave off the /k/." (ray) | | | |
| "Say the word splashed, but leave off the /t/." (splash) | | | |
| "Say the word , ringing but leave off the /ing/." (ring) | | | |
| "Say the word ,poppy but leave off the /ē/." (pop) | | | |
| "Say the word wind, but leave off the /d/." (win) | | | |
| Total | /6 | /6 | /6 |

14. Phoneme Deletion of Initial Sound

Teacher: "Listen as I say a word: jug. If I leave off the /j/, it becomes ug."

Teacher: "Listen as I say a word: flip. If I leave off the /f/, what word do I get?" Allow the student to answer.

Teacher: "My new word is lip."

Teacher: "Now we will do some more just like this." Continue on to the assessed items.

Check in the box for correct response. Record the child's response if it is incorrect.

| Date | | | |
|---|-----------|-----------|-----------|
| "Say the word can, but leave off the /k/." (an) | | | |
| "Say the word plot, but leave off the /p/." (lot) | | | |
| "Say the word nut, but leave off the /n/." (ut) | | | |
| "Say the word car, but leave off the /c/." (ar) | | | |
| "Say the word house, but leave off the /h/." (ouse) | | | |
| "Say the word star, but leave off the /s/." (tar) | | | |
| Total | /6 | /6 | /6 |

15. Phoneme substitution of Medial Sounds

Teacher: "Listen as I say a word: jet. If I change the /ě / to /ů/, it becomes jut."

Teacher: "Listen as I say a word: bag. If I change the /ǎ/ to /ĩ/, what word do I get?" Allow the student to answer.

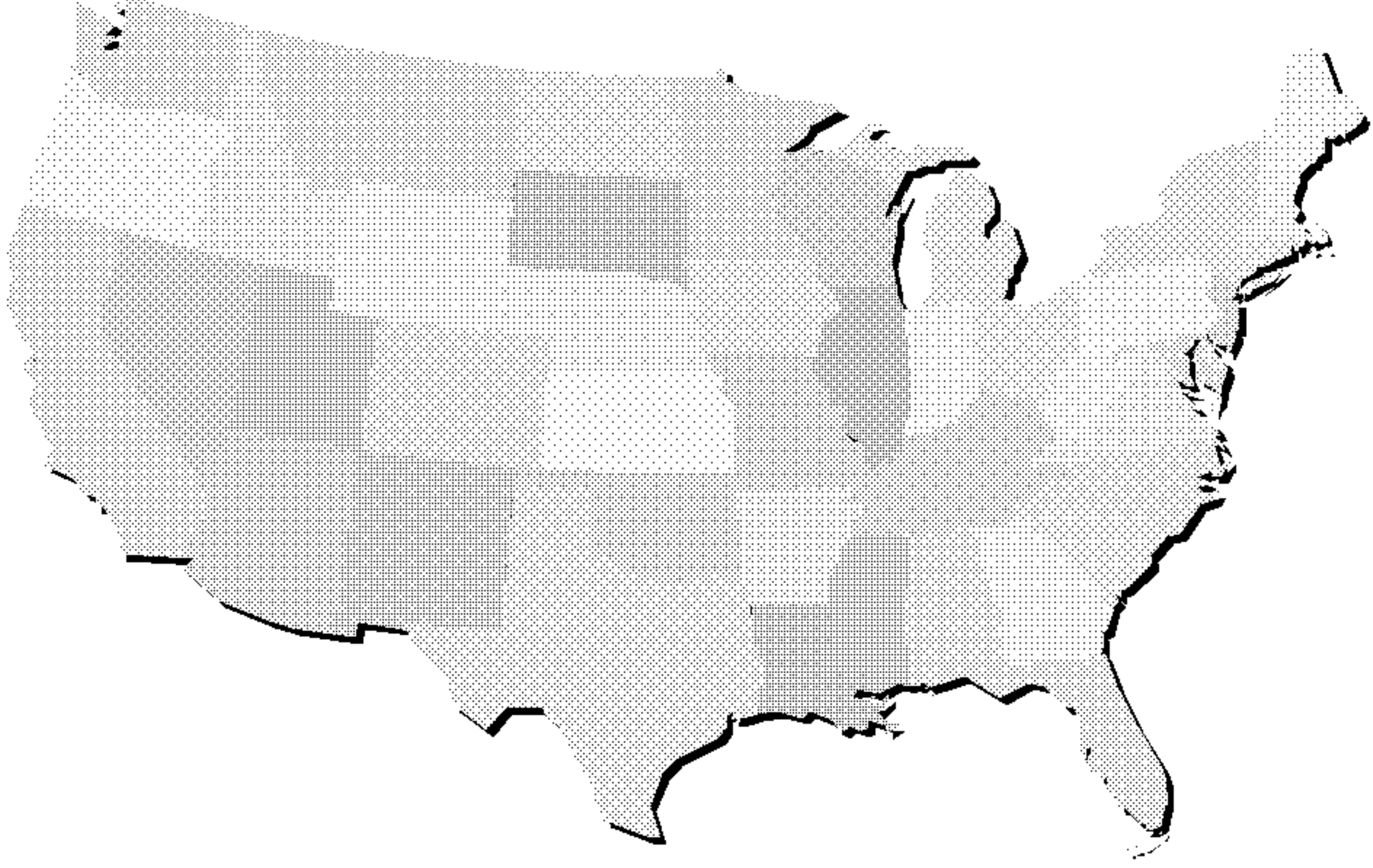
Teacher: "My new word is big."

Teacher: "Now we will do some more just like this." Continue on to the assessed items.

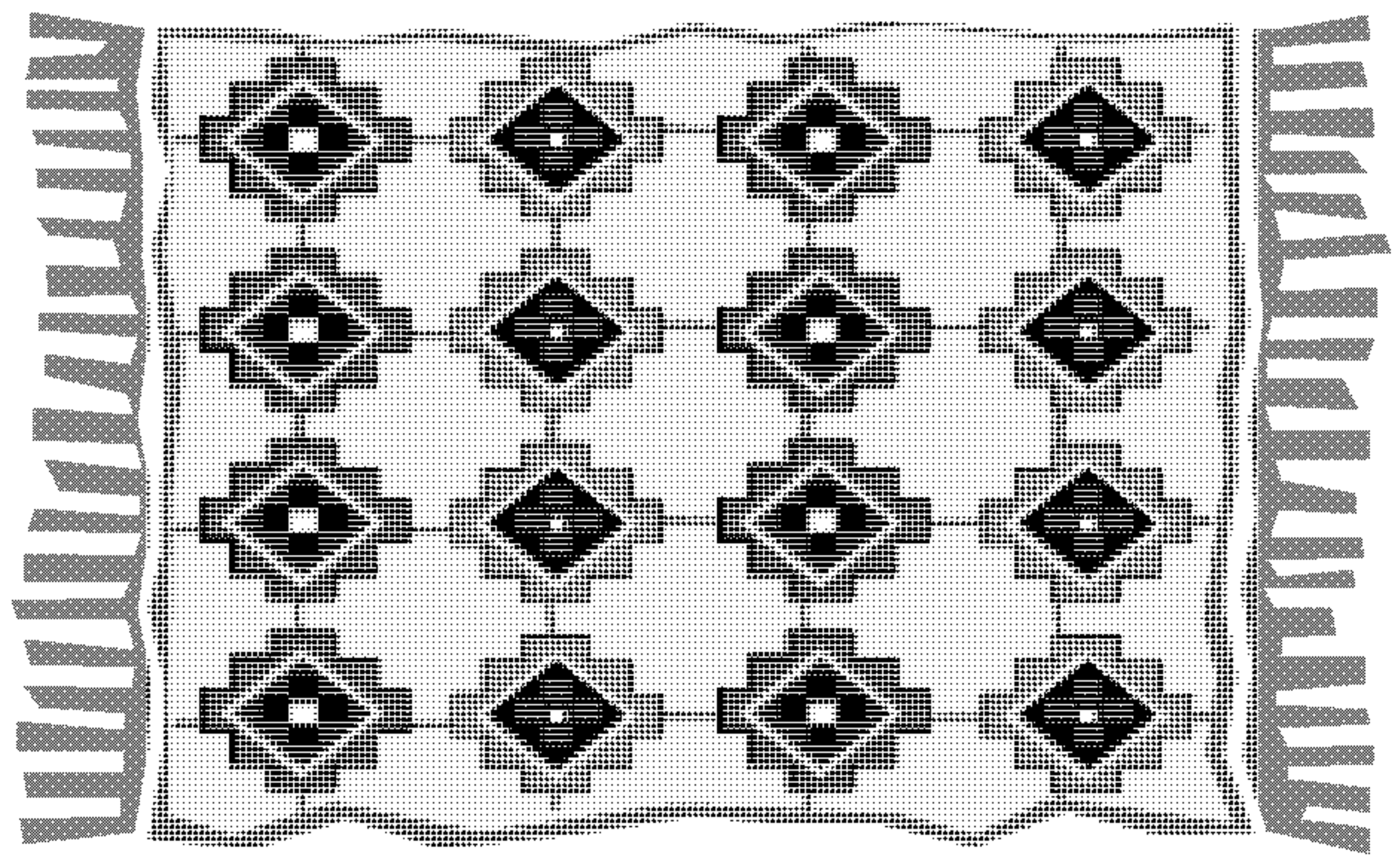
Check in the box for correct response. Record the child's response if it is incorrect.

| Date | | | |
|---|-----------|-----------|-----------|
| "Change the /ǎ/ in pan, to /ĩ/. What is the new word?" (pin) | | | |
| "Change the /ĩ/ in nice to /ur/. What is the new word?" (nurse) | | | |
| "Change the /ē/ in mean to /ī/. What is the new word?" (mine) | | | |
| "Change the /ǒ/ in cob, to /ǎ/. What is the new word?" (cab) | | | |
| "Change the /ů/ in pup to /ǒ/. What is the new word?" (pop) | | | |
| "Change the /ĩ/ in pig to /ě/. What is the new word?" (peg) | | | |
| Total | /6 | /6 | /6 |

1.



2.



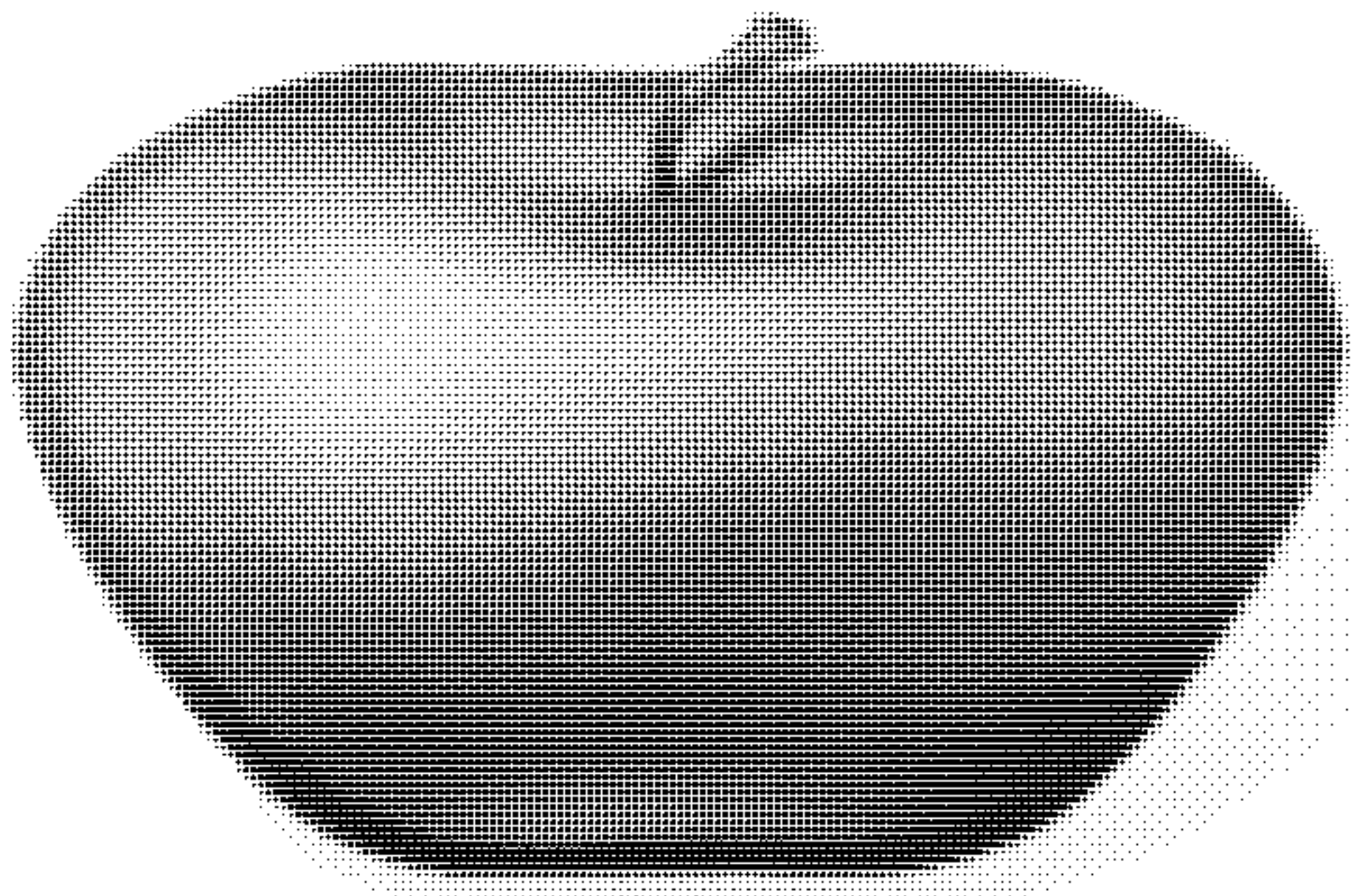
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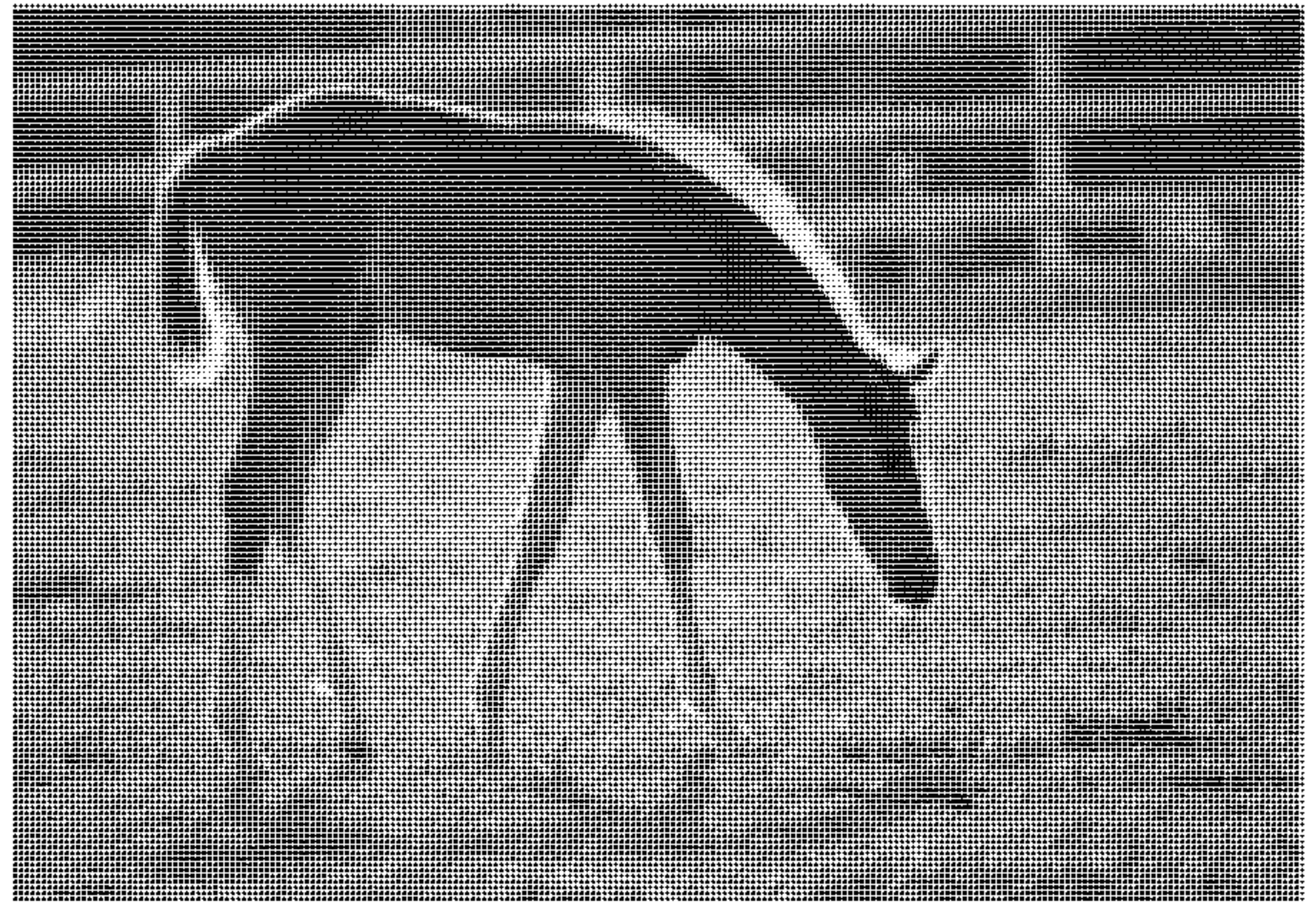
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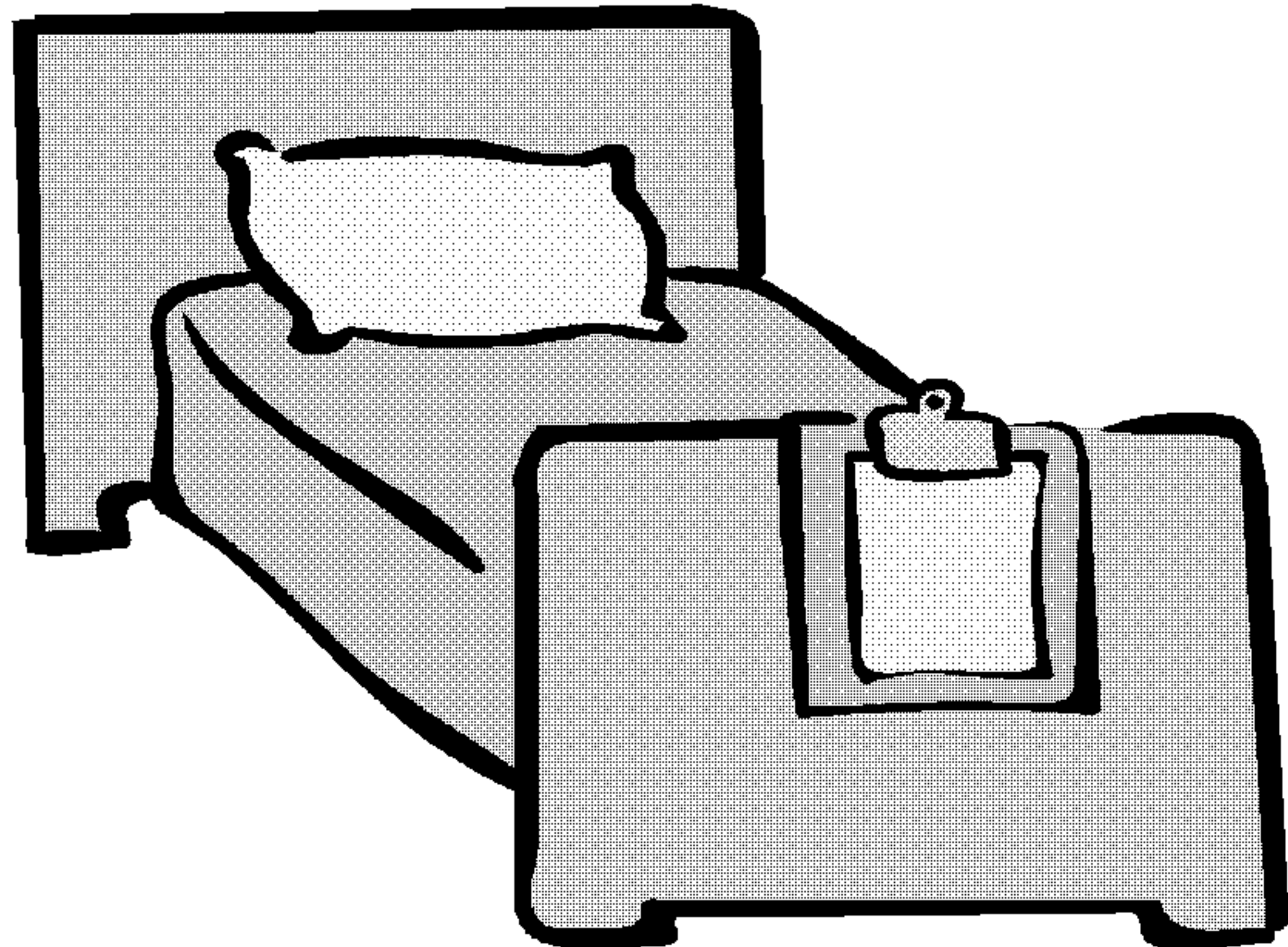
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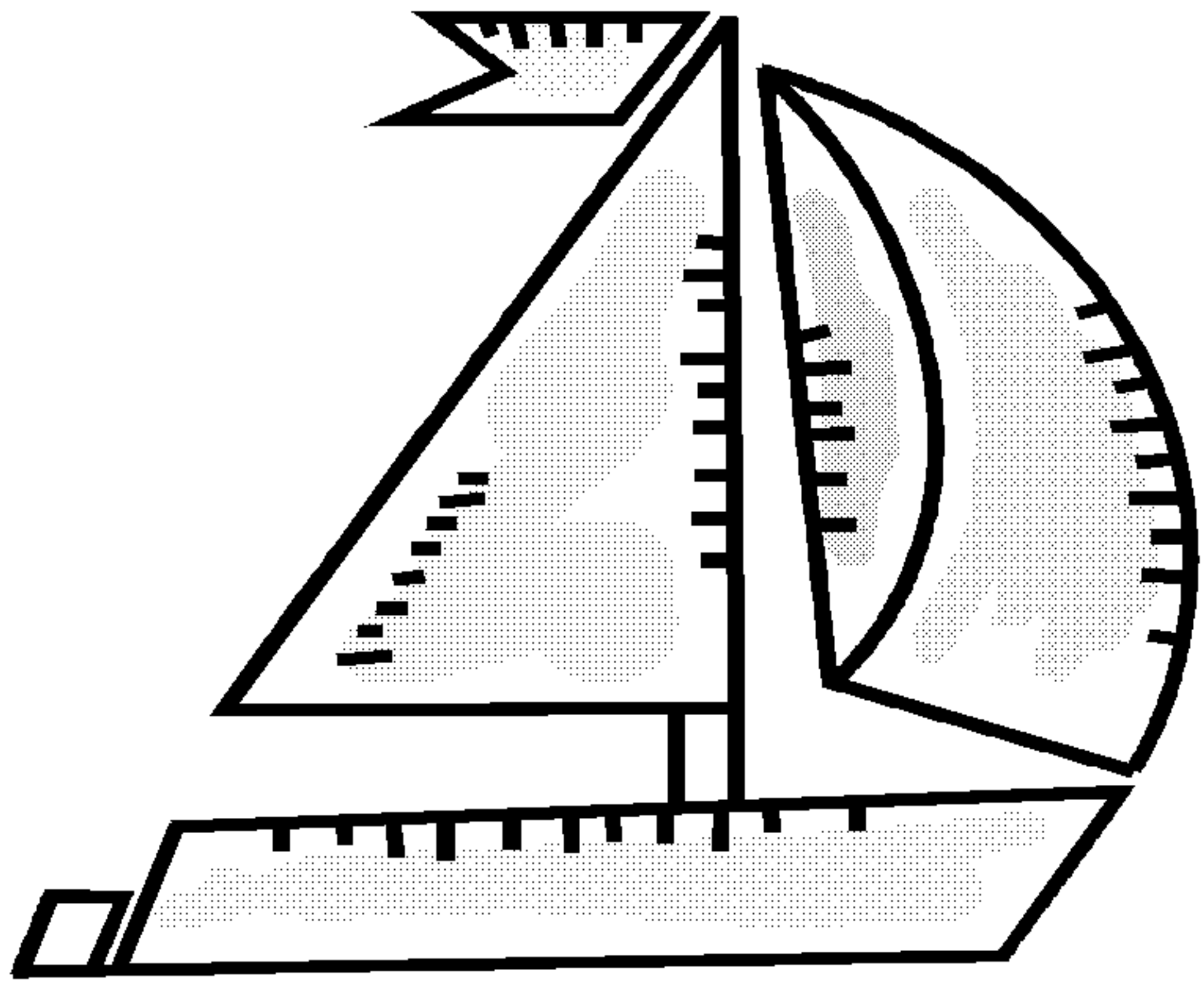
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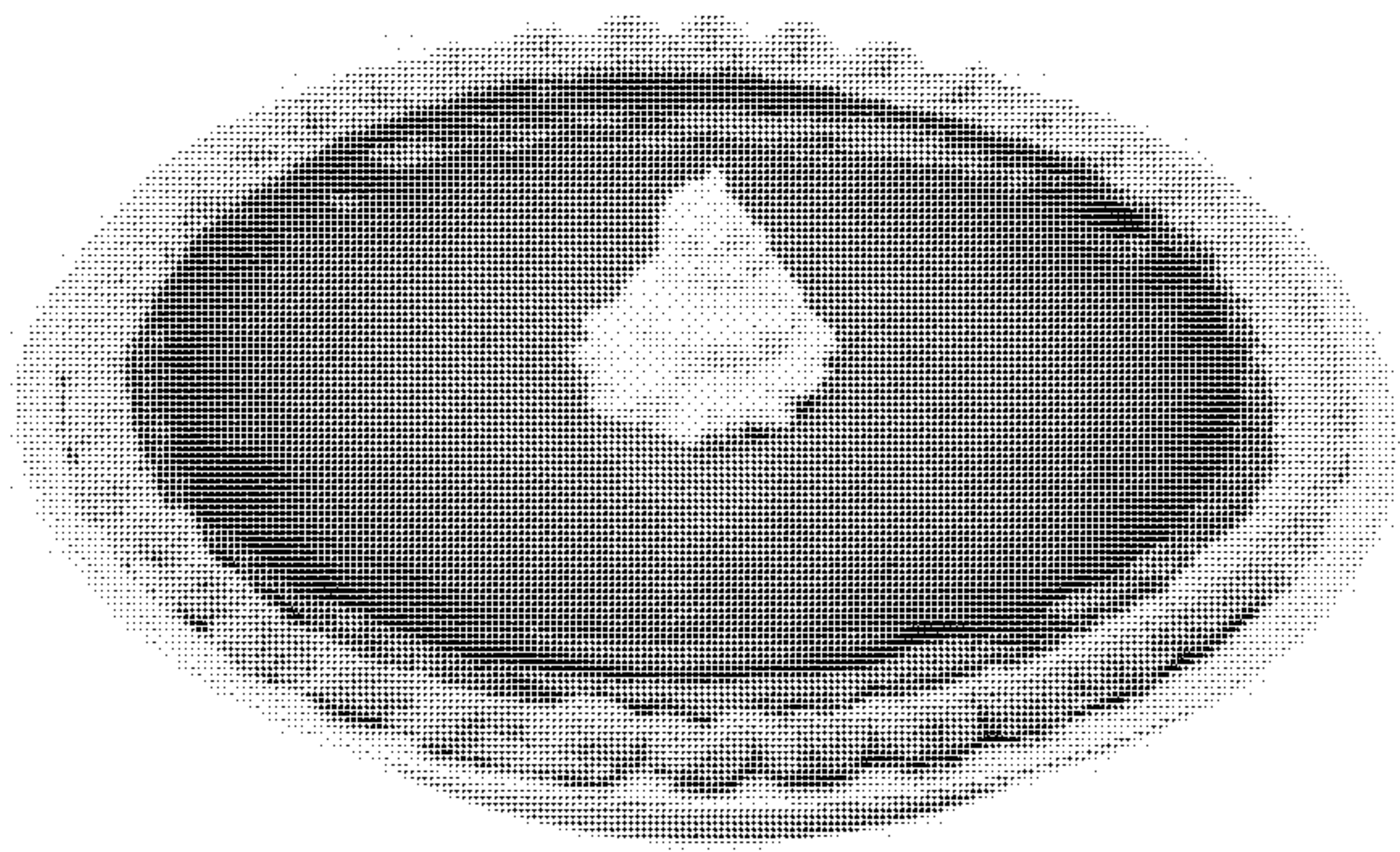
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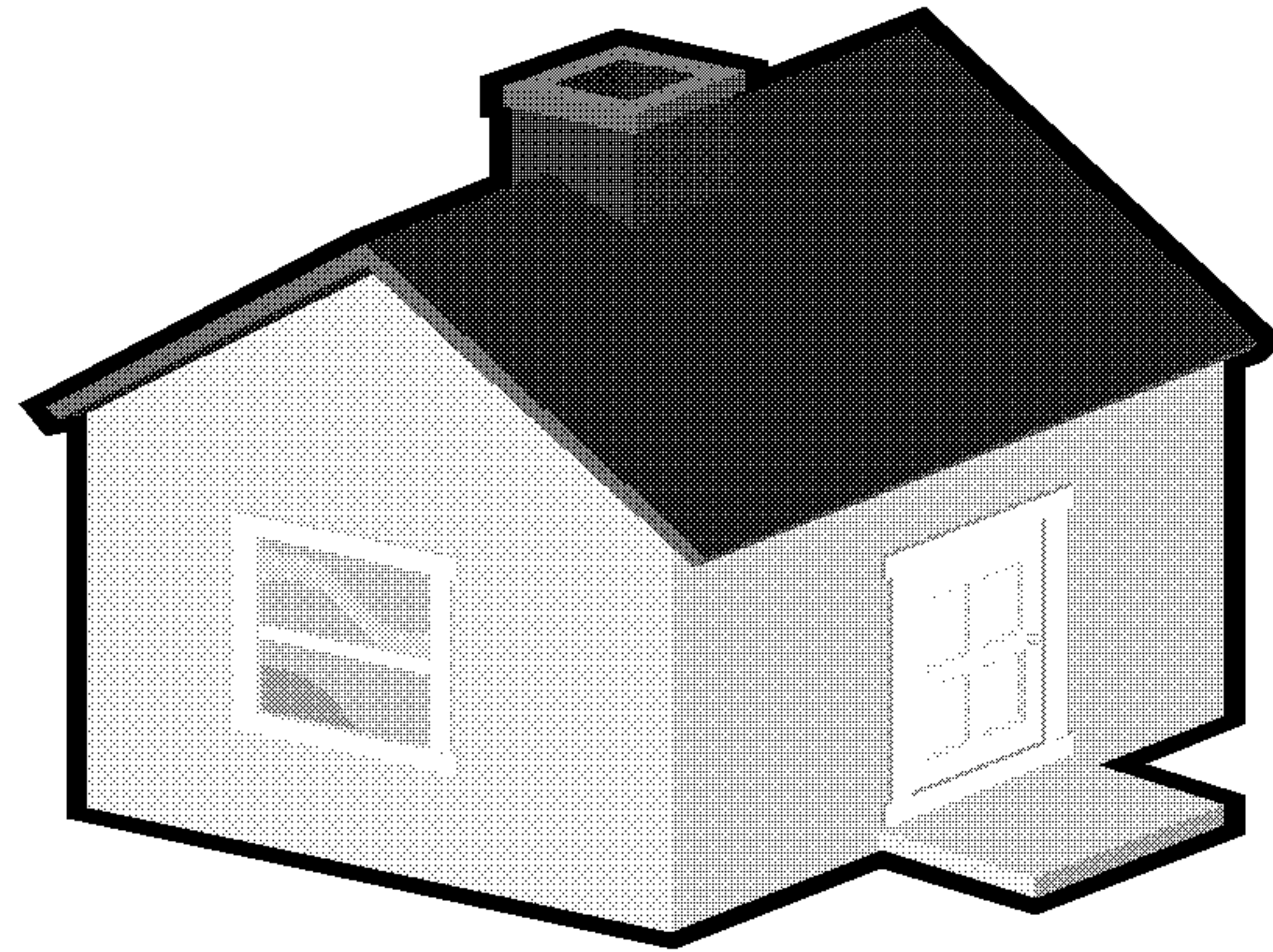
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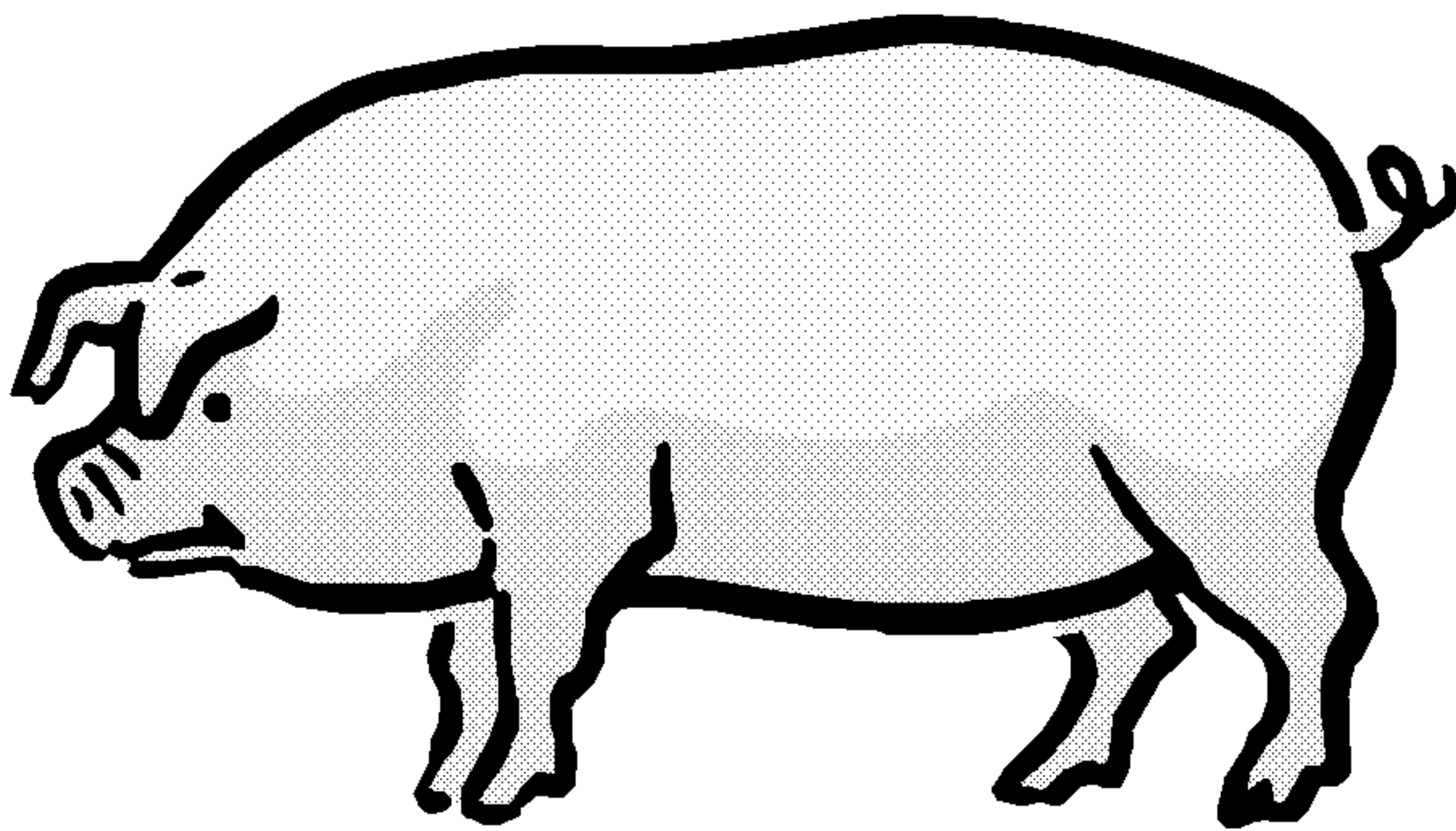
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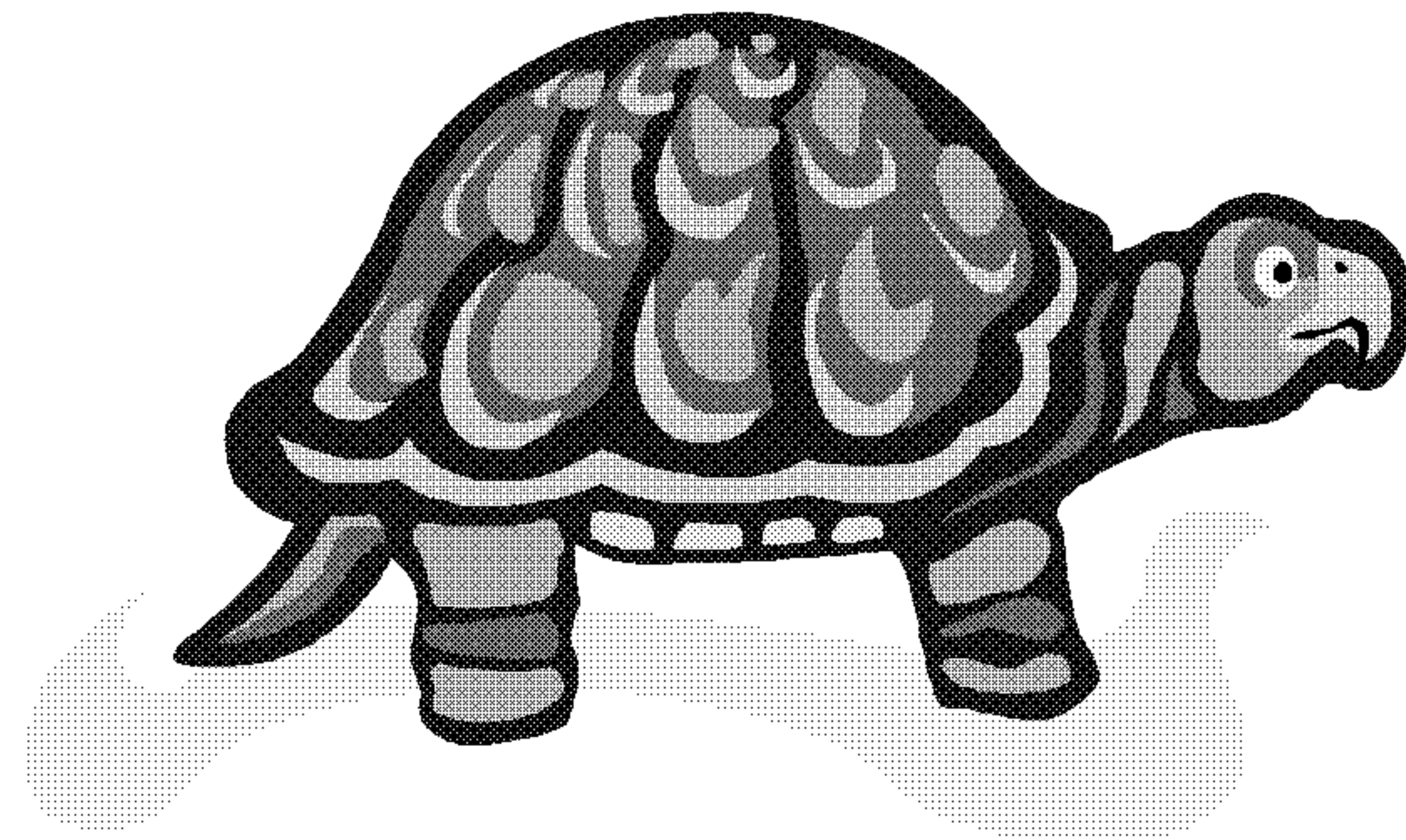
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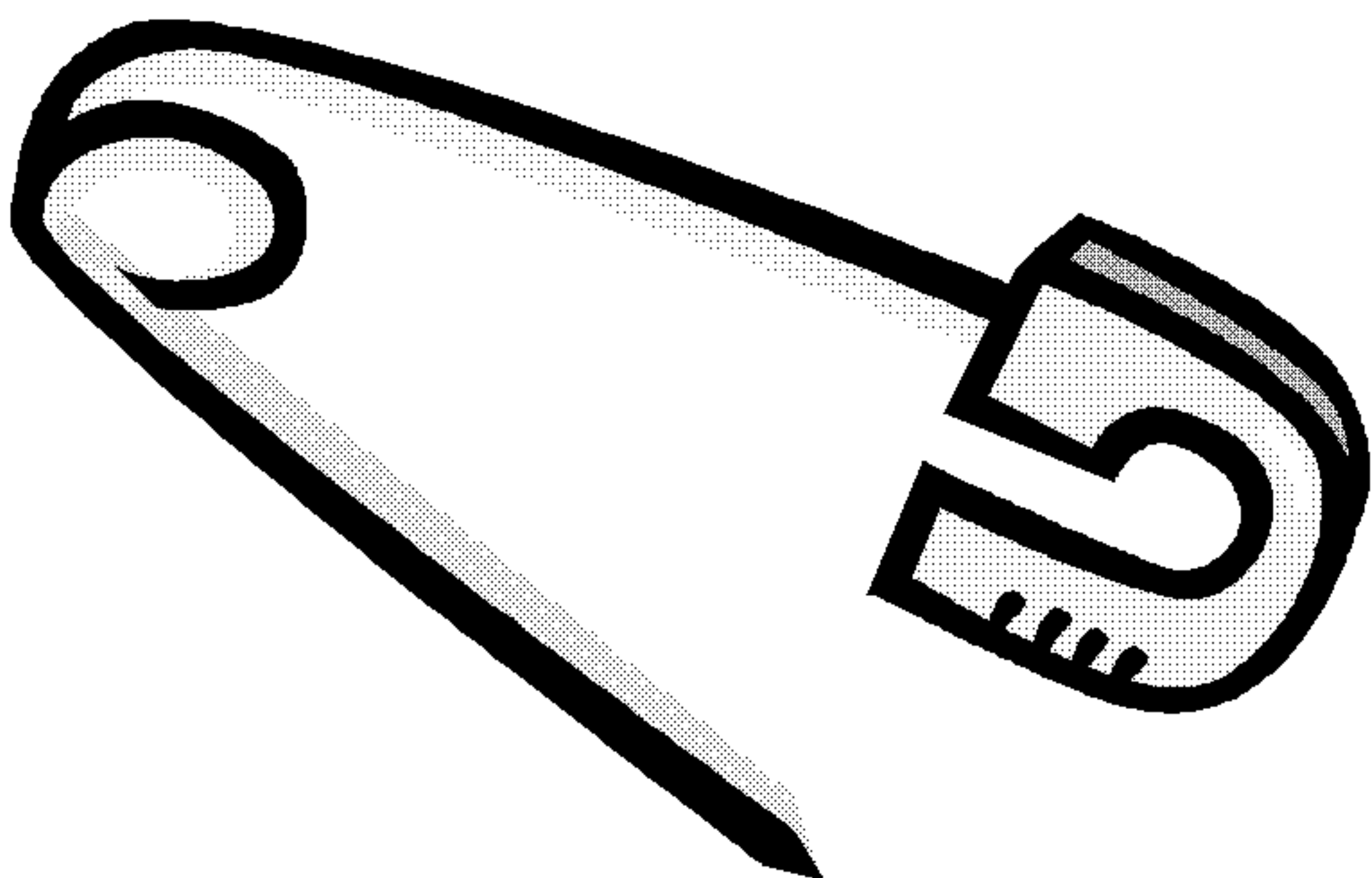
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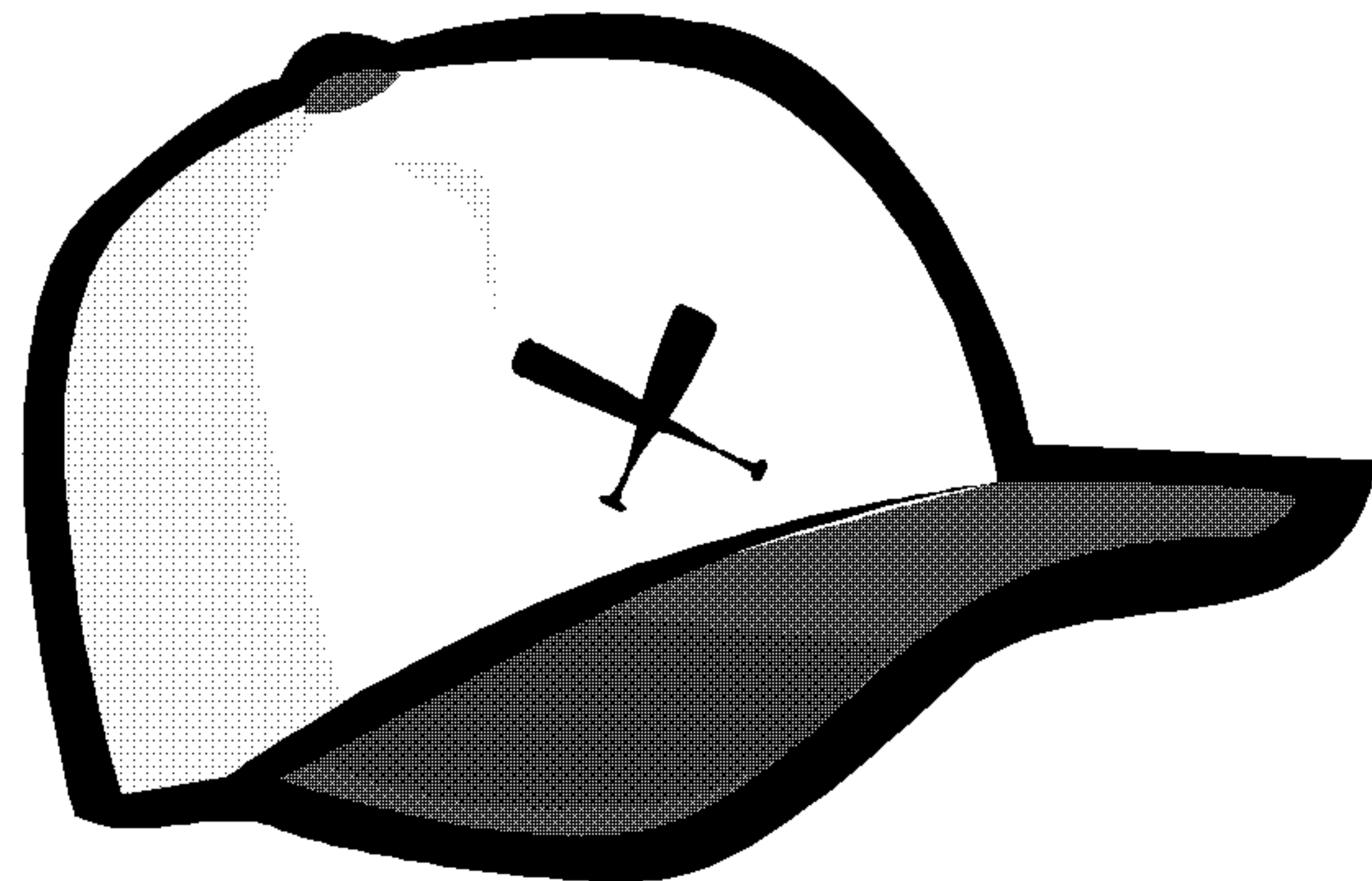
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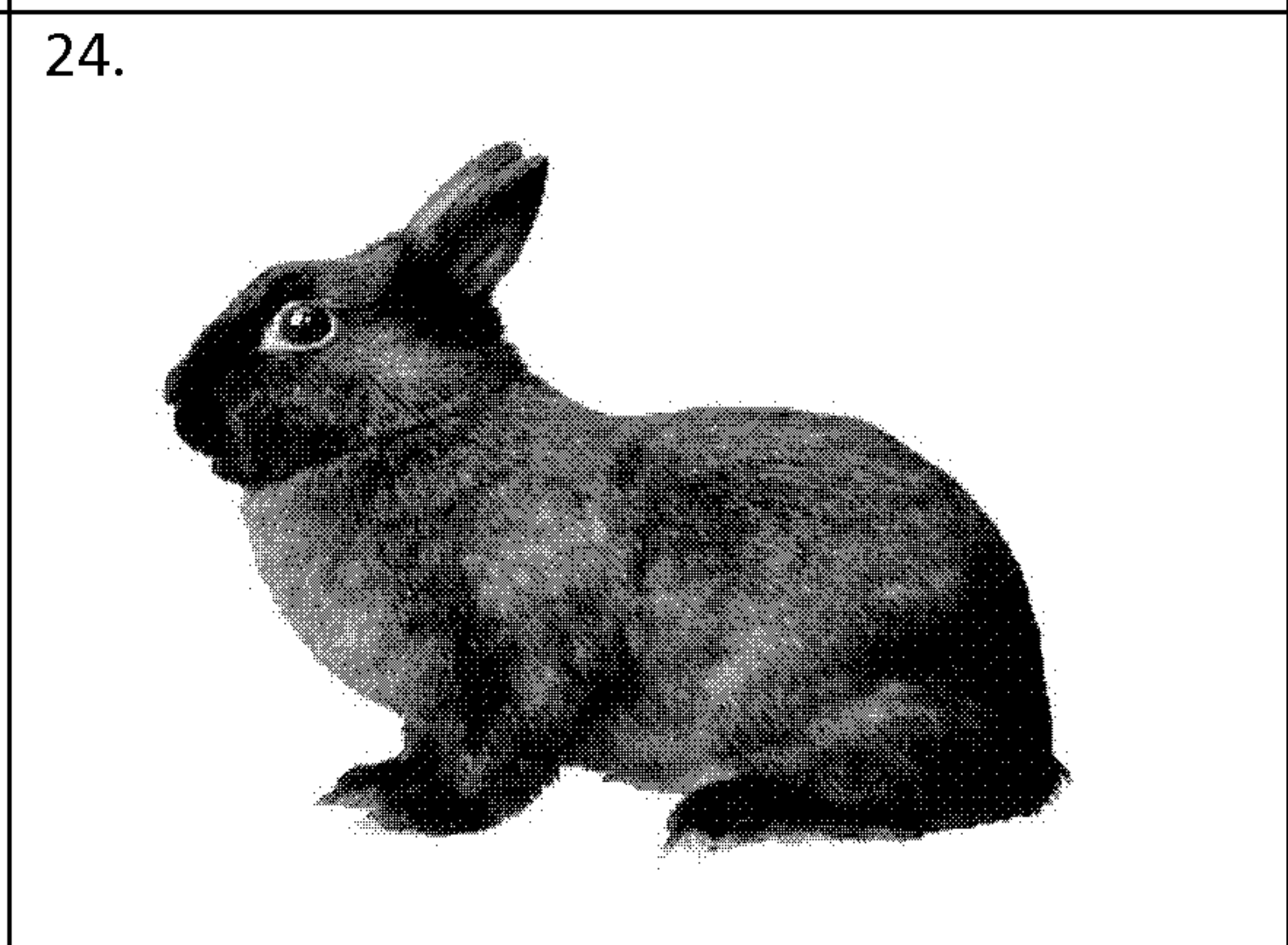
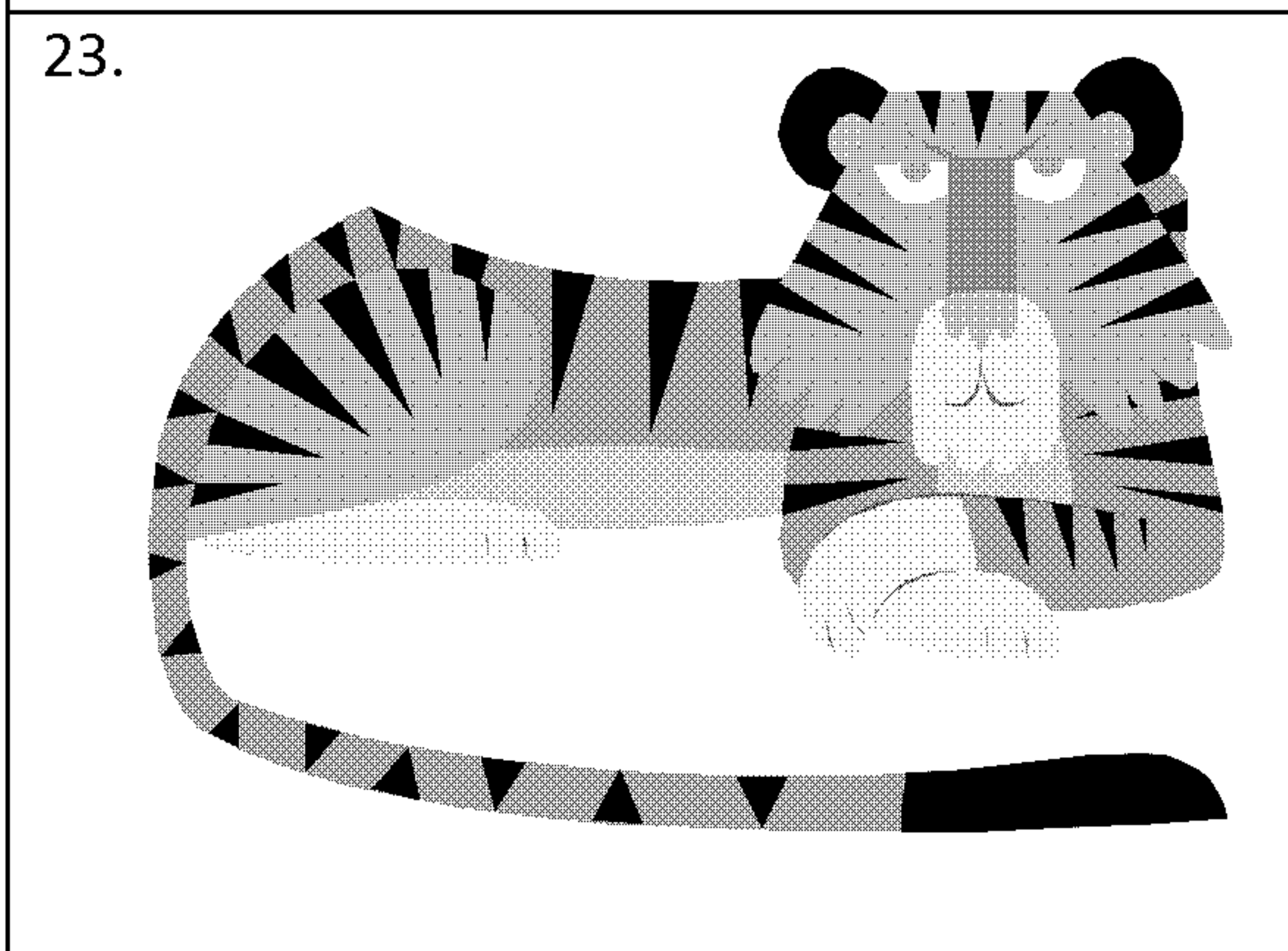
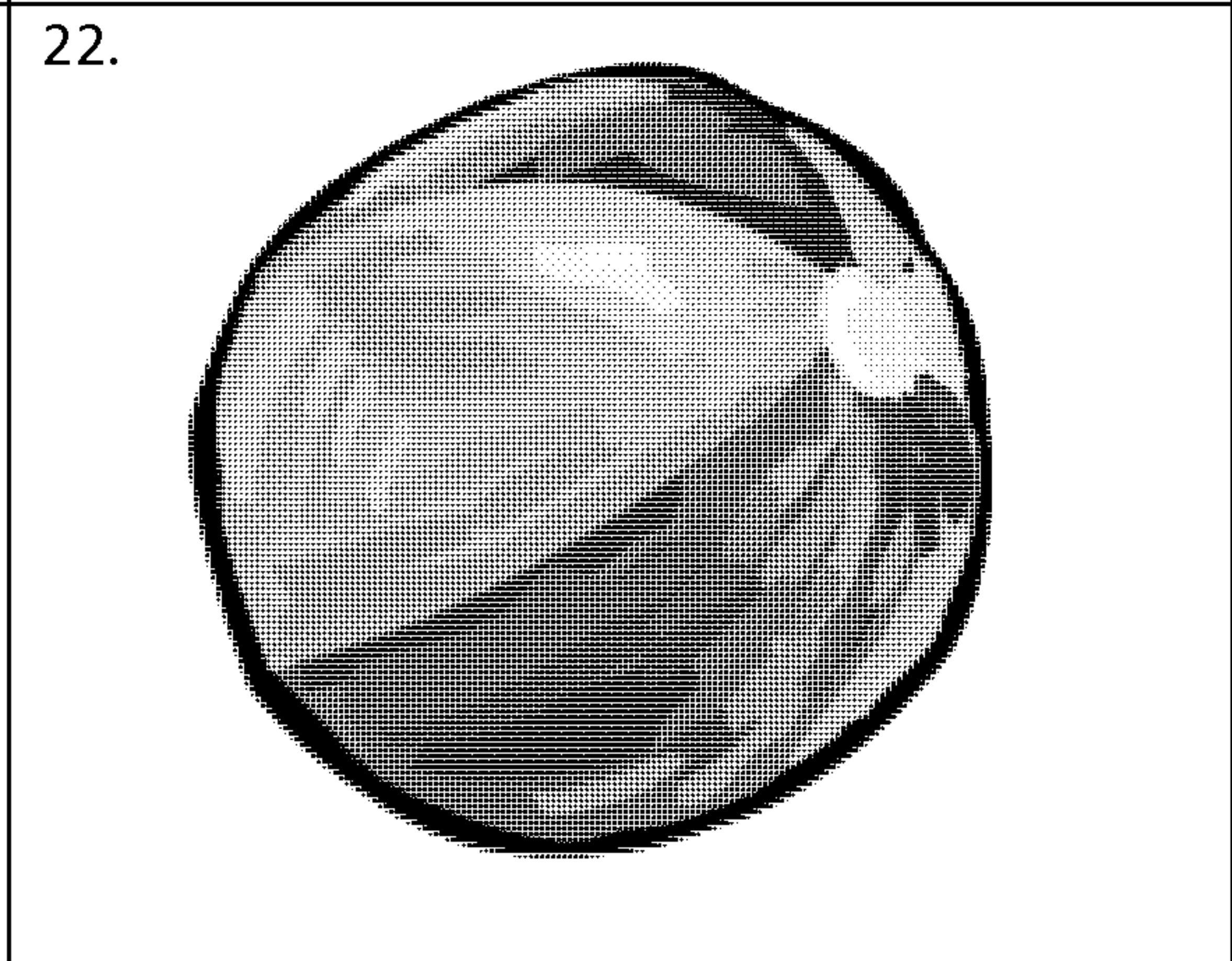
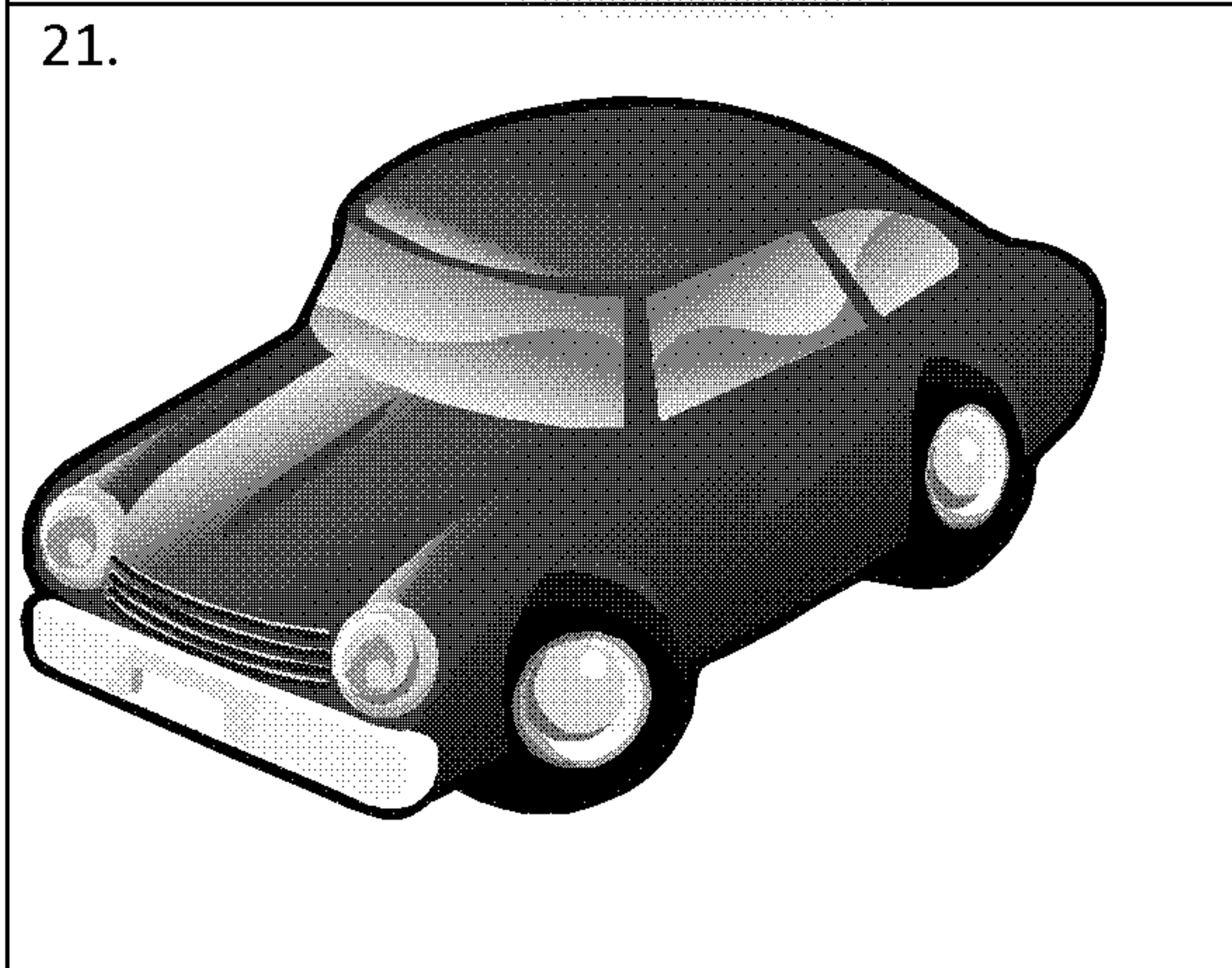
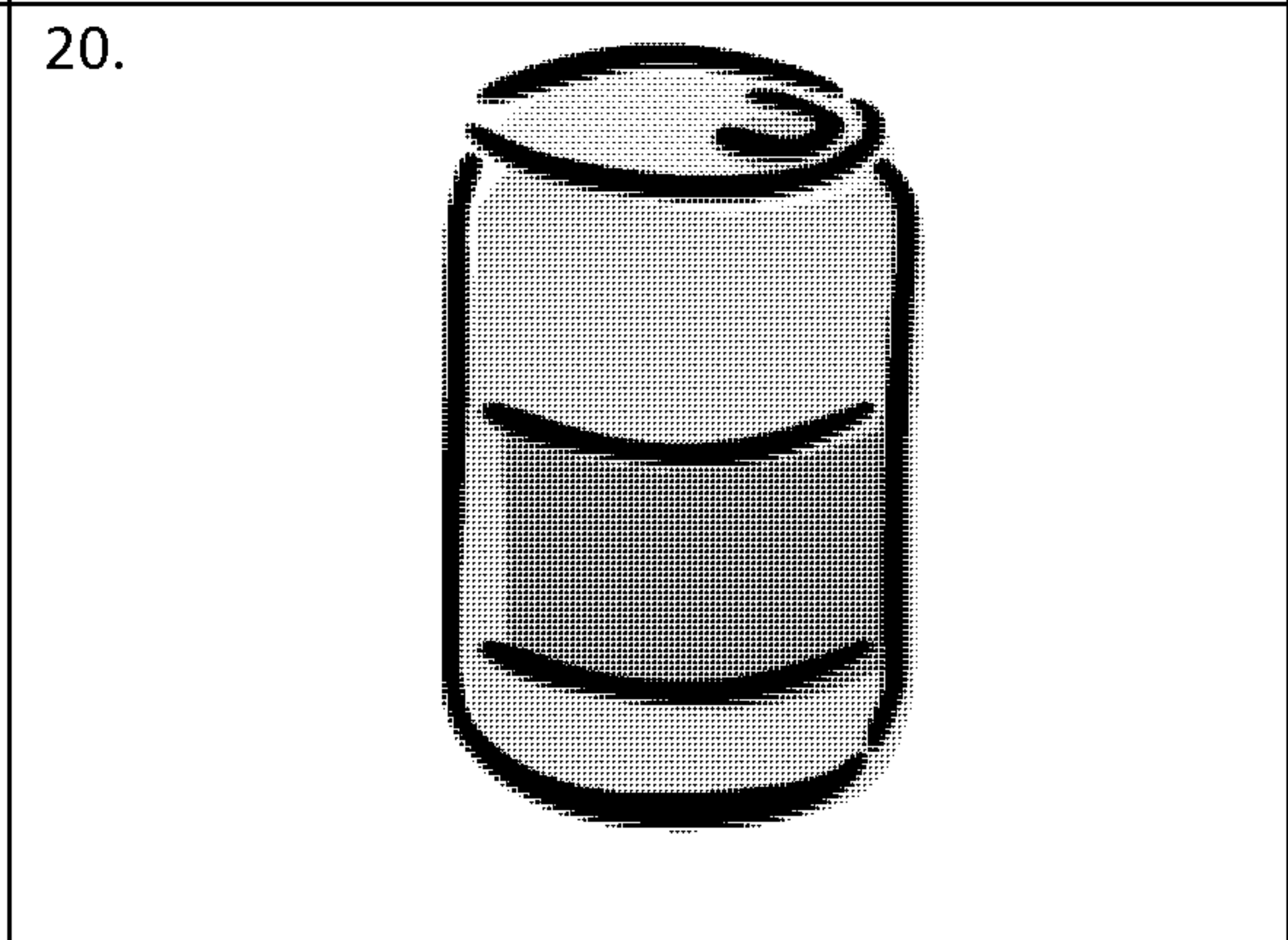
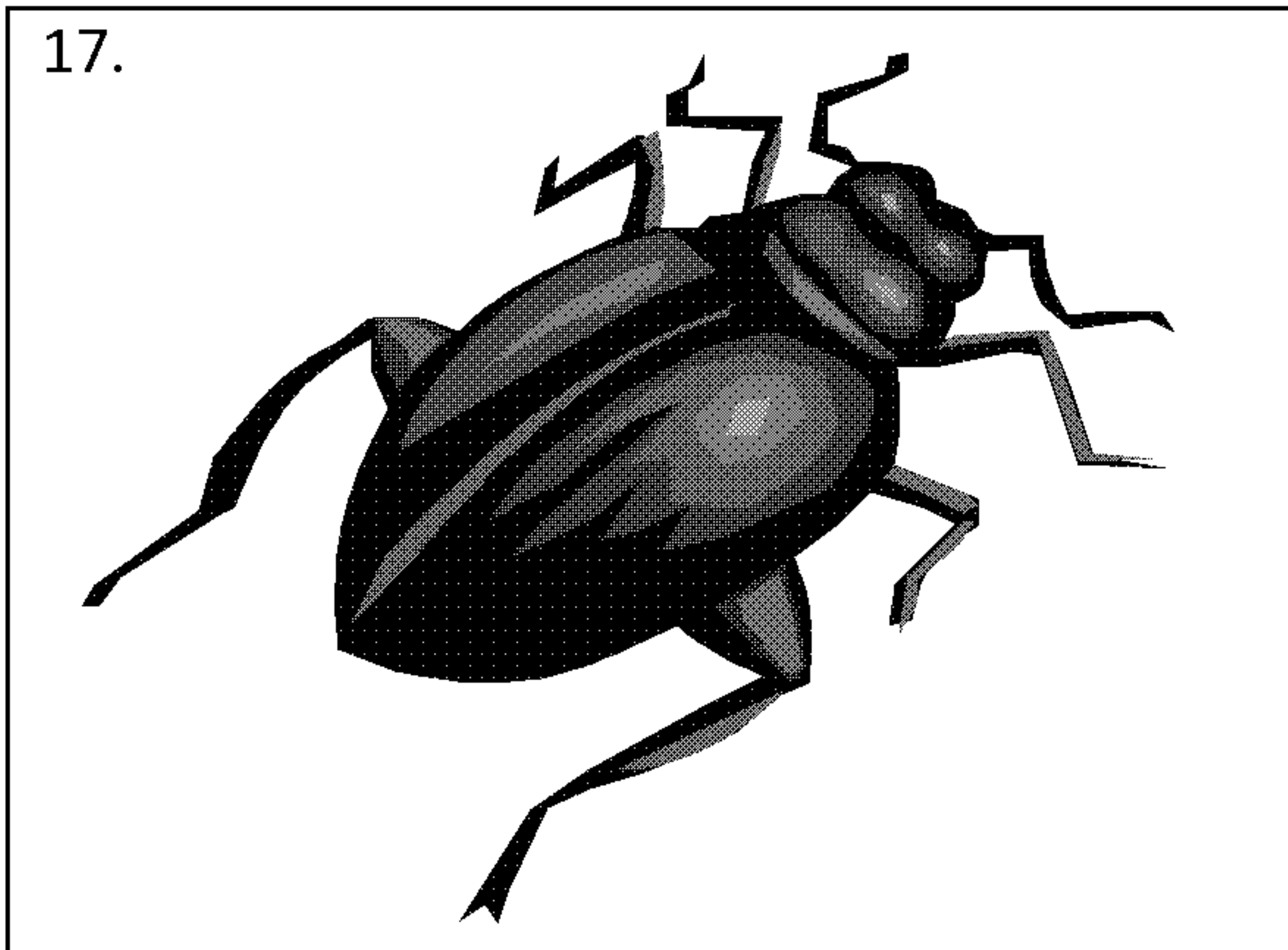


15.



16.





Records of Child's Oral Reading: Running Records

Purpose of a Running Record is to:

- Collect information to make critical **instructional decisions** about the child. *“This kind of information allows teachers to prompt, support and challenge individual learners. The records allow teachers to describe how children are working on a text.”*
- To assess the child's ability to read continuous text (decode print and construct meaning) at specific levels of difficulty.
- To record the child's oral reading for analysis of skills/strategies and for documentation of growth over time which will allow the teacher to *“plot a path of progress.”*
- To determine reading skills/strategies the child uses and neglects to decode print and construct meaning from text.

Setting:

- The teacher and student should sit beside each other in a quiet location at a table in a relaxing environment.
- The teacher explains to the student that for the next few minutes the student will read as the teacher takes notes.

Materials:

- Unfamiliar/unseen text that is at the child's instructional level. These texts should be kept **secure** and used for assessment purposes only. These texts may be selected using information from previous year's teacher, during the year as formative assessments are conducted, anecdotal records and observations during guided reading instruction.
 - **Secure** is defined as: To make certain, to guarantee, to ensureTo get possession of; acquire
 - **Secured texts are used for assessment only and not for reading instruction, general checkout, school library or leveled book rooms.**
- Running Record Recording Form on which teacher records child's oral reading noting correct responses and errors. Ideally a teacher should be able to use a blank sheet of paper to take a running record as the child progresses through the text.

Guidelines for Administration:

- Read the scripted introductory statement and allow the child to look through the book. (Introductory statement provides a frame for the child to draw on prior knowledge and experiences and to recognize characters, events and unfamiliar concepts.)
- Ask the child to read orally. Child reads entire text or selected portion of the text. A Running Record is taken on at least 100 running words.
- If the child stops at a word, wait about **3 seconds** ask the child to “Try it”. If the child is unable to continue, tell the child the word.
- Running Records should be started at level A when students are beginning to read.
- Teachers should assess students on an interim basis 2 times during the school year and administer a summative assessment at the end of a school year. Formative running records should be administered on a weekly/daily basis depending on the needs of each individual student.
- *Teachers should learn to take Running Records in ways that will allow them to use this technique with standard administration, recording, and interpretation.”*

Important Note:

The teacher must be very careful not to teach, point to text or give any prompts to the student that would interfere with the authenticity of the running record process. The teacher should sit back and offer no assistance.

Recording System

Information on Running Record Results:

- Complete the summary portion at the top of the Running Record Recording Form.
- Code each response by the child as s/he reads.
- Note and count each error and self-correction by totaling the correct number and recording it in the errors (**E**) and self-correction (**SC**) columns of the Running Record Recording Form.
- Analyze each error and self-correction to note the cues used by asking the following questions.
 - **Meaning (M):** Did the error make sense?
 - **Syntax (S):** Did the error sound like language?
 - **Visual (V):** Did it look and sound right?
- Coding goes in the column to the far right of the Running Record Form. Teachers list **MSV** and circle the correct code as you analyze each cueing system.
- Note the total number of words read, the total number of errors and the total number of self-corrections.
- Note patterns in the cues in the errors and the self-corrections.
- Compute the **ERROR RATE** (the error rate compares the number of errors with the total number of running words in the text.)
 - **ERROR RATE** is the number of incorrect responses read by the student during the oral reading.
 - **ERROR RATE** is calculated by taking the number of running words and dividing them by the number of errors and convert into a ratio.
 - **Example: 150 running words in the text:
10 errors read by the child.
Divide 150 by 10 will equal 15. $\frac{150}{10} = 15$**
 - **The ratio would be 1:15**
 - **Find 1: 15 on the Conversion Chart and you will have an accuracy rate of 93%.** The accuracy rate is the percentage of words in any text read accurately.
- Compute the **SELF CORRECTION RATE**.
 - Take the number of self corrections and add to the number of errors and divide by the number of self corrections and convert into a ratio.
 - **Example: You have 5 self corrects and 10 errors
Add together: $\frac{5 + 10}{5} = 3$**
 - **The ratio would be 1:3**

CONVENTIONS FOR TAKING A RUNNING RECORD

Record the response of the child on the top and the text on the bottom.

| Reader Behavior | Coding | Error |
|--|--|--|
| 1. Correct Responses | √ | No error |
| 2. Substitutions | Child: Home Text: House | One error |
| 3. Self-Corrections | Child: Home SC Text: House | No error |
| 4. Insertions | Child: here Text - | One error |
| 5. Omissions | Child: - Text: house | One error |
| 6. Child attempts to sound out word (record with lower case letters) | Child: n-o-t Text: not | If the sounding out is followed by a correct response: no error/no self correct If the sounding out is followed by an incorrect response: one error |
| 7. Child spells the word (record with upper case letters) | Child: N-O-T Text: NOT | If the spelling is then followed by a correct response: no error/no self correct If the spelling is then followed by an incorrect response: one error |
| 8. Child repeats or rereads | ← Child: √ come R She came | No error |
| 9. Record all attempts at a word | Child: here h- home Text: house | One error |
| 10. Child stops and cannot proceed. The teacher tells the word | Child: home Text: house (Try it) T | One error |
| 11. Child appeals for help. Suggest the child try it before telling | Child: here A Text: (Try it) T house | One error |

- Errors are anything that a child reads that differs from the actual text when reading and does not correct.
- Proper nouns count as **only one** error throughout the text. *Example: If the word "Pam" occurs throughout the text and the child misses the name each time, it is only counted as **one error**. If the child changes the name "Pam" to "Pat" in the same text it is still counted as **one error**.*
- All other errors count each time a child reads incorrectly. *Example: If the word "big" occurs **five times** in the text and the child misses it each time then the word counts as **five errors**. If the word "big" occurs in the text and the child "appeals," and the teacher tells the child the word it is counted as **one error**. If the word occurs again in the text and the child says the word "big" it is counted as a **correct response**.*

Conversion Table

| Error Rate | Percent Accuracy | Reading Level |
|------------|------------------|---|
| 1:200 | 99.5 | <u>Independent</u> Too few opportunities for teachers to observe children's 'reading work'. |
| 1:100 | 99 | |
| 1:50 | 98 | |
| 1:35 | 97 | |
| 1:25 | 96 | |
| 1:20 | 95 | |
| 1:17 | 94 | <u>Instructional</u> Good opportunities for teachers to observe children's 'reading work'. |
| 1:14 | 93 | |
| 1:12.5 | 92 | |
| 1:11.75 | 91 | |
| 1:10 | 90 | |
| 1:9 | 89 | <u>Frustration</u> The reader tends to lose the support of the meaning of the text. |
| 1:8 | 87.5 | |
| 1:7 | 85.5 | |
| 1:6 | 83 | |
| 1:5 | 80 | |
| 1:4 | 75 | |
| 1:3 | 66 | |
| 1:2 | 50 | |

How to calculate:

Error Rate = $\frac{\text{Running Words (RW)}}{\text{Errors (E)}} = 1:\underline{\quad}$ = % accuracy (see table above)

Example: $\frac{62}{5} = 1:12.4 = 91\%$ accuracy

Self Correction Rate = $\frac{\text{Self Corrects} + \text{Errors}}{\text{Self Corrects}} = 1:\underline{\quad}$

Example: $\frac{5+5=10}{5} = 1:2$ ratio of self corrects to errors

**You do not convert self-corrects to a percentage. Leave them as a ratio.*

RUNNING RECORD RECORDING FORM

Name _____ Date _____

Recorder _____

Book Title _____ Book Level _____

Conversion Table

| Error Rate | % Accuracy |
|---------------|------------|
| 1:200 | 99.5 |
| 1:100 | 99 |
| 1:50 | 98 |
| 1:35 | 97 |
| 1:25 | 96 |
| 1:20 | 95 |
| Easy | |
| 1:17 | 94 |
| 1:14 | 93 |
| 1:12.5 | 92 |
| 1:11.75 | 91 |
| 1:10 | 90 |
| Instructional | |
| 1:9 | 89 |
| 1:8 | 87.5 |
| 1:7 | 85.5 |
| 1:6 | 83 |
| 1:5 | 80 |
| 1:4 | 75 |
| 1:3 | 66 |
| 1:2 | 50 |
| Hard | |

Calculations

| Error Rate | Accuracy | Self-Correction Rate |
|--|--|---|
| <u>Running words</u> Errors e.g. $\frac{150}{15} = 1:10$ | use the Conversion Table 1:10=90% | <u>Errors + Self Corrects</u> Self Corrects e.g. $\frac{15+5}{5} = 1:4$ |

Symbols

| |
|---------------------------------|
| RW = Running Words |
| E = Errors |
| SC = Self-corrections |
| WCPM = Words Correct per Minute |
| M = Meaning |
| S = Structure/Syntax |
| V = Visual |

Scoring:

| | | | | | |
|--------------------------------------|------------------------|--------------------|---------------------|--|----------------------------|
| $\frac{RW}{E} = \frac{\quad}{\quad}$ | Error Rate 1: _____ | Accuracy _____% | SC Rate 1: _____ | Fluency Score $\frac{\quad}{\quad}$ WCPM | Oral Retell Score _____ |
|--------------------------------------|------------------------|--------------------|---------------------|--|----------------------------|

Analysis of Text Reading:

_____ Easy (95%-100%) _____ Instructional (90%-94%) _____ Hard (below 90%)

Use of Cues: _____ Meaning _____ Structure _____ Visual

Use of Strategies: _____ Monitoring _____ Cross-Checking _____ Searching

| Page | Text | Errors | | Cues Used | |
|------|------|--------|----|-----------|----|
| | | E | SC | E | SC |
| | | | | | |

| Page | Text | Errors | | Cues Used | |
|------|------|--------|----|-----------|----|
| | | E | SC | E | SC |
| | | | | | |

Fluency

Purpose of Fluency is to:

- Assess a child's ability to read a text accurately, quickly and with expression.
- Fluency should be assessed on all students using the *Qualitative Fluency Rubric*.
- Students that are reading at a level G or above should be assessed using both the *Qualitative and Quantitative Fluency Rubrics*.

Setting:

- Fluency should be assessed while the student is reading orally during their Running Record at their **instructional level of reading** (90%-94% accuracy).

Materials:

- Qualitative Fluency Rubric
- Quantitative Fluency Rubric (if level G or above)
- Stopwatch (if level G or above)

Guidelines for Administration:

- The teacher should time the student using a stopwatch as the student reads during the Running Record.
- After the student has completed their oral reading, the teacher should:
 - record the amount of time it took the student (in seconds)
 - calculate the WCPM (words correct per minute)
 - record any notes pertaining to fluency
 - apply the Qualitative Fluency Rubric score to their reading

Calculating WCPM:

1. Calculate the words read correctly:

Total words read – errors = words read correctly

Example: **100 words read - 10 errors = 90 words read correctly**

2. Calculate the number of words per minute

Total number of words read correctly ÷ number of seconds X 60 = WCPM

Example: **90 words read correctly ÷ 120 seconds = 75**

.75 x 60 = 45 WCPM

It is important that the teacher looks at both the WCPM and the Qualitative Fluency Rubric. Students reading a typical amount of WCPM should also be reading with appropriate expression and phrasing.

Quantitative Fluency Rubric
Typical WCPM for students in Grades 1-3

| | Beginning of Year | | Middle of Year | | End of Year | |
|------------|-------------------|------|----------------|------|-------------|------|
| Percentile | 75th | 50th | 75th | 50th | 75th | 50th |
| Grade 1 | - | - | 47 | 23 | 82 | 53 |
| Grade 2 | 79 | 51 | 100 | 72 | 117 | 89 |
| Grade 3 | 99 | 71 | 120 | 92 | 137 | 107 |

Adapted from Hasbrouck and Tindal, 2006

Qualitative Fluency Rubric

| Rubric Score | Descriptors | Examples |
|--------------|--|---|
| 1 | <ul style="list-style-type: none"> All reading is done word by word. Long pauses between words. Little evidence of phrasing. Little awareness of punctuation. There may be 2 word phrases, but word groupings are often awkward. | What/ The/ color/ apple/ is/ is/ the/ red. apple. |
| 2 | <ul style="list-style-type: none"> Most reading is done word by word. Some 2 word phrasing. Expressive interpretation may result in longer examples of phrasing. Inconsistent application of punctuation and syntax with rereading for problem solving. | What/ The color is/ apple is/ the/ red. apple. |
| 3 | <ul style="list-style-type: none"> Reading is done as a mixture of word by word reading, fluent reading, and phrased reading. Attention to punctuation and syntax with rereading for problem solving. | What color/ The apple/ is/ is/ the apple? red. |
| 4 | <ul style="list-style-type: none"> Reading is in large, meaningful phrases. Few slow-downs for problem solving of words or to confirm accuracy. Expressive interpretation is evident throughout reading. Attention to punctuation and syntax is present. | What color/ The apple/ is the apple? is red. |

Adapted from Fountas and Pinnell, 1996

If a student receives a fluency rubric score of 1 or 2, at the instructional level the teacher should consider having the child read a text at a lower level and assess fluency. Fluency should become a focus of instruction for students who have difficulty reading fluently at their instructional level.

Oral Retell

Purpose of Oral Retell:

- To assess how well a student approaches a text that they have read.
- To assess a student's ability to retell a text in their own words and to connect the text with other texts or experiences that they have read at their **instructional level (90%-94%)**.

The responses should be recorded by the teacher and then analyzed for:

- main idea
- characters and setting
- sequence of events
- making a connection to other information or personal experiences
- use of precise details
- knowledge of the author's purpose

Setting:

- The teacher and student should sit beside each other in a quiet location at a table in a relaxing environment (after the Running Record is completed).

Materials:

- Instructional level text (used in Running Record)
- Oral Retell Response Form
- Retelling Prompts

Guidelines for Administration:

Oral retell may be **aided or unaided**. An **unaided** retell is when the student provides information about the text **without any prompting** from the teacher. An **aided** retell is when the student provides information about the text **after being prompted** with questions related to the text by the teacher.

Ask the student to tell you about the text. As the student is retelling the story, the teacher will need to:

- record any information provided by the student in the **unaided** portion of the Oral Retell recording form
- prompt the student regarding any information they did not include during the unaided retelling and record it in the **aided** portion of the Oral Retell recording form
- score each portion of the retell using the rubric
- add the rubric score from each portion together to get a Summative Rubric Score
- record the score on the K-2 Literacy folder

A student's score **should not be affected** if the retell is primarily aided, but it should be noted so the teacher can plan instruction. *It is not expected that the teacher records every word the child states as part of their retell, just the key points that will support their rubric score.*

Oral Retell Rubric- Fiction and Nonfiction

This rubric should be used for analyzing each portion of the retell and the overall retell of the text. Please note that students receiving a score of 4 are exceeding expectations and are providing meaningful and extensive insight to the text. It is important to analyze the information provided by the individual student, regardless of text level. Students reading at lower text levels may have strong oral retell skills, while students reading at levels above their grade level may still require support in oral retell development. The assumption should not be made that students reading above grade level are also retelling above grade level. Many of our youngest readers can read at levels well above the levels that they can retell accurately.

A student's instructional reading level should reflect an appropriate accuracy (90%-94%, rate of fluency and retell (total score of 3 or higher).

| Rubric Score | Descriptors |
|---------------|--|
| 1: Unable | <ul style="list-style-type: none">• The student was unable to provide information related to the text. |
| 2: Some | <ul style="list-style-type: none">• The student provided some information related to the text.• The student provided limited details.• Some of the information provided was inaccurate or vague. |
| 3: Sufficient | <ul style="list-style-type: none">• The student provided sufficient information related to the text.• The student provided some precise details.• The information provided was accurate. |
| 4: Exceeds | <ul style="list-style-type: none">• The student provided sufficient information related to the text.• The student provided several precise details with elaboration.• The information provided was accurate and exceeded expectations. |

Oral Retell Student Response Sheet- Fiction Book Levels A-D

Name _____

Date _____

Book Title _____

Book Level _____

| | Unaided Response | Aided Response | Rubric Score |
|--|------------------|----------------|---|
| Setting (Time and Location) | | | 1-unable 2-some 3-sufficient 4-exceeds |
| Character/Object (Using specific names if applicable) | | | 1-unable 2-some 3-sufficient 4-exceeds |
| Events (in sequence) | | | 1-unable 2-some 3-sufficient 4-exceeds |
| Author's Purpose(may be very basic at these levels) | | | 1-unable 2-some 3-sufficient 4-exceeds |
| Connection (text: text, text: self, or text: world) | | | 1-unable 2-some 3-sufficient 4-exceeds |

Summative Rubric:

0-7 Points Level 1
 8-13 Points Level 2
 14-17 Points Level 3
 18-20 Points Level 4

Total Points: _____

Rubric Score: _____

Oral Retell Student Response Sheet- Nonfiction Book Levels A-D

Name _____

Date _____

Book Title _____

Book Level _____

| | Unaided Response | Aided Response | Rubric Score |
|--|-------------------------|-----------------------|---|
| Topic/Main Idea | | | 1-unable 2-some 3-sufficient 4-exceeds |
| Ideas/Key Vocabulary | | | 1-unable 2-some 3-sufficient 4-exceeds |
| Conclusions/ Inferences | | | 1-unable 2-some 3-sufficient 4-exceeds |
| Author's Purpose | | | 1-unable 2-some 3-sufficient 4-exceeds |
| Connection (text: text, text: self, or text: world) | | | 1-unable 2-some 3-sufficient 4-exceeds |

Summative Rubric:

- 0-7 Points Level 1
- 8-13 Points Level 2
- 14-17 Points Level 3
- 18-20 Points Level 4

Total Points: _____

Rubric Score: _____

Oral Retell Student Response Sheet- Fiction Book Levels E-G

Name _____

Date _____

Book Title _____

Book Level _____

| | Unaided Response | Aided Response | Rubric Score |
|--|------------------|----------------|---|
| Setting (Time and Location) | | | 1-unable 2-some 3-sufficient 4-exceeds |
| Character/Object (Using specific names if applicable) | | | 1-unable 2-some 3-sufficient 4-exceeds |
| Character Development | | | 1-unable 2-some 3-sufficient 4-exceeds |
| Plot/Main Idea | | | 1-unable 2-some 3-sufficient 4-exceeds |
| Events (in sequence) | | | 1-unable 2-some 3-sufficient 4-exceeds |
| Author's Purpose | | | 1-unable 2-some 3-sufficient 4-exceeds |
| Connection (text: text, text: self, or text: world) | | | 1-unable 2-some 3-sufficient 4-exceeds |

Summative Rubric:

- 0-11 Points Level 1
- 12-18 Points Level 2
- 19-24 Points Level 3
- 25-28 Points Level 4

Total Points: _____

Rubric Score: _____

Oral Retell Student Response Sheet- Nonfiction Book Levels E and Above

Name _____

Date _____

Book Title _____

Book Level _____

| | Unaided Response | Aided Response | Rubric Score |
|--|-------------------------|-----------------------|---|
| Topic/Main Idea | | | 1-unable 2-some 3-sufficient 4-exceeds |
| Sequence of Steps/Events | | | 1-unable 2-some 3-sufficient 4-exceeds |
| Ideas/Key Vocabulary | | | 1-unable 2-some 3-sufficient 4-exceeds |
| Conclusions/ Inferences | | | 1-unable 2-some 3-sufficient 4-exceeds |
| Author's Purpose | | | 1-unable 2-some 3-sufficient 4-exceeds |
| Connection (text: text, text: self, or text: world) | | | 1-unable 2-some 3-sufficient 4-exceeds |

Summative Rubric:

- 0-8 Points Level 1
- 9-14 Points Level 2
- 15-20 Points Level 3
- 21-24 Points Level 4

Total Points: _____

Rubric Score: _____

Oral Retell Student Response Sheet- Fiction Book Levels H and Above

Name _____

Date _____

Book Title _____

Book Level _____

| | Unaided Response | Aided Response | Rubric Score |
|--|------------------|----------------|---|
| Setting (Time and Location) | | | 1-unable 2-some 3-sufficient 4-exceeds |
| Character Development | | | 1-unable 2-some 3-sufficient 4-exceeds |
| Events (in sequence) | | | 1-unable 2-some 3-sufficient 4-exceeds |
| Problem | | | 1-unable 2-some 3-sufficient 4-exceeds |
| Solution | | | 1-unable 2-some 3-sufficient 4-exceeds |
| Plot/Main Idea | | | 1-unable 2-some 3-sufficient 4-exceeds |
| Author's Purpose | | | 1-unable 2-some 3-sufficient 4-exceeds |
| Connection (text: text, text: self, or text: world) | | | 1-unable 2-some 3-sufficient 4-exceeds |

Summative Rubric:

- 0-12 Points Level 1
- 13-19 Points Level 2
- 20-27 Points Level 3
- 28-32 Points Level 4

Total Points: _____

Rubric Score: _____

Fiction Retelling Prompts

After the student retells the text without teacher assistance, the teacher will need to prompt the student for any information that they did not include in the unaided retelling. The following prompts may be helpful for generating student responses:

| Story Element | Prompt(s) |
|---|--|
| Setting (Time and Location) | <ul style="list-style-type: none"> • Where/when did the story happen? • Where did ____ happen? • When did ____ happen? |
| Character/Object | <ul style="list-style-type: none"> • Can you tell me who the story was about? • What was his/her name? • Who were the characters in the story? |
| Character Development (using characters mentioned by the student) | <ul style="list-style-type: none"> • Can you tell me more about ____? • How did ____ change in the story? • Why do you think ____ did that? |
| Events (in sequence) | <ul style="list-style-type: none"> • What else happened in the story? • When did that happen? • What happened at the beginning /end of the story? • What happened before/after ____? |
| Problem | <ul style="list-style-type: none"> • What was the problem in the story? • What was ____'s main problem? |
| Solution | <ul style="list-style-type: none"> • How did the problem get solved? • What was the solution to the problem in the story? • How did ____ solve his/her problem? |
| Plot | <ul style="list-style-type: none"> • Can you tell me about the story in just a few sentences? |
| Author's Purpose | <ul style="list-style-type: none"> • Why do you think the author wrote this story? • What do you think the author wanted to teach you in this story? • What lesson did you learn from this story? |
| Connection (text: text, text: self, or text: world) | <ul style="list-style-type: none"> • Has anything like this ever happened to you? Tell me about it. • Does this story remind you of something that has happened to you? Tell me about it. • Does this story remind you of another story you have read/heard? Tell me about it. • Did you like this story? Tell me why. |

Teachers may want to laminate and keep these prompts with their assessment materials for quick reference.

Nonfiction Retelling Prompts

After the student retells the text without teacher assistance, the teacher will need to prompt the student for any information that they did not include in the unaided retelling. The following prompts may be helpful for generating student responses:

| Story Element | Prompt(s) |
|---|--|
| Topic/Main Idea | <ul style="list-style-type: none"> • Can you tell me what this book was about? • What was this book mostly about? • What was the main idea of this book? |
| Sequence of Steps/Events | <ul style="list-style-type: none"> • What else happened in the book? • Can you tell me the steps that you read about in the book? • How was the book organized? |
| Ideas/Key Vocabulary | <ul style="list-style-type: none"> • What were the important ideas in the book? • What new ideas/vocabulary did you learn from this book? |
| Conclusions/Inferences | <ul style="list-style-type: none"> • Can you tell me about the book in just a few sentences? • What did you learn from this book? |
| Author's Purpose | <ul style="list-style-type: none"> • Why do you think the author wrote this book? • What do you think the author wanted you to learn from this book? |
| Connection (text: text, text: self, or text: world) | <ul style="list-style-type: none"> • Does this book remind you of another book you have read/heard? Tell me about it. • Did you like this book? Tell me why. |

Teachers may want to laminate and keep these prompts with their assessment materials for quick reference.

Writing about Reading (optional)

Purpose of Writing about Reading:

- To use as an optional assessment after students have completed a Running Record and Oral Retell assessment.
- This assessment should be considered for students that have a difficulty with oral expression.
This assessment should not replace the Oral Retell portion.

Setting:

- At the student's seat or another comfortable writing area in the classroom.

Materials:

- Writing about Reading student form

Guidelines for Administration:

- Complete the Running Record and Oral Retell (instructional level).
- Allow the student to return to their seat (or a quiet place in the classroom) and complete the student form (or a blank sheet of paper).
- Use the rubric to score the sample.
- Attach the sample to the Running Record and Oral Retell forms and place in the students K-2 Literacy Folder.

Writing about Reading Scoring Rubric

| Rubric Score | Descriptors |
|--------------|---|
| 1 | <ul style="list-style-type: none">• The drawing or writing reflects little or no understanding of the text. |
| 2 | <ul style="list-style-type: none">• The drawing or writing reflects some understanding of the text. |
| 3 | <ul style="list-style-type: none">• The drawing or writing reflects sufficient understanding of the text. |
| 4 | <ul style="list-style-type: none">• The drawing or writing reflects understanding of the text beyond grade level expectations |

Writing About Reading (optional)

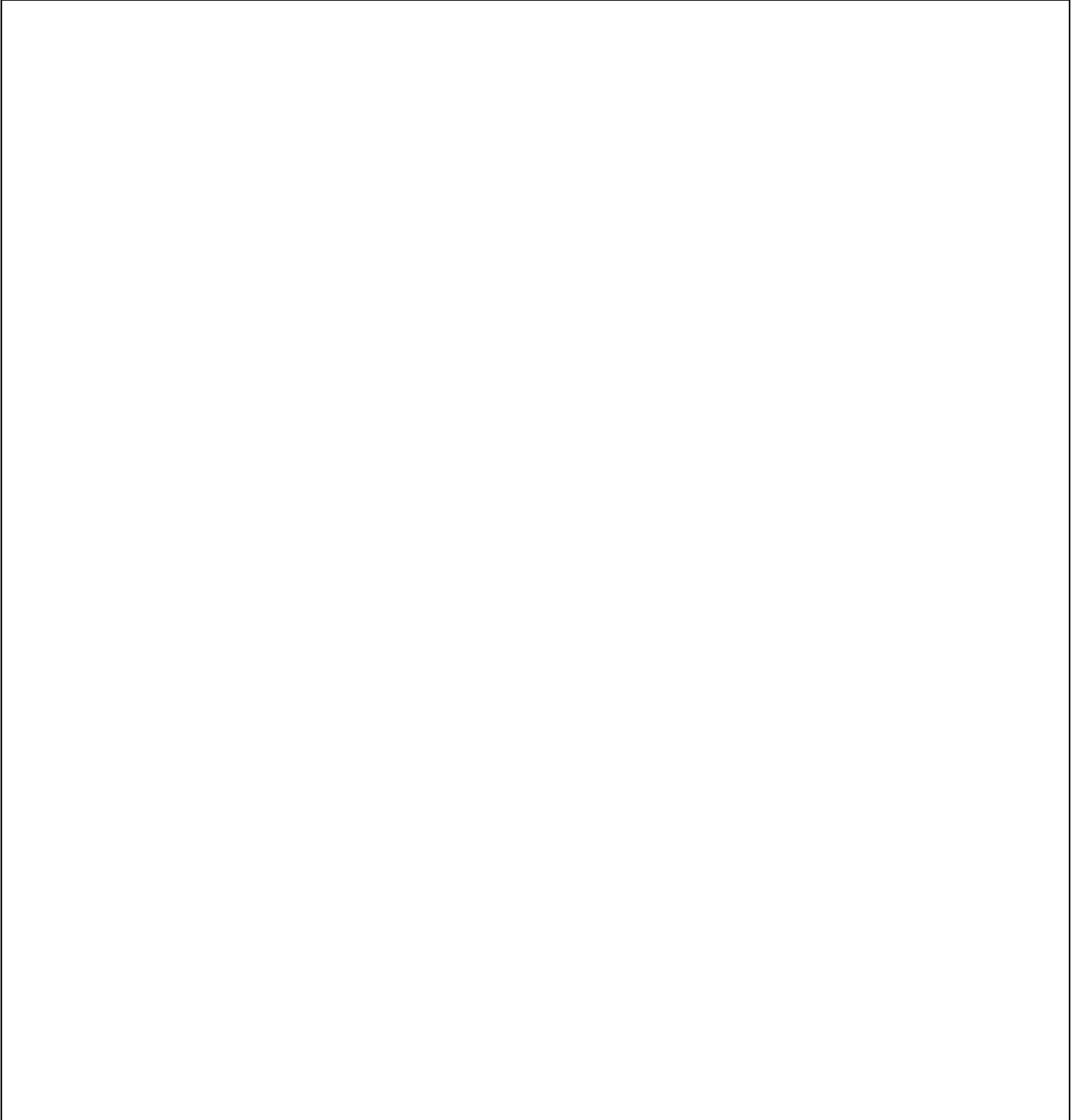
Name _____

Date _____

Book Title _____

Level _____

Draw a picture that shows what you read.



Rubric score: _____

Writing About Reading (optional)


Name _____

Date _____

Book Title _____

Level _____

Draw a picture and write about what you read.



Rubric score: _____

Primary Spelling Inventory

(adapted from Francine Johnston, 7/98)

Purpose of Primary Spelling Inventory:

- To assess the word knowledge students have to bring to the tasks of reading and spelling.

Students are not to study these words. Studying the words would invalidate the purpose of the inventory, which is to find out what they truly know about how words work.

Setting:

- This assessment can be administered to small groups (recommended in K-1) or the whole class.

Materials:

- Sentences for words
- Individual Score Sheet
- Class Composite Sheet
- Blank paper for students

Guidelines for Administration:

- Call out the word and use it in a sentence (just as you would for any spelling test).
- Score each student's assessment and record results on the Individual Score Sheet.
- Record class results on the Class Composite.

The words are ordered in terms of their relative difficulty for children in grades K-5. For this reason you only need to administer the words which sample features your students are likely to master during the year. Below you will find the recommended word count per grade level:

- Kindergarten: the first 5-8 words
- First grade: at least the first 15 words
- Second and Third grade: the entire list.

For those students who are spelling most words correctly in kindergarten and first grade, you may call out additional words.

Scoring:

- Check off or highlight the features for each word which are spelled according to the descriptors at the top.
- Assign 1 point for each feature (some words are scored for some features and not others).
- Add an additional point in the "Word Correct" column for entire words that are spelled correctly.
- Total the number of points **across each word and under each feature.**
- Review the feature columns in order to determine the individual needs of your students.

**If a student does not receive any points for a particular feature, that feature is beyond their instructional level, and the earlier features should be addressed first.*

Sentences for Administration

| Word | Sentence | Word |
|---|---|----------|
| 1. fan | I could use a fan on a hot day. | fan |
| 2. pet | I have a pet cat who likes to play. | pet |
| 3. dig | He will dig a hole in the sand. | dig |
| 4. rob | A raccoon will rob a bird's nest for eggs. | rob |
| 5. hope | I hope you will do well on the test. | hope |
| 6. wait | You will need to wait for the letter. | wait |
| 7. gum | I stepped in some bubble gum . | gum |
| 8. sled | The dog sled was pulled by huskies. | sled |
| <i>You may stop here in kindergarten unless a student has spelled 5 words correct.</i> | | |
| 9. stick | I used a stick to poke in the hole. | stick |
| 10. shine | He rubbed the coin to make it shine . | shine |
| 11. dream | I had a funny dream last night. | dream |
| 12. blade | The blade of the knife was very sharp. | blade |
| 13. coach | The coach called the team off the field. | coach |
| 14. fright | She was a fright in her costume. | fright |
| 15. chewing | Don't talk until you finish chewing your food. | chewing |
| <i>You may stop here in first grade unless a student has spelled 10 words correctly.</i> | | |
| 16. crawl | You will get dirty if you crawl under the bed. | crawl |
| 17. wishes | In fairy tales, wishes often come true. | wishes |
| 18. thorn | The thorn from the rose bush stuck me. | thorn |
| 19. shouted | They shouted at the barking dog. | shouted |
| 20. spoil | The food will spoil if it sits out too long. | spoil |
| 21. growl | The dog will growl if you bother him. | growl |
| 22. third | I was the third person in line. | third |
| 23. camped | We camped down by the river last weekend. | camped |
| 24. tries | He tries hard every day to finish his work. | tries |
| 25. clapping | The audience was clapping after the program. | clapping |
| 26. riding | They are riding their bikes to the park today. | riding |

Primary Spelling Inventory

Individual Score Sheet

Student Name _____

Date _____

| Word | Initial Consonants | Final Consonants | Short Vowels | Digraphs | Blends | Long Vowel Patterns | Other Vowel Patterns | Inflected Endings | Correct Spelling | Total Points |
|--------------|--------------------|------------------|--------------|-----------|------------|---------------------|----------------------|-------------------|------------------|--------------|
| fan | f n | n | a | | | | | | | |
| pet | p t | t | e | | | | | | | |
| dig | d g | g | i | | | | | | | |
| rob | r b | b | o | | | | | | | |
| hope | h p | p | | | | o-e | | | | |
| wait | w t | t | | | | ai | | | | |
| gum | g m | m | u | | | | | | | |
| sled | | | e | | sl | | | | | |
| stick | | | i | | st | | | | | |
| shine | | | | sh | | i-e | | | | |
| dream | | | | | dr | ea | | | | |
| blade | | | | | bl | a-e | | | | |
| coach | | | | -ch | | oa | | | | |
| fright | | | | | fr | igh | | | | |
| chewing | | | | ch | | | ew | -ing | | |
| crawl | | | | | cr | | aw | | | |
| wishes | | | | -sh | | | | -es | | |
| thorn | | | | th | | | or | | | |
| shouted | | | | sh | | | ou | -ed | | |
| spoil | | | | | sp | | oi | | | |
| growl | | | | | gr | | ow | | | |
| third | | | | th | | | ir | | | |
| camped | | | | | -mp | | | -ed | | |
| tries | | | | | tr | | | -ies | | |
| clapping | | | | | cl | | | -pping | | |
| riding | | | | | | | | -ding | | |
| TOTAL | /7 | /7 | /7 | /7 | /11 | /7 | /7 | /7 | | |

Writing Continuum

Writing is an essential tool for learning and communicating. In grades K-2, teachers set the foundation for writers to grow and develop across the different stages of the writing continuum. Students develop as writers by writing. It is important that our students are engaged in writing experiences every day.

The NC K-2 Writing Continuum shows the different stages young writer's progress through as they work their way towards becoming independent writers. Along with the continuum, is an alignment with the five features of writing (focus, organization, support and elaboration, style, conventions). It is important that K-2 students learn the features of writing and how to recognize them in their own pieces.

The NC K-2 Writing Continuum should be used to analyze student writing throughout the year for the purposes of formative, interim/benchmark, and summative assessment. For the purpose of formative assessment, teachers should examine student writing from everyday writing experiences that occur during the writing process. For the purpose of interim/benchmark and summative assessment, teachers should collect a writing sample from students completed during a controlled writing experience. **It is strongly recommended that teachers keep a portfolio of student writing samples throughout the year to document progress over time.**

In a controlled writing experience:

- Students produce a writing sample without teacher assistance.
- The sample should be handwritten by the student, unless the student has modifications per an IEP.
- The teacher should follow typical prewriting procedures that reflect regular classroom writing experiences.
- The teacher should not remove resources such as word walls, word charts, or dictionaries that are used during typical writing experiences.
- The teacher should maintain a positive writing environment.

Assessing Writing Holistically:

Assessing writing should be done carefully. A student's writing often shows characteristics of more than one stage.

- Read through the student's piece of writing.
- Review the rubric and the criteria of each stage.
- Decide which stage the piece best represents based on both content and conventions.
 - There is not a certain number of content or conventions criteria needed for each stage. Each piece should be reviewed in its entirety.
 - Depending on the type of writing or the length of the piece, it may not display every single characteristic of a particular stage, but the characteristics that are present will be most representative of a particular stage.
 - For example, if looking at a piece of writing it may have several characteristics of an Early Developing writer, but does not have a drawing and does not include punctuation other than periods and contains just 2 words where the writer used a capital letter in the middle rather than a lowercase letter. This piece should still be considered an Early Developing piece because what it does include fits best into that stage and there was only 1 small area that had characteristics of an Emergent writer.
- After students have completed interim and summative writing samples, the teacher needs to analyze them and record the students writing stage on the K-2 Literacy folder.

North Carolina K-2 Writing Continuum

PREWRITING

- Relies primarily on drawings to convey meaning.
- Uses random numbers and letters to represent words.
- Tells about own drawing and writing.

EARLY EMERGENT

- Uses drawing and words to convey meaning.
- Copies words, names, and labels from environment.
- Uses mostly beginning and ending consonants to spell words.
- Uses upper and lowercase letters indiscriminately.
- Pretends to read own writing.

EMERGENT

- Establishes a relationship between drawing and print.
- Adds details to drawing.
- Writes 1 or 2 sentences focused on a topic.
- Writes in the way one would speak.
- Writes left to right and top to bottom.
- Uses upper and lowercase letters indiscriminately.
- Uses spacing between words inconsistently.
- Spells names and familiar words correctly.
- Uses temporary spelling.
- Begins to read own writing.

EARLY DEVELOPING

- Relates drawings and writing to create a more meaningful text.
- Drawings show a sequence of events.
- Writes a few short, patterned, repetitive sentences focused on a topic.
- Writes about familiar topics and experiences.
- Shows evidence of using language from books.
- Writes left to right across several lines.
- Uses spacing between words consistently.
- Spells simple words and some high frequency words correctly.
- Uses temporary spelling with some phonetic elements.
- Uses capital letters for names and the beginning of sentences.
- Uses periods correctly.
- Uses question marks and exclamation points inconsistently.
- Reads own writing with fluency.

DEVELOPING

- Uses drawings to enhance meaning of writing.
- Writes several sentences about a topic.
- Writes in complete sentences.
- Writes in a logical sequence.
- Uses list-like details and descriptive language.
- Uses vocabulary appropriate for the topic.
- Spells many high frequency words correctly.
- Uses temporary spelling that can generally be read by others and is moving toward conventional spelling.
- Uses capital letters and end punctuation correctly and consistently.
- Begins to write with a sense of audience.

EARLY INDEPENDENT

- Writes a series of related ideas in an organized, logical sequence.
- Writes stories with a clear beginning, middle, and end.
- Uses varied sentence patterns and lengths.
- Enhances ideas using details and descriptive language.
- Begins to use elaboration to support details.
- Uses alternatives for commonly used words to enhance the text.
- Spells most high frequency words correctly.
- Uses a variety of spelling strategies to spell unfamiliar words.
- Uses more conventional than temporary spelling.
- Uses commas and apostrophes correctly.
- Begins to write with a sense of audience.
- Uses paragraphs inconsistently.

INDEPENDENT

- Maintains a clear focus throughout the text.
- Connects ideas smoothly and logically.
- Uses varied sentence patterns and lengths that develop and extend the topic.
- Uses language and details that create a vivid mental picture.
- Uses elaboration to support details that is related to the topic.
- Uses a variety of resources to spell unfamiliar words.
- Spells most words correctly.
- Experiments with dialogue to enhance writing.
- Writes with standard punctuation, capitalization, and grammar.
- Writes with a sense of audience.
- Uses paragraphs correctly.

NC K-2 Writing Continuum and the Features of Writing

| | PREWRITING | EARLY EMERGENT | EMERGENT | EARLY DEVELOPING | DEVELOPING | EARLY INDEPENDENT | INDEPENDENT |
|----------------------------------|---|--|---|---|---|---|---|
| FOCUS | ✓ Relies primarily on drawings to convey meaning. | ✓ Uses drawings and words to convey meaning. | ✓ Established a relationship between picture and print. ✓ Writes 1 or 2 sentences focused on a single topic. | ✓ Writes about familiar topics and experiences. ✓ Drawings show a sequence of events. ✓ Writes a few short, patterned, repetitive sentences focused on a topic. | ✓ Writes several sentences about a topic. ✓ Writes in complete sentences. ✓ Writes in a logical sequence. | ✓ Writes a series of related ideas in an organized, logical sequence. ✓ Writes stories with a clear beginning, middle, and end. | ✓ Maintains a clear focus throughout the text. ✓ Connects ideas smoothly and logically. |
| ORGANIZATION | | | | | | | |
| SUPPORT & ELABORATION | | | ✓ Adds details to drawings. | ✓ Relates drawings and writing to create a more meaningful text. | ✓ Uses drawings to enhance meaning of writing. ✓ Uses list-like details and some descriptive language. | ✓ Enhances ideas using details and descriptive language. ✓ Begins to use elaboration to support details. | ✓ Uses language and details that create a vivid mental picture. ✓ Uses elaboration to support details that is related to the topic. |
| STYLE | ✓ Tells about own writing. | ✓ Pretends to read own writing. | ✓ Writes in the way one would speak. ✓ Begins to read own writing. | ✓ Shows evidence of using language from books. ✓ Reads own writing with fluency. | ✓ Uses vocabulary appropriate to the topic. ✓ Begins to write with a sense of audience. | ✓ Uses varied sentence patterns and lengths. ✓ Uses alternatives for commonly used words to enhance the text. ✓ Begins to write with a sense of audience. | ✓ Uses varied sentence patterns and lengths that develop and extend the topic. ✓ Writes with a sense of audience. |
| CONVENTIONS | ✓ Uses random numbers and letters to represent words. | ✓ Copies words, names, and labels from environment. ✓ Uses mostly beginning and ending consonants to spell words. ✓ Uses upper and lowercase letters indiscriminately. | ✓ Writes left to right and top to bottom. ✓ Uses upper and lowercase letters indiscriminately. ✓ Uses spacing between words inconsistently. ✓ Spells names and familiar words correctly. ✓ Uses temporary spelling. | ✓ Writes left to right across several lines. ✓ Uses spacing between words consistently. ✓ Spells simple words and some high frequency words correctly. ✓ Uses temporary spelling with some phonetic elements. ✓ Uses capital letters for names and the beginning of sentences. ✓ Uses periods correctly. ✓ Uses question marks and exclamation points inconsistently. | ✓ Spells many high frequency words correctly. ✓ Uses temporary spelling that can generally be read by others and is moving toward conventional spelling. ✓ Uses capital letters and end punctuation correctly and consistently. | ✓ Spells most high frequency words correctly. ✓ Uses a variety of spelling strategies to spell unfamiliar words. ✓ Uses more conventional than temporary spelling. ✓ Uses commas and apostrophes correctly. ✓ Uses paragraphs inconsistently. | ✓ Uses a variety of resources to spell unfamiliar words. ✓ Spells most words correctly. ✓ Experiments with dialogue to enhance writing. ✓ Writes with standard punctuation, capitalization, and grammar. ✓ Uses paragraphs correctly. |

FEATURES

Addendum

Book Level Equivalence Chart
Based on Fountas and Pinnell

| Reading Level | Grade | Text Level | Basal Level | Reading Recovery |
|---------------|----------------------------|------------|-------------|------------------|
| Emergent | Kindergarten/ Grade One | A | Readiness | 1 |
| Early | Kindergarten/ Grade One | B | | 2 |
| Early | Kindergarten/ Grade One | C | PP1 | 3/4 |
| Early | Grade One | D | PP2 | 5/6 |
| Early | Grade One | E | PP3 | 7/8 |
| Early | Grade One | F | Primer | 9/10 |
| Early | Grade One | G | | 11/12 |
| Early Fluent | Grade One/Two | H | Grade One | 13/14 |
| Early Fluent | Grade One/Two | I | | 15/16/17 |
| Early Fluent | Grade Two | J | Grade Two | 18/19/20 |
| Early Fluent | Grade Two | K | | |
| Early Fluent | Grade Two/Three | L | | |
| Fluent | Grade Two/Three | M | | |
| Fluent | Grade Two/Three | N | Grade Three | |
| Fluent | Grade Three/Four | O | | |
| Fluent | Grade Three/Four | P | | |
| Fluent | Grade Four | Q | Grade Four | |
| Fluent | Grade Four | R | | |
| Advanced | Grade Four/Five | S | | |
| Advanced | Grade Four/Five | T | | |
| Advanced | Grade Five | U | | |
| Advanced | Grade Five/Six | V | | |
| Advanced | Grade Five/Six | W | | |
| Advanced | Grade Six/Seven/Eight | XYZ | | |

Directions for putting the “No Sandwich” book together:

(adapted from *Observation Survey* by Marie Clay)

1. Print front cover and dedication page front to back.
2. Print title page and page 2 front to back.
3. Print page 3 and page 4 front to back.
4. Print page 5 and page 6 front to back.
5. Print page 7 and page 8 front to back.
6. Print page 9 and page 10 front to back.
7. Print page 11 and page 12 front to back.
8. Print page 13 and page 14 front to back.
9. Print page 15 and page 16 front to back.
10. Print page 17 and page 18 front to back.
11. And finally page 19 and page 20 front to back.

Note: the odd pages are the picture pages and are not numbered.

We bound the book together using a very small plastic ring binding and printed on medium weight card stock. We did not laminate our demonstration book before binding it together, but you can laminate yours for extra protection.

Phonemic Awareness cards

1. map
2. rug
3. man
4. cat
5. apple
6. horse
7. fox
8. bed
9. boat
10. fish
11. pie
12. house
13. pig
14. turtle
15. pin
16. hat
17. bug
18. cup
19. star
20. can
21. car
22. ball
23. tiger
24. rabbit

Guidelines for Using Picture Cards for Phonemic Awareness Assessment

The picture cards may be used for tasks 4 and 11 only.

- Show the student the picture card and say the word.
- Place the card in front of the student.
- Show them the corresponding cards, saying the word as you place in each in front of them.

Task 4:

Orally identifies words that begin the same.

Teacher: “Listen while I say a word: turtle. Place the card with the turtle picture in front of the student. What word begins the same as turtle: rabbit (place the card with the rabbit in front of the student, next to the first card), or tiger (place the card with the tiger in front of the student, next to the other cards)?” Allow the student to answer.

Teacher: “Turtle and tiger both begin with a /t/.”

Teacher: “Now we will do some more just like this.” Continue on to the assessed items.

Check in the box for the correct response. Record the child’s response if it is incorrect.

Task 11:

Orally identifies words that end the same.

Teacher: “Listen while I say a word: man. Place the card with the man picture in front of the student. What word ends the same as man: apple (place the card with the apple in front of the student, next to the first card), or can (place the card with the can in front of the student, next to the other cards)?” Allow the student to answer.

Teacher: “Man and can both end with a /n/.”

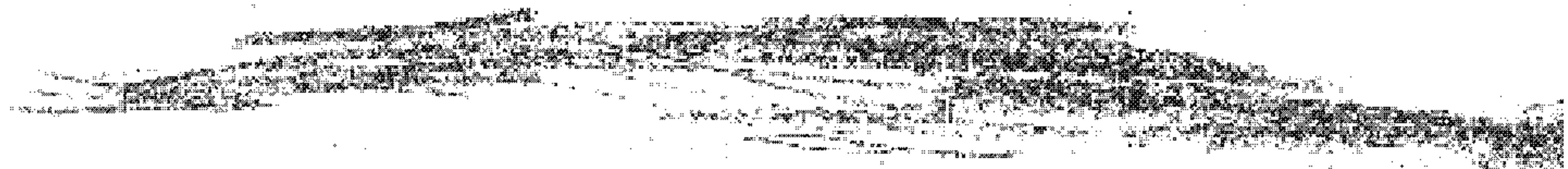
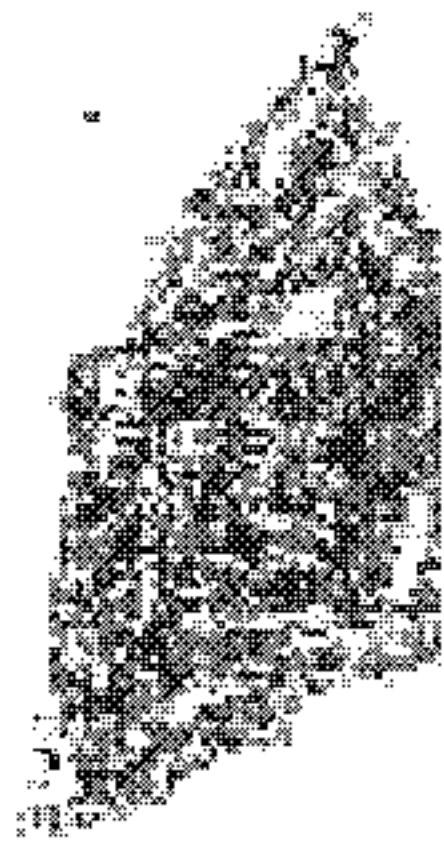
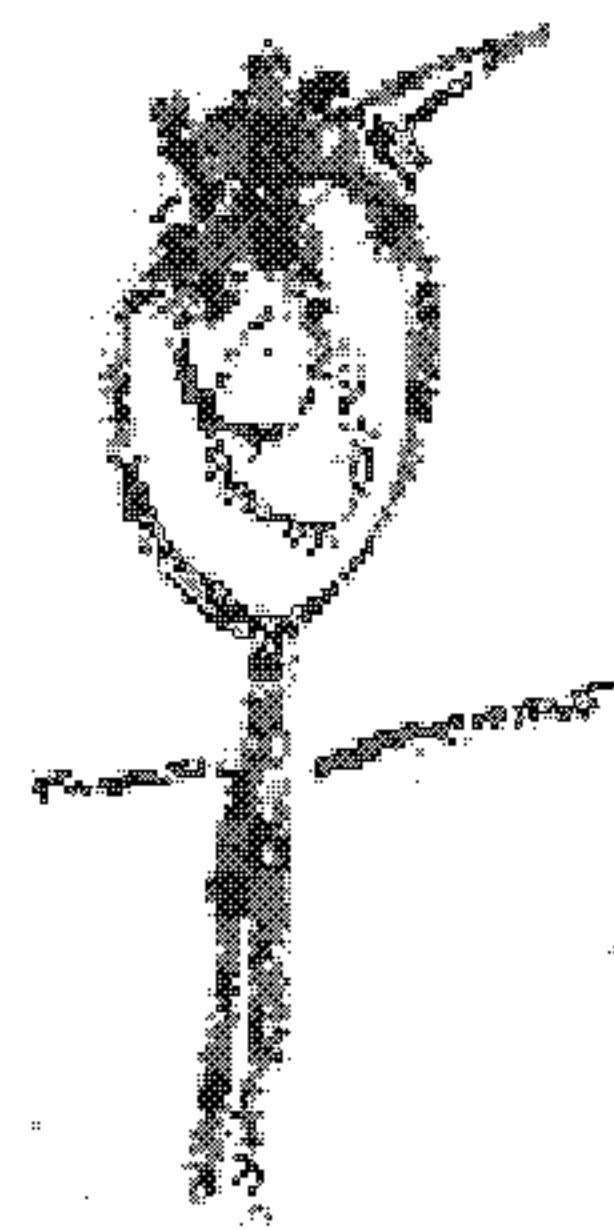
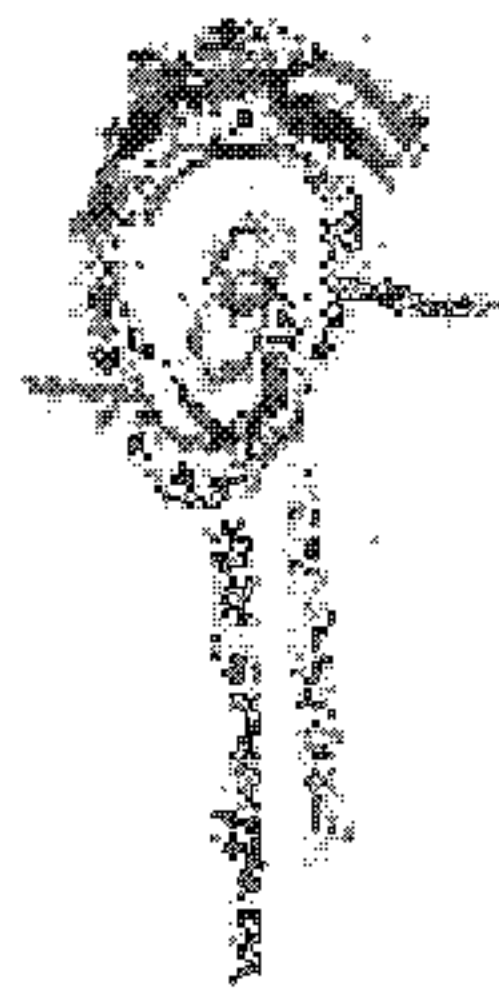
Teacher: “Now we will do some more just like this.” Continue on to the assessed items.

Check in the box for correct response. Record the child’s response if it is incorrect.

Sample 1: Prewriting

The writer relies primarily on drawings to convey meaning. There are a few strings of random letters and numbers, some of which are backwards to represent words. There is a large period after the string of letters.

ETH AN OPIY Z-7
OHBONAF
OX.



Sample 2: Early Emergent

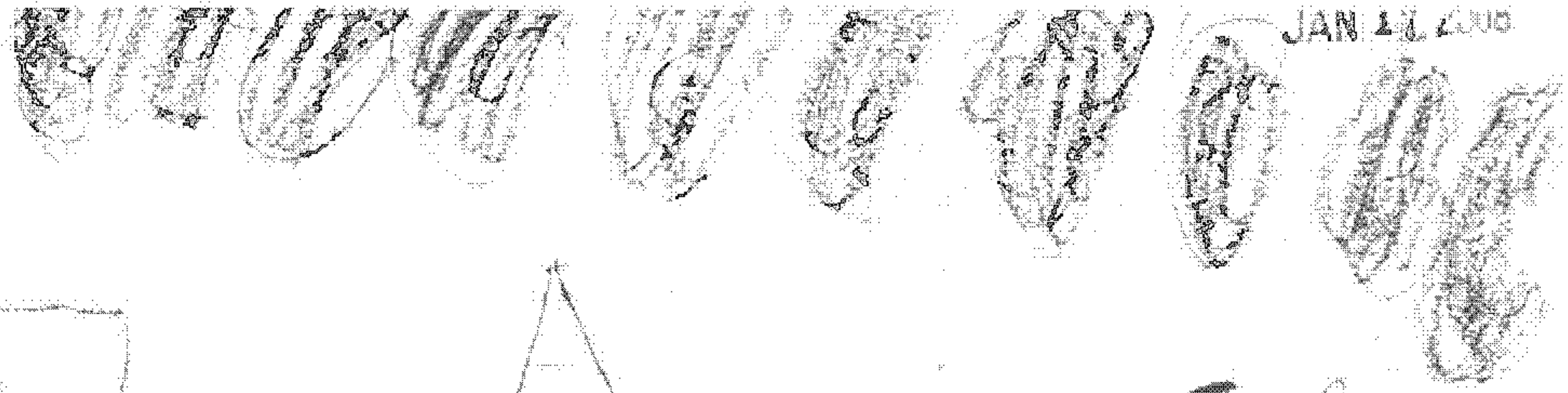
The writer uses both a drawing and some words to convey meaning. The writer is using upper and lower case letters indiscriminately (uppercase: L, K, T, O, B, lowercase: c, r, f). The writer is using mostly beginning and ending sounds to spell words (LK=like, BTrfLs=butterflies). The writer is not yet using spaces between words. There is a period at the end of the final word on the page.



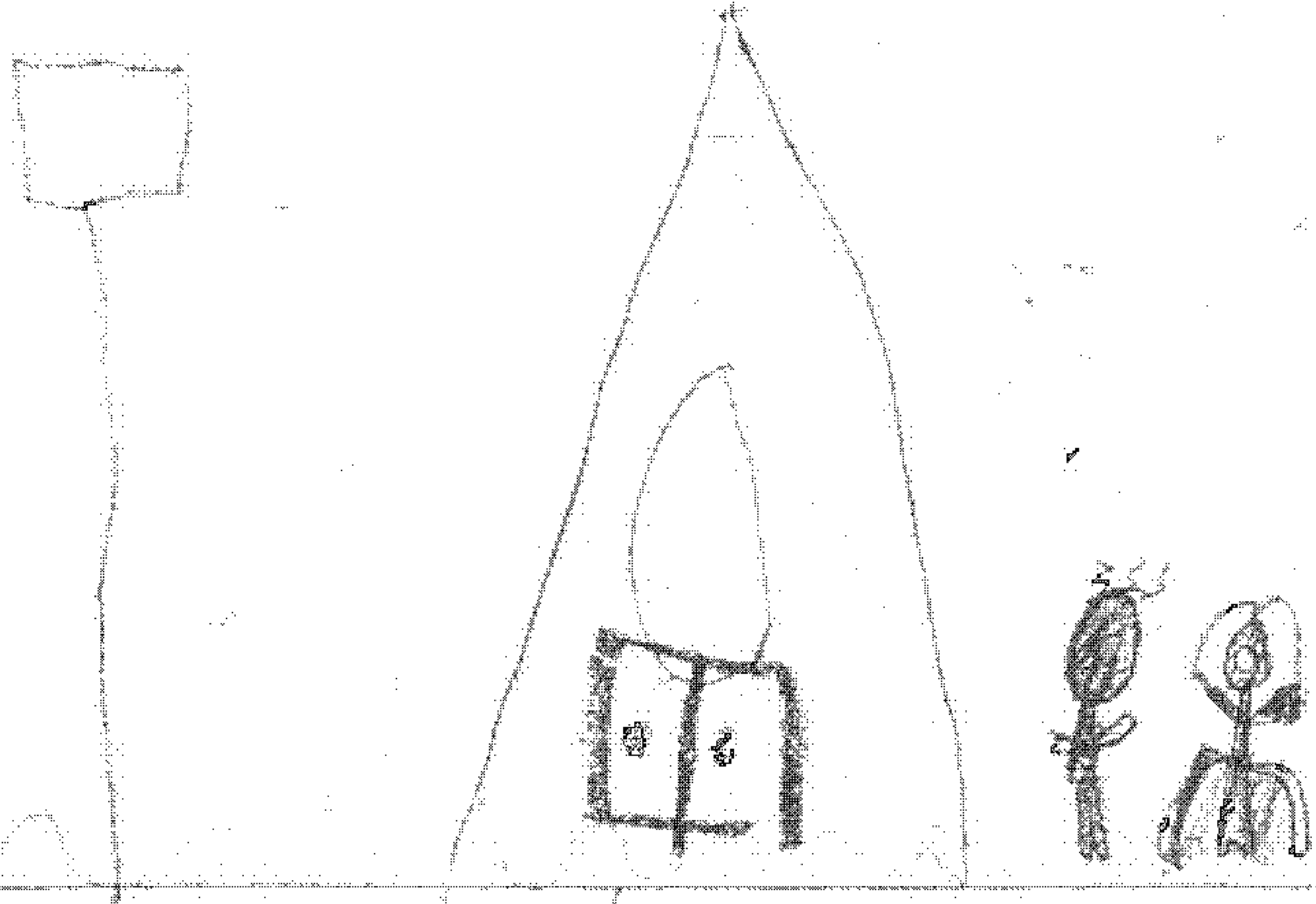
L K T O K C
B T F L S.

Sample 3: Emergent

This writer has 1 sentence with a repeated ending. The writer writes left to right and top to bottom. Upper and lower case letters are used indiscriminately throughout the piece. There is also inconsistent spacing used between words, with some spaces quite large and some quite small. The writer is spelling some familiar words correctly (to, the, with, my, mom). The writer does not use end punctuation at the conclusion of the sentence.



JAN 21 2006

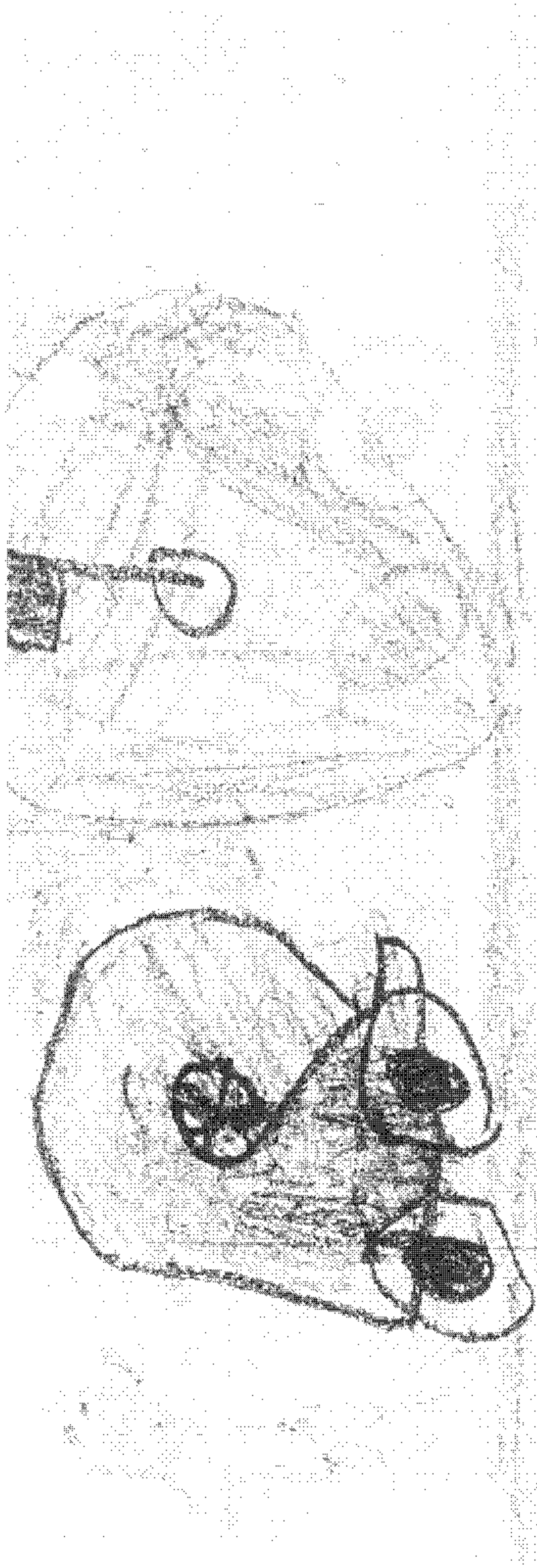


1-23-06

I - Wit to The Stue
With my Mom to The
Stue

Sample 4: Early Developing

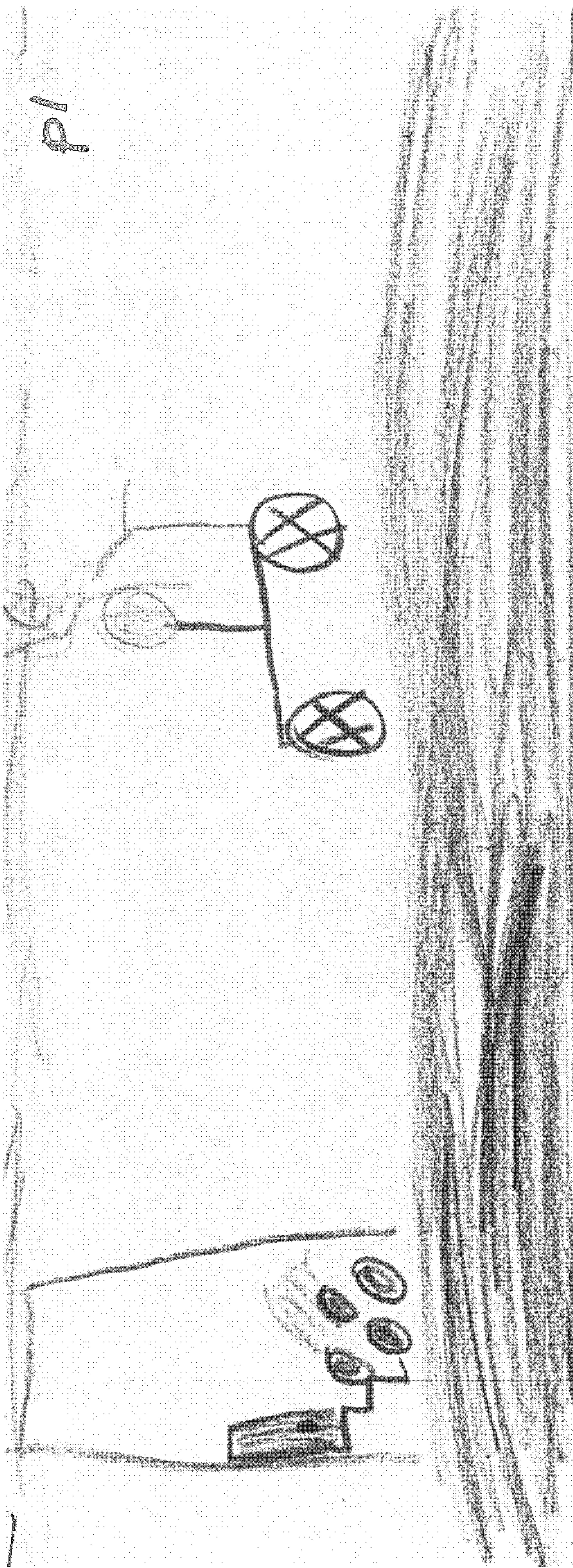
This writer has written a few short sentences focused on a single topic (going golfing with dad). The drawing creates meaning for the story. The writer is writing about a familiar experience. The writer has written left to write across several lines with evidence of a return sweep in the second and third sentences. The writer consistently spaces correctly. The writer spells some simple words and some high frequency words correctly (one, day, me, my, and, to, see, got, it, was, fun). The writer is using periods correctly and an exclamation point appropriately at the end of the piece.



One day me and
my dad went
to see golf.
and we got to
find in a lot.
and it was fun.

Sample 5: Developing

The writer has written several focused sentences. The piece is written in a logical sequence and includes some details. The vocabulary used is appropriate for the topic (training wheels, practiced, helmet). There are many high frequency words spelled correctly (took, my, with, let, go, was, it, on, the, have, and, fun). The piece can be easily read and the spelling is moving towards conventional. There is appropriate use of punctuation including exclamation points. There is evidence that the writer is beginning to write with a sense of audience (When my dad let go of my bike, I was doing it!).



pl

I took my traditions of a my
 birthday present with my Dad. When
 my Dad let go off my birthday

I was doing it
 F R A N K

P2

I was riding on the street with my

Dad. I have yellow and black hair

that I wash with my bed

p.3

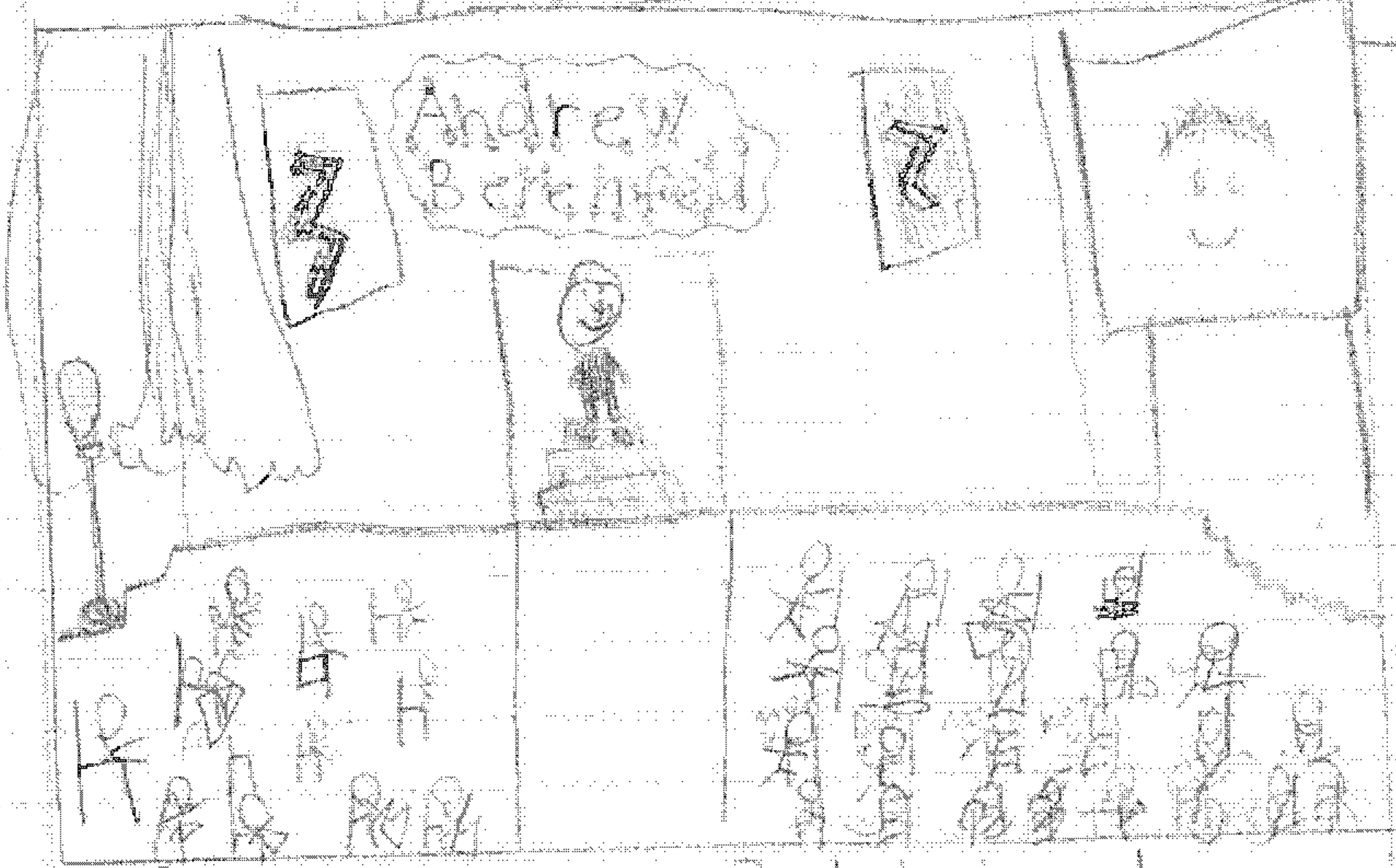
This I was on the red J was
so much fun!

Sample 6: Early Independent

The writer has written a series of related ideas that are organized in a logical, sequential order. There is a beginning, middle, and end to the piece, though it has a few lapses in focus (The first 2 sentences are not well connected and the end is slightly abrupt). The writer uses a variety of sentence patterns that enhance the story. The writer uses details, though some are basic (size and color words) and some elaboration (When it was time to go, I was already half asleep). Most of the words are spelled correctly throughout the piece. Punctuation is used correctly and the writer has begun to experiment with dialogue.

My brother's Performance

CP
ALEX B
11-14-07



One day at Raleigh when my brother went to Juan Casablancas acting school he practised one of his monologs. When my dad got a room in the hotel we saw our room number. Right when we stepped in the room it was amazing the bed looked so cool.

It had a big tv rite
infront of the bed. I
loved that room! Well it
was 10:00 and time for
my brothers showcase to
go on. When we all sat
down the lights turned
off and then little lights
turned on all around
the stage. We have
been waiting and
waiting for my brothers
showcase to go on but
it was still not his
turn. Finally it was his
turn and he did great!

p3

9/11/11

He was second to last.

When it was time to

go one of the judges

called him up. We all

thought he got in trouble.

When he went over to

the lady she said

'If we have a movie

and we needed someone

to be in it we would

choose YOU! My brother

was shocked. When

it was late and time to

go I was already

late, asleep. When we

got home and went to

P4

bed I would never

forget about mate ♡

THE END ☺

Sample 7: Independent

The writer has a clear focus throughout the piece. The writer uses effective transitions to connect ideas. The language and details create a vivid mental picture (“frightened little black and white kitten,” “held out my palms,” “mom set her down gently in them”). There is evidence of elaboration (“everyone ran to the cage full of four tired kittens,” “my mom lifted her up carefully and whispered”). The writer experiments with dialogue that enhances the story. Most of the words are spelled correctly and capitalization and punctuation are used appropriately.

Surprise

When is she going to come,
I wondered while I was at
pre school. I was four years
old and my teacher's cat had
just had kittens. Mrs. Kiera,
my teacher, was running late.
I guess because she said
she would bring her kittens
and anyone could have one!
Just at that moment, the
door swung open. "I'm here!"
cried Mrs. Kiera. Everybody
ran to the cage full of four
tiny kittens with their mothers.
(including me and my mom!)
Shouts came out saying "I
want that one!" "Can I
hold her?" "She's so
cute!" Suddenly I saw a
frightened little black and
white kitten who was still

left in the corner of her cage. That one I told my mom and we walked over to her small-sized cage and my mom lifted her up carefully and whispered, "Hold out your palms. I held out my palms. My mom set her down gently on them. She felt perfectly. I stroked the kitten's tiny head while my mom walked off to find Mrs. Kiera. Seconds later, both of them came back to where I was standing. "Kendall likes her," my mom said. "Oreo!" Mrs. Kiera laughed. "Who is Oreo?" I asked. "Why, Oreo is in your palm!" I stared at the kitten in my hand. Then I shot a glance at my mom. That's when I started begging, "Please, pretty please!" My mom let out a big sigh and slowly nodded yes. "Yes!" I shouted. Oreo Bender! That

p3

was a huge surprise!

Frequently Asked Questions

North Carolina K-2 Literacy Assessment (2009)

General

Question: Does every school in North Carolina have to use the NC K-2 Literacy Assessment?

Answer: No, State Board policy HSP-C-016, states that, "The State Board of Education requires that schools and school districts implement assessments at grades K, 1, and 2 that include documented, on-going individualized assessments throughout the year and a summative evaluation at the end of the year. These assessments monitor achievement of benchmarks in the North Carolina Standard Course of Study. They may take the form of the state-developed materials, adaptations of them, or unique assessments adopted by the local school board. Grades K, 1, and 2 assessments should be implemented by all schools by the 2000-2001 school year."

Question: Can schools use standardized tests in grades K-2?

Answer: No, legislation states that, "The State Board of Education shall adopt and provide to the local school administrative units developmentally appropriate individualized assessment instruments consistent with the Basic Education Program for the first and second grades, rather than standardized tests. Local school administrative units may use these assessment instruments provided to them by the State Board for first and second grade students, and shall not use standardized tests except as required as a condition of receiving a federal grant under the Reading First Program."

Question: How often does a teacher need to administer the K-2 Literacy Assessment to their students?

Answer: The NC K-2 Literacy Assessment is intended to be used for formative, interim, and summative purposes. The assessment should be used throughout the school year for formative assessment. Interim assessments should be administered at the beginning and middle of the school year and a final summative assessment should be administered at the end of a school year. Please refer to the *Suggested Timelines* section of the assessment for more specific suggestions for each grade level.

Letter and Sound Identification

Question: Does a student need to know all of their letters and sounds before learning to read?

Answer: No, a student does not need to know all of their letters and sounds before receiving instruction in reading and learning to read. As a student develops early reading concepts, they will likely learn the letters and sounds not yet mastered.

Question: How often should a teacher assess and re-assess Letter and Sound Identification?

Answer: Letter and Sound Identification should be assessed at the beginning of kindergarten to begin to plan for instruction for each student. Assessment should be continued until the student has demonstrated understanding of letters and sounds. These items can also be informally assessed during guided reading groups and literacy stations after the initial assessment has been given. If the teacher observes the student in a guided reading group or literacy station demonstrating understanding for a letter(s) or a sound(s) previously not known, the teacher should record this on the Letter and Sound Identification Recording form and date it appropriately.

Question: Can a teacher use a blank piece of paper to cover up the rows of letters beneath the row they are currently assessing?

Answer: Yes, for some students this helps keep their focus on just one row at a time.

Book and Print Awareness

Question: What are masking cards?

Answer: Masking cards are used for certain items on the Book and Print Awareness assessment to help the student identify small parts of print. They should be made using index cards or cardstock paper. Teachers need to cut them into approximately 3" X 1" rectangles. Two cards will be needed for the assessment. The same cards may be used for each student.

Question: What text does a teacher need to use when administering Book and Print Awareness?

Answer: The text, *No Sandwich* has been provided with the assessment and contains all of the items assessed. The *Book and Print Awareness Administration Guide* follows this text. However, if teachers choose, they may use any book that has all of the assessed items present and create their own script for the text they select.

Question: Is Book and Print Awareness only assessed in kindergarten?

Answer: No, Book and Print Awareness is intended to be assessed during the first two years of school. Although many students will demonstrate understanding of the concepts in kindergarten, it is expected that some students will need continued instruction and assessment in first grade.

Question: How often should a teacher assess and re-assess Book and Print Awareness?

Answer: Book and Print Awareness should be assessed at the beginning of kindergarten to begin to plan for instruction for each student. Assessment should be continued until the student has demonstrated understanding of the concepts assessed. These items can also be informally assessed during guided reading groups and literacy stations after the initial assessment has been given. If the teacher observes the student in a guided reading group or literacy station demonstrating understanding of a book and print awareness concept previously not known, the teacher should record this on the Book and Print Awareness Individual Checklist and date it appropriately.

Running Records

Question: What does "secured texts" mean?

Answer: Secured texts are texts only used for interim and summative purposes. They are texts that are not found in classroom or school libraries, leveled book rooms, or during instruction.

Question: How often should a teacher assess and re-assess using Running Records?

Answer: Running Records should be used to assess students beginning at level A to begin to plan for instruction for each student. Running Records should be continued through second grade. Teachers should be taking Running Records during guided reading groups as formative assessment often (daily/weekly/monthly) in order to plan effectively for the needs of each student. Teachers should be administering interim Running Records in the beginning and middle of each school year and a summative Running Record at the end of each school year.

Question: Some of the higher leveled texts have many words (200+); does the student need to read aloud the entire text?

Answer: No. When students are reading higher leveled texts that are longer in length, it is appropriate for the teacher to find a natural stopping place (between 100-200 words) and then asks the student to read the remainder of text silently. After the student finishes the text silently, the teacher should administer the Oral Retell portion of the assessment.

Question: What level of text should students be reading on at the end of each school year?

Answer: The North Carolina Department of Public Instruction does not have set “benchmarks” for students in grades K-2. These are typically set by the school or school district based on the needs of their students. Students should make at least a year’s worth of growth for a year’s worth of work.

Fluency

Question: Should fluency be assessed on a separate text or on the text used for the Running Record assessment?

Answer: Fluency should be assessed during the Running Record. As the student reads the text aloud, the teacher should be observing their oral reading as well as timing the words read per minute. Both the *Qualitative and Quantitative Fluency Rubrics* should be used with students reading text at a level G and above.

Question: How does a teacher assess fluency on levels A-E?

Answer: Fluency should be assessed using the *Qualitative Fluency Rubric* only at levels A-E.

Question: How often should a teacher assess and re-assess fluency?

Answer: Fluency should be assessed any time a Running Record is administered.

Question: If a student reads a text accurately, but not fluently, should the teacher take another Running Record on a lower level text?

Answer: It depends on the purpose of the Running Record. If the Running Record is being done for formative assessment purposes, it is not necessary to assess on a lower text level. This is very important instructional information for the teacher. If the assessment is being administered for interim or summative purposes, then the teacher should consider finding a text at a level that the student can read accurately, fluently, and can retell.

Oral Retell

Question: If most of a student’s Oral Retell assessment is aided by the teacher, should they receive a lower score?

Answer: No, the amount of aided responses does not affect a student’s score. The teacher should however use this information to plan for instruction.

Question: Does the teacher have to use the prompts provided or can they create their own?

Answer: The prompts included in the NC K-2 Literacy Assessment are suggestions for helping teachers. Teachers can use these prompts or other prompts that they create. It is important that whatever prompts are used, they are the same prompts that are modeled during instruction so students are familiar with the terminology and vocabulary used in the prompts.

Question: How often should a teacher assess and re-assess Oral Retell?

Answer: Oral Retell should be assessed any time a Running Record is administered.

Question: If a student reads a text accurately and fluently, but does not score a 3 or a 4 on their Oral Retell should the teacher take another Running Record on a lower level text?

Answer: It depends on the purpose of the Running Record. If the Running Record is being done for formative assessment purposes, it is not necessary to assess on a lower text level. This is very important instructional information for the teacher. If the assessment is being administered for interim or summative purposes, then the teacher should consider finding a text at a level that the student can read accurately, fluently, and can retell.

Primary Spelling Inventory

Question: Does a teacher have to administer this assessment one-on-one or can they administer it to the whole class at the same time?

Answer: It is recommended that this assessment be administered to small groups (in K-1) or to the whole class.

Question: Should a teacher send the words on the Primary Spelling Inventory home with students to study?

Answer: Students are not to study these words. Studying the words would invalidate the purpose of the inventory, which is to find out what they truly know about how words work.

Writing

Question: Does the NCDPI have any prompts to use for the K-2 Writing assessment?

Answer: The NCDPI does not provide prompts for writing in grades K-2. It is not necessary that each student write on the same topic.

Question: Can students draw a picture before they start writing?

Answer: Yes, for many students, especially those at the early stages of writing development, a picture can often enhance their writing.

Question: Is a "controlled writing experience" like a mock writing test?

Answer: No, a "controlled writing experience" is simply a writing experience that students produce a writing sample without teacher assistance. It is not necessary to remove word walls, charts, or anything else in the writing environment that students have used during everyday writing experiences.

Question: How many writing samples should a teacher have in a student's writing portfolio?

Answer: It is expected that students in K-2 will write daily. Teachers should choose pieces that reflect the stage of writing development that each student is in to show growth over time. There are not a set number of samples required. Some students may have more samples than others.

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COMMON CORE STATE STANDARDS FOR

English Language Arts
&
Literacy in History/Social Studies,
Science, and Technical Subjects

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Introduction

The Common Core State Standards for English Language Arts & Literacy in History/Social Studies, Science, and Technical Subjects (“the Standards”) are the culmination of an extended, broad-based effort to fulfill the charge issued by the states to create the next generation of K–12 standards in order to help ensure that all students are college and career ready in literacy no later than the end of high school.

The present work, led by the Council of Chief State School Officers (CCSSO) and the National Governors Association (NGA), builds on the foundation laid by states in their decades-long work on crafting high-quality education standards. The Standards also draw on the most important international models as well as research and input from numerous sources, including state departments of education, scholars, assessment developers, professional organizations, educators from kindergarten through college, and parents, students, and other members of the public. In their design and content, refined through successive drafts and numerous rounds of feedback, the Standards represent a synthesis of the best elements of standards-related work to date and an important advance over that previous work.

As specified by CCSSO and NGA, the Standards are (1) research and evidence based, (2) aligned with college and work expectations, (3) rigorous, and (4) internationally benchmarked. A particular standard was included in the document only when the best available evidence indicated that its mastery was essential for college and career readiness in a twenty-first-century, globally competitive society. The Standards are intended to be a living work: as new and better evidence emerges, the Standards will be revised accordingly.

The Standards are an extension of a prior initiative led by CCSSO and NGA to develop College and Career Readiness (CCR) standards in reading, writing, speaking, listening, and language as well as in mathematics. The CCR Reading, Writing, and Speaking and Listening Standards, released in draft form in September 2009, serve, in revised form, as the backbone for the present document. Grade-specific K–12 standards in reading, writing, speaking, listening, and language translate the broad (and, for the earliest grades, seemingly distant) aims of the CCR standards into age- and attainment-appropriate terms.

The Standards set requirements not only for English language arts (ELA) but also for literacy in history/social studies, science, and technical subjects. Just as students must learn to read, write, speak, listen, and use language effectively in a variety of content areas, so too must the Standards specify the literacy skills and understandings required for college and career readiness in multiple disciplines. Literacy standards for grade 6 and above are predicated on teachers of ELA, history/social studies, science, and technical subjects using their content area expertise to help students meet the particular challenges of reading, writing, speaking, listening, and language in their respective fields. It is important to note that the 6–12 literacy standards in history/social studies, science, and technical subjects are not meant to replace content standards in those areas but rather to supplement them. States may incorporate these standards into their standards for those subjects or adopt them as content area literacy standards.

As a natural outgrowth of meeting the charge to define college and career readiness, the Standards also lay out a vision of what it means to be a literate person in the twenty-first century. Indeed, the skills and understandings students are expected to demonstrate have wide applicability outside the classroom or workplace. Students who meet the Standards readily undertake the close, attentive reading that is at the heart of understanding and enjoying complex works of literature. They habitually perform the critical reading necessary to pick carefully through the staggering amount of information available today in print and digitally. They actively seek the wide, deep, and thoughtful engagement with high-quality literary and informational texts that builds knowledge, enlarges experience, and broadens worldviews. They reflexively demonstrate the cogent reasoning and use of evidence that is essential to both private deliberation and responsible citizenship in a democratic republic. In short, students who meet the Standards develop the skills in reading, writing, speaking, and listening that are the foundation for any creative and purposeful expression in language.

June 2, 2010

Key Design Considerations

CCR and grade-specific standards

The CCR standards anchor the document and define general, cross-disciplinary literacy expectations that must be met for students to be prepared to enter college and workforce training programs ready to succeed. The K–12 grade-specific standards define end-of-year expectations and a cumulative progression designed to enable students to meet college and career readiness expectations no later than the end of high school. The CCR and high school (grades 9–12) standards work in tandem to define the college and career readiness line—the former providing broad standards, the latter providing additional specificity. Hence, both should be considered when developing college and career readiness assessments.

Students advancing through the grades are expected to meet each year’s grade-specific standards, retain or further develop skills and understandings mastered in preceding grades, and work steadily toward meeting the more general expectations described by the CCR standards.

Grade levels for K–8; grade bands for 9–10 and 11–12

The Standards use individual grade levels in kindergarten through grade 8 to provide useful specificity; the Standards use two-year bands in grades 9–12 to allow schools, districts, and states flexibility in high school course design.

A focus on results rather than means

By emphasizing required achievements, the Standards leave room for teachers, curriculum developers, and states to determine how those goals should be reached and what additional topics should be addressed. Thus, the Standards do not mandate such things as a particular writing process or the full range of metacognitive strategies that students may need to monitor and direct their thinking and learning. Teachers are thus free to provide students with whatever tools and knowledge their professional judgment and experience identify as most helpful for meeting the goals set out in the Standards.

An integrated model of literacy

Although the Standards are divided into Reading, Writing, Speaking and Listening, and Language strands for conceptual clarity, the processes of communication are closely connected, as reflected throughout this document. For example, Writing standard 9 requires that students be able to write about what they read. Likewise, Speaking and Listening standard 4 sets the expectation that students will share findings from their research.

Research and media skills blended into the Standards as a whole

To be ready for college, workforce training, and life in a technological society, students need the ability to gather, comprehend, evaluate, synthesize, and report on information and ideas, to conduct original research in order to answer questions or solve problems, and to analyze and create a high volume and extensive range of print and nonprint texts in media forms old and new. The need to conduct research and to produce and consume media is embedded into every aspect of today’s curriculum. In like fashion, research and media skills and understandings are embedded throughout the Standards rather than treated in a separate section.

Shared responsibility for students’ literacy development

The Standards insist that instruction in reading, writing, speaking, listening, and language be a shared responsibility within the school. The K–5 standards include expectations for reading, writing, speaking, listening, and language applicable to a range of subjects, including but not limited to ELA. The grades 6–12 standards are divided into two sections, one for ELA and the other for history/social studies, science, and technical subjects. This division reflects the unique, time-honored place of ELA teachers in developing students’ literacy skills while at the same time recognizing that teachers in other areas must have a role in this development as well.

Part of the motivation behind the interdisciplinary approach to literacy promulgated by the Standards is extensive research establishing the need for college and career ready students to be proficient in reading complex informational text independently in a variety of content areas. Most of the required reading in college and workforce training programs is informational in structure and challenging in content; postsecondary education programs typically provide students with both a higher volume of such reading than is generally required in K–12 schools and comparatively little scaffolding.

The Standards are not alone in calling for a special emphasis on informational text. The 2009 reading framework of the National Assessment of Educational Progress (NAEP) requires a high and increasing proportion of informational text on its assessment as students advance through the grades.

Distribution of Literary and Informational Passages by Grade in the 2009 NAEP Reading Framework

| Grade | Literary | Informational |
|-------|----------|---------------|
| 4 | 50% | 50% |
| 8 | 45% | 55% |
| 12 | 30% | 70% |

Source: National Assessment Governing Board. (2008). *Reading framework for the 2009 National Assessment of Educational Progress*. Washington, DC: U.S. Government Printing Office.

The Standards aim to align instruction with this framework so that many more students than at present can meet the requirements of college and career readiness. In K-5, the Standards follow NAEP's lead in balancing the reading of literature with the reading of informational texts, including texts in history/social studies, science, and technical subjects. In accord with NAEP's growing emphasis on informational texts in the higher grades, the Standards demand that a significant amount of reading of informational texts take place in and outside the ELA classroom. Fulfilling the Standards for 6-12 ELA requires much greater attention to a specific category of informational text—literary nonfiction—than has been traditional. Because the ELA classroom must focus on literature (stories, drama, and poetry) as well as literary nonfiction, a great deal of informational reading in grades 6-12 must take place in other classes if the NAEP assessment framework is to be matched instructionally.¹ To measure students' growth toward college and career readiness, assessments aligned with the Standards should adhere to the distribution of texts across grades cited in the NAEP framework.

NAEP likewise outlines a distribution across the grades of the core purposes and types of student writing. The 2011 NAEP framework, like the Standards, cultivates the development of three mutually reinforcing writing capacities: writing to persuade, to explain, and to convey real or imagined experience. Evidence concerning the demands of college and career readiness gathered during development of the Standards concurs with NAEP's shifting emphases: standards for grades 9-12 describe writing in all three forms, but, consistent with NAEP, the overwhelming focus of writing throughout high school should be on arguments and informative/explanatory texts.²

¹The percentages on the table reflect the sum of student reading, not just reading in ELA settings. Teachers of senior English classes, for example, are not required to devote 70 percent of reading to informational texts. Rather, 70 percent of student reading across the grade should be informational.

²As with reading, the percentages in the table reflect the sum of student writing, not just writing in ELA settings.

Distribution of Communicative Purposes by Grade in the 2011 NAEP Writing Framework

| Grade | To Persuade | To Explain | To Convey Experience |
|-------|-------------|------------|----------------------|
| 4 | 30% | 35% | 35% |
| 8 | 35% | 35% | 30% |
| 12 | 40% | 40% | 20% |

Source: National Assessment Governing Board. (2007). *Writing framework for the 2011 National Assessment of Educational Progress, pre-publication edition*. Iowa City, IA: ACT, Inc.

It follows that writing assessments aligned with the Standards should adhere to the distribution of writing purposes across grades outlined by NAEP.

Focus and coherence in instruction and assessment

While the Standards delineate specific expectations in reading, writing, speaking, listening, and language, each standard need not be a separate focus for instruction and assessment. Often, several standards can be addressed by a single rich task. For example, when editing writing, students address Writing standard 5 (“Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach”) as well as Language standards 1-3 (which deal with conventions of standard English and knowledge of language). When drawing evidence from literary and informational texts per Writing standard 9, students are also demonstrating their comprehension skill in relation to specific standards in Reading. When discussing something they have read or written, students are also demonstrating their speaking and listening skills. The CCR anchor standards themselves provide another source of focus and coherence.

The same ten CCR anchor standards for Reading apply to both literary and informational texts, including texts in history/social studies, science, and technical subjects. The ten CCR anchor standards for Writing cover numerous text types and subject areas. This means that students can develop mutually reinforcing skills and exhibit mastery of standards for reading and writing across a range of texts and classrooms.

What is Not Covered by the Standards

The Standards should be recognized for what they are not as well as what they are. The most important intentional design limitations are as follows:

1. The Standards define what all students are expected to know and be able to do, not how teachers should teach. For instance, the use of play with young children is not specified by the Standards, but it is welcome as a valuable activity in its own right and as a way to help students meet the expectations in this document. Furthermore, while the Standards make references to some particular forms of content, including mythology, foundational U.S. documents, and Shakespeare, they do not—indeed, cannot—enumerate all or even most of the content that students should learn. The Standards must therefore be complemented by a well-developed, content-rich curriculum consistent with the expectations laid out in this document.
 2. While the Standards focus on what is most essential, they do not describe all that can or should be taught. A great deal is left to the discretion of teachers and curriculum developers. The aim of the Standards is to articulate the fundamentals, not to set out an exhaustive list or a set of restrictions that limits what can be taught beyond what is specified herein.
 3. The Standards do not define the nature of advanced work for students who meet the Standards prior to the end of high school. For those students, advanced work in such areas as literature, composition, language, and journalism should be available. This work should provide the next logical step up from the college and career readiness baseline established here.
 4. The Standards set grade-specific standards but do not define the intervention methods or materials necessary to support students who are well below or well above grade-level expectations. No set of grade-specific standards can fully reflect the great variety in abilities, needs, learning rates, and achievement levels of students in any given classroom. However, the Standards do provide clear signposts along the way to the goal of college and career readiness for all students.
 5. It is also beyond the scope of the Standards to define the full range of supports appropriate for English language learners and for students with special needs. At the same time, all students must have the opportunity to learn and meet the same high standards if they are to access the knowledge and skills necessary in their post-high school lives.
Each grade will include students who are still acquiring English. For those students, it is possible to meet the standards in reading, writing, speaking, and listening without displaying native-like control of conventions and vocabulary.
- The Standards should also be read as allowing for the widest possible range of students to participate fully from the outset and as permitting appropriate accommodations to ensure maximum participation of students with special education needs. For example, for students with disabilities *reading* should allow for the use of Braille, screen-reader technology, or other assistive devices, while *writing* should include the use of a scribe, computer, or speech-to-text technology. In a similar vein, *speaking* and *listening* should be interpreted broadly to include sign language.
6. While the ELA and content area literacy components described herein are critical to college and career readiness, they do not define the whole of such readiness. Students require a wide-ranging, rigorous academic preparation and, particularly in the early grades, attention to such matters as social, emotional, and physical development and approaches to learning. Similarly, the Standards define literacy expectations in history/social studies, science, and technical subjects, but literacy standards in other areas, such as mathematics and health education, modeled on those in this document are strongly encouraged to facilitate a comprehensive, schoolwide literacy program.

Students Who are College and Career Ready in Reading, Writing, Speaking, Listening, and Language

The descriptions that follow are not standards themselves but instead offer a portrait of students who meet the standards set out in this document. As students advance through the grades and master the standards in reading, writing, speaking, listening, and language, they are able to exhibit with increasing fullness and regularity these capacities of the literate individual.

They demonstrate independence.

Students can, without significant scaffolding, comprehend and evaluate complex texts across a range of types and disciplines, and they can construct effective arguments and convey intricate or multifaceted information. Likewise, students are able independently to discern a speaker's key points, request clarification, and ask relevant questions. They build on others' ideas, articulate their own ideas, and confirm they have been understood. Without prompting, they demonstrate command of standard English and acquire and use a wide-ranging vocabulary. More broadly, they become self-directed learners, effectively seeking out and using resources to assist them, including teachers, peers, and print and digital reference materials.

They build strong content knowledge.

Students establish a base of knowledge across a wide range of subject matter by engaging with works of quality and substance. They become proficient in new areas through research and study. They read purposefully and listen attentively to gain both general knowledge and discipline-specific expertise. They refine and share their knowledge through writing and speaking.

They respond to the varying demands of audience, task, purpose, and discipline.

Students adapt their communication in relation to audience, task, purpose, and discipline. They set and adjust purpose for reading, writing, speaking, listening, and language use as warranted by the task. They appreciate nuances, such as how the composition of an audience should affect tone when speaking and how the connotations of words affect meaning. They also know that different disciplines call for different types of evidence (e.g., documentary evidence in history, experimental evidence in science).

They comprehend as well as critique.

Students are engaged and open-minded—but discerning—readers and listeners. They work diligently to understand precisely what an author or speaker is saying, but they also question an author's or speaker's assumptions and premises and assess the veracity of claims and the soundness of reasoning.

They value evidence.

Students cite specific evidence when offering an oral or written interpretation of a text. They use relevant evidence when supporting their own points in writing and speaking, making their reasoning clear to the reader or listener, and they constructively evaluate others' use of evidence.

They use technology and digital media strategically and capably.

Students employ technology thoughtfully to enhance their reading, writing, speaking, listening, and language use. They tailor their searches online to acquire useful information efficiently, and they integrate what they learn using technology with what they learn offline. They are familiar with the strengths and limitations of various technological tools and mediums and can select and use those best suited to their communication goals.

They come to understand other perspectives and cultures.

Students appreciate that the twenty-first-century classroom and workplace are settings in which people from often widely divergent cultures and who represent diverse experiences and perspectives must learn and work together. Students actively seek to understand other perspectives and cultures through reading and listening, and they are able to communicate effectively with people of varied backgrounds. They evaluate other points of view critically and constructively. Through reading great classic and contemporary works of literature representative of a variety of periods, cultures, and worldviews, students can vicariously inhabit worlds and have experiences much different than their own.

How to Read This Document

Overall Document Organization

The Standards comprise three main sections: a comprehensive K–5 section and two content area-specific sections for grades 6–12, one for ELA and one for history/social studies, science, and technical subjects. Three appendices accompany the main document.

Each section is divided into strands. K–5 and 6–12 ELA have Reading, Writing, Speaking and Listening, and Language strands; the 6–12 history/ social studies, science, and technical subjects section focuses on Reading and Writing. Each strand is headed by a strand-specific set of College and Career Readiness Anchor Standards that is identical across all grades and content areas.

Standards for each grade within K–8 and for grades 9–10 and 11–12 follow the CCR anchor standards in each strand. Each grade-specific standard (as these standards are collectively referred to) corresponds to the same-numbered CCR anchor standard. Put another way, each CCR anchor standard has an accompanying grade-specific standard translating the broader CCR statement into grade-appropriate end-of-year expectations.

Individual CCR anchor standards can be identified by their strand, CCR status, and number (R.CCR.6, for example). Individual grade-specific standards can be identified by their strand, grade, and number (or number and letter, where applicable), so that RI.4.3, for example, stands for Reading, Informational Text, grade 4, standard 3 and W.5.1a stands for Writing, grade 5, standard 1a. Strand designations can be found in brackets alongside the full strand title.

Who is responsible for which portion of the Standards

A single K–5 section lists standards for reading, writing, speaking, listening, and language across the curriculum, reflecting the fact that most or all of the instruction students in these grades receive comes from one teacher. Grades 6–12 are covered in two content area-specific sections, the first for the English language arts teacher and the second for teachers of history/social studies, science, and technical subjects. Each section uses the same CCR anchor standards but also includes grade-specific standards tuned to the literacy requirements of the particular discipline(s).

Key Features of the Standards

Reading: Text complexity and the growth of comprehension

The Reading standards place equal emphasis on the sophistication of what students read and the skill with which they read. Standard 10 defines a grade-by-grade “staircase” of increasing text complexity that rises from beginning reading

to the college and career readiness level. Whatever they are reading, students must also show a steadily growing ability to discern more from and make fuller use of text, including making an increasing number of connections among ideas and between texts, considering a wider range of textual evidence, and becoming more sensitive to inconsistencies, ambiguities, and poor reasoning in texts.

Writing: Text types, responding to reading, and research

The Standards acknowledge the fact that whereas some writing skills, such as the ability to plan, revise, edit, and publish, are applicable to many types of writing, other skills are more properly defined in terms of specific writing types: arguments, informative/explanatory texts, and narratives. Standard 9 stresses the importance of the writing-reading connection by requiring students to draw upon and write about evidence from literary and informational texts. Because of the centrality of writing to most forms of inquiry, research standards are prominently included in this strand, though skills important to research are infused throughout the document.

Speaking and Listening: Flexible communication and collaboration

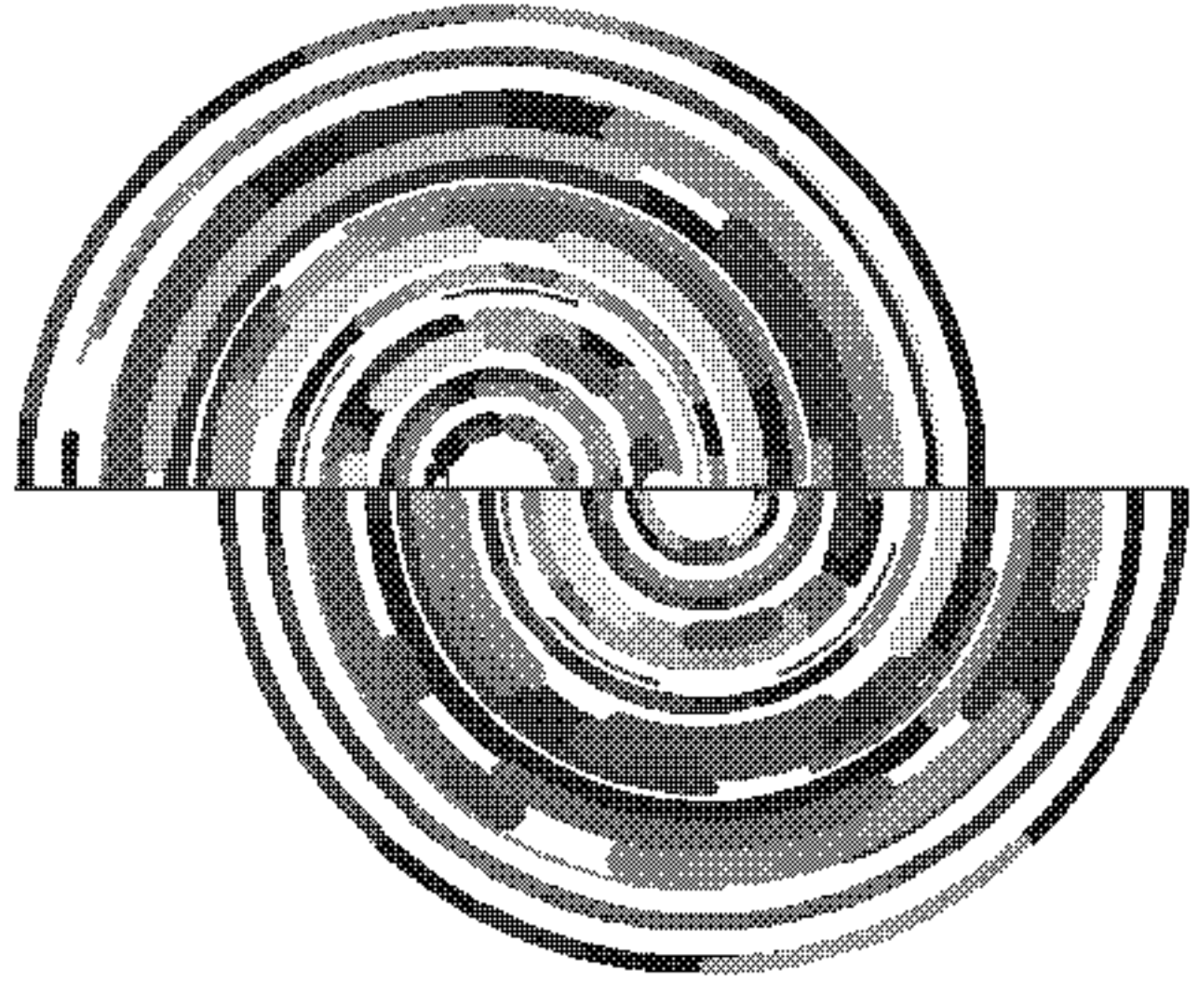
Including but not limited to skills necessary for formal presentations, the Speaking and Listening standards require students to develop a range of broadly useful oral communication and interpersonal skills. Students must learn to work together, express and listen carefully to ideas, integrate information from oral, visual, quantitative, and media sources, evaluate what they hear, use media and visual displays strategically to help achieve communicative purposes, and adapt speech to context and task.

Language: Conventions, effective use, and vocabulary

The Language standards include the essential “rules” of standard written and spoken English, but they also approach language as a matter of craft and informed choice among alternatives. The vocabulary standards focus on understanding words and phrases, their relationships, and their nuances and on acquiring new vocabulary, particularly general academic and domain-specific words and phrases.

Appendices A, B, and C

Appendix A contains supplementary material on reading, writing, speaking and listening, and language as well as a glossary of key terms. Appendix B consists of text exemplars illustrating the complexity, quality, and range of reading appropriate for various grade levels with accompanying sample performance tasks. Appendix C includes annotated samples demonstrating at least adequate performance in student writing at various grade levels.



STANDARDS FOR

**English Language Arts
& Literacy in History/Social Studies,
Science, and Technical Subjects**

K-5

College and Career Readiness Anchor Standards for Reading

The K-5 standards on the following pages define what students should understand and be able to do by the end of each grade. They correspond to the College and Career Readiness (CCR) anchor standards below by number. The CCR and grade-specific standards are necessary complements—the former providing broad standards, the latter providing additional specificity—that together define the skills and understandings that all students must demonstrate.

Key Ideas and Details

1. Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.
2. Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.
3. Analyze how and why individuals, events, and ideas develop and interact over the course of a text.

Craft and Structure

4. Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone.
5. Analyze the structure of texts, including how specific sentences, paragraphs, and larger portions of the text (e.g., a section, chapter, scene, or stanza) relate to each other and the whole.
6. Assess how point of view or purpose shapes the content and style of a text.

Integration of Knowledge and Ideas

7. Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words.*
8. Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence.
9. Analyze how two or more texts address similar themes or topics in order to build knowledge or to compare the approaches the authors take.

Range of Reading and Level of Text Complexity

10. Read and comprehend complex literary and informational texts independently and proficiently.

*Please see “Research to Build and Present Knowledge” in Writing and “Comprehension and Collaboration” in Speaking and Listening for additional standards relevant to gathering, assessing, and applying information from print and digital sources.

Note on range and content of student reading

To build a foundation for college and career readiness, students must read widely and deeply from among a broad range of high-quality, increasingly challenging literary and informational texts. Through extensive reading of stories, dramas, poems, and myths from diverse cultures and different time periods, students gain literary and cultural knowledge as well as familiarity with various text structures and elements. By reading texts in history/social studies, science, and other disciplines, students build a foundation of knowledge in these fields that will also give them the background to be better readers in all content areas. Students can only gain this foundation when the curriculum is intentionally and coherently structured to develop rich content knowledge within and across grades. Students also acquire the habits of reading independently and closely, which are essential to their future success.

Reading Standards for Literature K-5

RL

The following standards offer a focus for instruction each year and help ensure that students gain adequate exposure to a range of texts and tasks. Rigor is also infused through the requirement that students read increasingly complex texts through the grades. *Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades.*

Kindergartners:

Key Ideas and Details

1. With prompting and support, ask and answer questions about key details in a text.
2. With prompting and support, retell familiar stories, including key details.
3. With prompting and support, identify characters, settings, and major events in a story.

Craft and Structure

4. Ask and answer questions about unknown words in a text.
5. Recognize common types of texts (e.g., storybooks, poems).
6. With prompting and support, name the author and illustrator of a story and define the role of each in telling the story.

Integration of Knowledge and Ideas

7. With prompting and support, describe the relationship between illustrations and the story in which they appear (e.g., what moment in a story an illustration depicts).
8. (Not applicable to literature)
9. With prompting and support, compare and contrast the adventures and experiences of characters in familiar stories.

Range of Reading and Level of Text Complexity

10. Actively engage in group reading activities with purpose and understanding.

Grade 1 students:

1. Ask and answer questions about key details in a text.
2. Retell stories, including key details, and demonstrate understanding of their central message or lesson.
3. Describe characters, settings, and major events in a story, using key details.

Craft and Structure

4. Ask and answer questions about unknown words in a text.
5. Explain major differences between books that tell stories and books that give information, drawing on a wide reading of a range of text types.
6. Identify who is telling the story at various points in a text.

Integration of Knowledge and Ideas

7. Use illustrations and details in a story to describe its characters, setting, or events.
8. (Not applicable to literature)
9. Compare and contrast the adventures and experiences of characters in stories.

Range of Reading and Level of Text Complexity

10. With prompting and support, read prose and poetry of appropriate complexity for grade 1.

Grade 2 students:

1. Ask and answer such questions as *who*, *what*, *where*, *when*, *why*, and *how* to demonstrate understanding of key details in a text.
2. Recount stories, including fables and folktales from diverse cultures, and determine their central message, lesson, or moral.
3. Describe how characters in a story respond to major events and challenges.

Craft and Structure

4. Identify words and phrases in stories or poems that suggest feelings or appeal to the senses.
5. Describe the overall structure of a story, including describing how the beginning introduces the story and the ending concludes the action.
6. Acknowledge differences in the points of view of characters, including by speaking in a different voice for each character when reading dialogue aloud.

Integration of Knowledge and Ideas

7. Use illustrations and details in a story to describe its characters, setting, or events.
8. (Not applicable to literature)
9. Compare and contrast two or more versions of the same story (e.g., Cinderella stories) by different authors or from different cultures.

Range of Reading and Level of Text Complexity

10. By the end of the year, read and comprehend literature, including stories and poetry, in the grades 2-3 text complexity band proficiently, with scaffolding as needed at the high end of the range.

Reading Standards for Literature K-5

RL

Grade 3 students:

Key Ideas and Details

1. Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.
2. Recount stories, including fables, folktales, and myths from diverse cultures; determine the central message, lesson, or moral and explain how it is conveyed through key details in the text.
3. Describe characters in a story (e.g., their traits, motivations, or feelings) and explain how their actions contribute to the sequence of events.

Craft and Structure

4. Determine the meaning of words and phrases as they are used in a text, distinguishing literal from nonliteral language.
5. Refer to parts of stories, dramas, and poems when writing or speaking about a text, using terms such as chapter, scene, and stanza; describe how each successive part builds on earlier sections.
6. Distinguish their own point of view from that of the narrator or those of the characters.

Integration of Knowledge and Ideas

7. Explain how specific aspects of a text's illustrations contribute to what is conveyed by the words in a story (e.g., create mood, emphasize aspects of a character or setting).
8. (Not applicable to literature)
9. Compare and contrast the themes, settings, and plots of stories written by the same author about the same or similar characters (e.g., in books from a series).

Range of Reading and Level of Text Complexity

10. By the end of the year, read and comprehend literature, including stories, dramas, and poetry, at the high end of the grades 2-3 text complexity band independently and proficiently.

Grade 4 students:

1. Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.

2. Determine a theme of a story, drama, or poem from details in the text; summarize the text.

3. Describe in depth a character, setting, or event in a story or drama, drawing on specific details in the text (e.g., a character's thoughts, words, or actions).

4. Determine the meaning of words and phrases as they are used in a text, including those that allude to significant characters found in mythology (e.g., Hercules).

5. Explain major differences between poems, drama, and prose, and refer to the structural elements of poems (e.g., verse, rhythm, meter) and drama (e.g., casts of characters, settings, descriptions, dialogue, stage directions) when writing or speaking about a text.

6. Compare and contrast the point of view from which different stories are narrated, including the difference between first- and third-person narrations.

7. Make connections between the text of a story or drama and a visual or oral presentation of the text, identifying where each version reflects specific descriptions and directions in the text.

8. (Not applicable to literature)

9. Compare and contrast the treatment of similar themes and topics (e.g., opposition of good and evil) and patterns of events (e.g., the quest) in stories, myths, and traditional literature from different cultures.

10. By the end of the year, read and comprehend literature, including stories, dramas, and poetry, in the grades 4-5 text complexity band proficiently, with scaffolding as needed at the high end of the range.

Grade 5 students:

1. Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text.

2. Determine a theme of a story, drama, or poem from details in the text, including how characters in a story or drama respond to challenges or how the speaker in a poem reflects upon a topic; summarize the text.

3. Compare and contrast two or more characters, settings, or events in a story or drama, drawing on specific details in the text (e.g., how characters interact).

4. Determine the meaning of words and phrases as they are used in a text, including figurative language such as metaphors and similes.

5. Explain how a series of chapters, scenes, or stanzas fits together to provide the overall structure of a particular story, drama, or poem.

6. Describe how a narrator's or speaker's point of view influences how events are described.

7. Analyze how visual and multimedia elements contribute to the meaning, tone, or beauty of a text (e.g., graphic novel, multimedia presentation of fiction, folktale, myth, poem).

8. (Not applicable to literature)

9. Compare and contrast stories in the same genre (e.g., mysteries and adventure stories) on their approaches to similar themes and topics.

10. By the end of the year, read and comprehend literature, including stories, dramas, and poetry, at the high end of the grades 4-5 text complexity band independently and proficiently.

Reading Standards for Informational Text K-5

RI

Kindergartners:

Key Ideas and Details

1. With prompting and support, ask and answer questions about key details in a text.
2. With prompting and support, identify the main topic and retell key details of a text.
3. With prompting and support, describe the connection between two individuals, events, ideas, or pieces of information in a text.

Craft and Structure

4. With prompting and support, ask and answer questions about unknown words in a text.
5. Identify the front cover, back cover, and title page of a book.
6. Name the author and illustrator of a text and define the role of each in presenting the ideas or information in a text.

Integration of Knowledge and Ideas

7. With prompting and support, describe the relationship between illustrations and the text in which they appear (e.g., what person, place, thing, or idea in the text an illustration depicts).
8. With prompting and support, identify the reasons an author gives to support points in a text.
9. With prompting and support, identify basic similarities in and differences between two texts on the same topic (e.g., in illustrations, descriptions, or procedures).

Range of Reading and Level of Text Complexity

10. Actively engage in group reading activities with purpose and understanding.

Grade 1 students:

1. Ask and answer questions about key details in a text.
2. Identify the main topic and retell key details of a text.
3. Describe the connection between two individuals, events, ideas, or pieces of information in a text.

Craft and Structure

4. Ask and answer questions to help determine or clarify the meaning of words and phrases in a text.
5. Know and use various text features (e.g., headings, tables of contents, glossaries, electronic menus, icons) to locate key facts or information in a text.
6. Distinguish between information provided by pictures or other illustrations and information provided by the words in a text.

Integration of Knowledge and Ideas

7. Use the illustrations and details in a text to describe its key ideas.
8. Identify the reasons an author gives to support points in a text.
9. Identify basic similarities in and differences between two texts on the same topic (e.g., in illustrations, descriptions, or procedures).

Range of Reading and Level of Text Complexity

10. With prompting and support, read informational texts appropriately complex for grade 1.

Grade 2 students:

1. Ask and answer such questions as *who*, *what*, *where*, *when*, *why*, and *how* to demonstrate understanding of key details in a text.
2. Identify the main topic of a multiparagraph text as well as the focus of specific paragraphs within the text.
3. Describe the connection between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text.

Craft and Structure

4. Determine the meaning of words and phrases in a text relevant to a *grade 2 topic or subject area*.
5. Know and use various text features (e.g., captions, bold print, subheadings, glossaries, indexes, electronic menus, icons) to locate key facts or information in a text efficiently.
6. Identify the main purpose of a text, including what the author wants to answer, explain, or describe.

Integration of Knowledge and Ideas

7. Explain how specific images (e.g., a diagram showing how a machine works) contribute to and clarify a text.
8. Describe how reasons support specific points the author makes in a text.
9. Compare and contrast the most important points presented by two texts on the same topic.

Range of Reading and Level of Text Complexity

10. By the end of year, read and comprehend informational texts, including history/social studies, science, and technical texts, in the grades 2–3 text complexity band proficiently, with scaffolding as needed at the high end of the range.

Reading Standards for Informational Text K-5

RI

Grade 3 students:

Key Ideas and Details

1. Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.
2. Determine the main idea of a text; recount the key details and explain how they support the main idea.
3. Describe the relationship between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text, using language that pertains to time, sequence, and cause/effect.

Craft and Structure

4. Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a *grade 3 topic or subject area*.
5. Use text features and search tools (e.g., key words, sidebars, hyperlinks) to locate information relevant to a given topic efficiently.
6. Distinguish their own point of view from that of the author of a text.

Integration of Knowledge and Ideas

7. Use information gained from illustrations (e.g., maps, photographs) and the words in a text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur).
8. Describe the logical connection between particular sentences and paragraphs in a text (e.g., comparison, cause/effect, first/second/third in a sequence).
9. Compare and contrast the most important points and key details presented in two texts on the same topic.

Range of Reading and Level of Text Complexity

10. By the end of the year, read and comprehend informational texts, including history/social studies, science, and technical texts, at the high end of the grades 2-3 text complexity band independently and proficiently.

Grade 4 students:

1. Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.
2. Determine the main idea of a text and explain how it is supported by key details; summarize the text.
3. Explain events, procedures, ideas, or concepts in a historical, scientific, or technical text, including what happened and why, based on specific information in the text.

Craft and Structure

4. Determine the meaning of general academic and domain-specific words or phrases in a text relevant to a *grade 4 topic or subject area*.
5. Describe the overall structure (e.g., chronology, comparison, cause/effect, problem/solution) of events, ideas, concepts, or part of a text.
6. Compare and contrast a firsthand and secondhand account of the same event or topic; describe the differences in focus and the information provided.

Integration of Knowledge and Ideas

7. Interpret information presented visually, orally, or quantitatively (e.g., in charts, graphs, diagrams, time lines, animations, or interactive elements on Web pages) and explain how the information contributes to an understanding of the text in which it appears.
8. Explain how an author uses reasons and evidence to support particular points in a text.
9. Integrate information from two texts on the same topic in order to write or speak about the subject knowledgeably.

Range of Reading and Level of Text Complexity

10. By the end of year, read and comprehend informational texts, including history/social science, and technical texts, in the grades 4-5 text complexity band proficiently, with scaffolding as needed at the high end of the range.

Grade 5 students:

1. Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text.
2. Determine two or more main ideas of a text and explain how they are supported by key details; summarize the text.
3. Explain the relationships or interactions between two or more individuals, events, ideas, or concepts in a historical, scientific, or technical text based on specific information in the text.

Craft and Structure

4. Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a *grade 5 topic or subject area*.
5. Compare and contrast the overall structure (e.g., chronology, comparison, cause/effect, problem/solution) of events, ideas, concepts, or information in two or more texts.
6. Analyze multiple accounts of the same event or topic, noting important similarities and differences in the point of view they represent.

Integration of Knowledge and Ideas

7. Draw on information from multiple print or digital sources, demonstrating the ability to locate an answer to a question quickly or to solve a problem efficiently.
8. Explain how an author uses reasons and evidence to support particular points in a text, identifying which reasons and evidence support which point(s).
9. Integrate information from several texts on the same topic in order to write or speak about the subject knowledgeably.

Range of Reading and Level of Text Complexity

10. By the end of the year, read and comprehend informational texts, including history/social studies, science, and technical texts, at the high end of the grades 4-5 text complexity band independently and proficiently.

Reading Standards: Foundational Skills (K-5)

RF

These standards are directed toward fostering students' understanding and working knowledge of concepts of print, the alphabetic principle, and other basic conventions of the English writing system. These foundational skills are not an end in and of themselves; rather, they are necessary and important components of an effective, comprehensive reading program designed to develop proficient readers with the capacity to comprehend texts across a range of types and disciplines. Instruction should be differentiated: good readers will need much less practice with these concepts than struggling readers will. The point is to teach students what they need to learn and not what they already know—to discern when particular children or activities warrant more or less attention.

Note: *In kindergarten, children are expected to demonstrate increasing awareness and competence in the areas that follow.*

Kindergartners:

Grade 1 students:

Print Concepts

1. Demonstrate understanding of the organization and basic features of print.
 - a. Follow words from left to right, top to bottom, and page by page.
 - b. Recognize that spoken words are represented in written language by specific sequences of letters.
 - c. Understand that words are separated by spaces in print.
 - d. Recognize and name all upper- and lowercase letters of the alphabet.

Phonological Awareness

2. Demonstrate understanding of spoken words, syllables, and sounds (phonemes).
 - a. Recognize and produce rhyming words.
 - b. Count, pronounce, blend, and segment syllables in spoken words.
 - c. Blend and segment onsets and rimes of single-syllable spoken words.
 - d. Isolate and pronounce the initial, medial vowel, and final sounds (phonemes) in three-phoneme (consonant-vowel-consonant, or CVC) words.* (This does not include CVCs ending with /l/, /r/, or /x/.)
 - e. Add or substitute individual sounds (phonemes) in simple, one-syllable words to make new words.
2. Demonstrate understanding of spoken words, syllables, and sounds (phonemes).
 - a. Distinguish long from short vowel sounds in spoken single-syllable words.
 - b. Orally produce single-syllable words by blending sounds (phonemes), including consonant blends.
 - c. Isolate and pronounce initial, medial vowel, and final sounds (phonemes) in spoken single-syllable words.
 - d. Segment spoken single-syllable words into their complete sequence of individual sounds (phonemes).

*Words, syllables, or phonemes written in /slashes/ refer to their pronunciation or phonology. Thus, /CVC/ is a word with three phonemes regardless of the number of letters in the spelling of the word.

Reading Standards: Foundational Skills (K-5)

RF

Note: In kindergarten children are expected to demonstrate increasing awareness and competence in the areas that follow.

Kindergartners: Phonics and Word Recognition

3. Know and apply grade-level phonics and word analysis skills in decoding words.
 - a. Demonstrate basic knowledge of one-to-one letter-sound correspondences by producing the primary or many of the most frequent sound for each consonant.
 - b. Associate the long and short sounds with common spellings (graphemes) for the five major vowels.
 - c. Read common high-frequency words by sight (e.g., *the, of, to, you, she, my, is, are, do, does*).
 - d. Distinguish between similarly spelled words by identifying the sounds of the letters that differ.

Grade 1 students:

3. Know and apply grade-level phonics and word analysis skills in decoding words.
 - a. Know the spelling-sound correspondences for common consonant digraphs.
 - b. Decode regularly spelled one-syllable words.
 - c. Know final -e and common vowel team conventions for representing long vowel sounds.
 - d. Use knowledge that every syllable must have a vowel sound to determine the number of syllables in a printed word.
 - e. Decode two-syllable words following basic patterns by breaking the words into syllables.
 - f. Read words with inflectional endings.
 - g. Recognize and read grade-appropriate irregularly spelled words.

Grade 2 students:

3. Know and apply grade-level phonics and word analysis skills in decoding words.
 - a. Distinguish long and short vowels when reading regularly spelled one-syllable words.
 - b. Know spelling-sound correspondences for additional common vowel teams.
 - c. Decode regularly spelled two-syllable words with long vowels.
 - d. Decode words with common prefixes and suffixes.
 - e. Identify words with inconsistent but common spelling-sound correspondences.
 - f. Recognize and read grade-appropriate irregularly spelled words.

Fluency

4. Read emergent-reader texts with purpose and understanding.
 4. Read with sufficient accuracy and fluency to support comprehension.
 - a. Read on-level text with purpose and understanding.
 - b. Read on-level text orally with accuracy, appropriate rate, and expression on successive readings.
 - c. Use context to confirm or self-correct word recognition and understanding, rereading as necessary.

Reading Standards: Foundational Skills (K-5)

RF

Grade 3 students:

Phonics and Word Recognition

3. Know and apply grade-level phonics and word analysis skills in decoding words.
 - a. Identify and know the meaning of the most common prefixes and derivational suffixes.
 - b. Decode words with common Latin suffixes.
 - c. Decode multisyllable words.
 - d. Read grade-appropriate irregularly spelled words.

Grade 4 students:

3. Know and apply grade-level phonics and word analysis skills in decoding words.
 - a. Use combined knowledge of all letter-sound correspondences, syllabication patterns, and morphology (e.g., roots and affixes) to read accurately unfamiliar multisyllabic words in context and out of context.

Grade 5 students:

3. Know and apply grade-level phonics and word analysis skills in decoding words.
 - a. Use combined knowledge of all letter-sound correspondences, syllabication patterns, and morphology (e.g., roots and affixes) to read accurately unfamiliar multisyllabic words in context and out of context.

Fluency

4. Read with sufficient accuracy and fluency to support comprehension.
 - a. Read on-level text with purpose and understanding.
 - b. Read on-level prose and poetry orally with accuracy, appropriate rate, and expression on successive readings
 - c. Use context to confirm or self-correct word recognition and understanding, rereading as necessary.

4. Read with sufficient accuracy and fluency to support comprehension.
 - a. Read on-level text with purpose and understanding.
 - b. Read on-level prose and poetry orally with accuracy, appropriate rate, and expression on successive readings.
 - c. Use context to confirm or self-correct word recognition and understanding, rereading as necessary.

4. Read with sufficient accuracy and fluency to support comprehension.
 - a. Read on-level text with purpose and understanding.
 - b. Read on-level prose and poetry orally with accuracy, appropriate rate, and expression on successive readings.
 - c. Use context to confirm or self-correct word recognition and understanding, rereading as necessary.

College and Career Readiness Anchor Standards for Writing

The K-5 standards on the following pages define what students should understand and be able to do by the end of each grade. They correspond to the College and Career Readiness (CCR) anchor standards below by number. The CCR and grade-specific standards are necessary complements—the former providing broad standards, the latter providing additional specificity—that together define the skills and understandings that all students must demonstrate.

Text Types and Purposes*

1. Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.
2. Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content.
3. Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences.

Production and Distribution of Writing

4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
5. Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.
6. Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others.

Research to Build and Present Knowledge

7. Conduct short as well as more sustained research projects based on focused questions, demonstrating understanding of the subject under investigation.
8. Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.
9. Draw evidence from literary or informational texts to support analysis, reflection, and research.

Range of Writing

10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.

Note on range and content of student writing

To build a foundation for college and career readiness, students need to learn to use writing as a way of offering and supporting opinions, demonstrating understanding of the subjects they are studying, and conveying real and imagined experiences and events. They learn to appreciate that a key purpose of writing is to communicate clearly to an external, sometimes unfamiliar audience, and they begin to adapt the form and content of their writing to accomplish a particular task and purpose. They develop the capacity to build knowledge on a subject through research projects and to respond analytically to literary and informational sources. To meet these goals, students must devote significant time and effort to writing, producing numerous pieces over short and extended time frames throughout the year.

*These broad types of writing include many subgenres. See Appendix A for definitions of key writing types.

Writing Standards K-5

W

The following standards for K-5 offer a focus for instruction each year to help ensure that students gain adequate mastery of a range of skills and applications. Each year in their writing, students should demonstrate increasing sophistication in all aspects of language use, from vocabulary and syntax to the development and organization of ideas, and they should address increasingly demanding content and sources. *Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades.* The expected growth in student writing ability is reflected both in the standards themselves and in the collection of annotated student writing samples in Appendix C.

Kindergartners:

Grade 1 students:

Grade 2 students:

Text Types and Purposes

- | | | | | | |
|----|---|----|---|----|---|
| 1. | Use a combination of drawing, dictating, and writing to compose opinion pieces in which they tell a reader the topic or the name of the book they are writing about and state an opinion or preference about the topic or book (e.g., <i>My favorite book is . . .</i>). | 1. | Write opinion pieces in which they introduce the topic or name the book they are writing about, state an opinion, supply reasons that support the opinion, and provide some sense of closure. | 1. | Write opinion pieces in which they introduce the topic or book they are writing about, state an opinion, supply reasons that support the opinion, use linking words (e.g., <i>because, and, also</i>) to connect opinion and reasons, and provide a concluding statement or section. |
| 2. | Use a combination of drawing, dictating, and writing to compose informative/explanatory texts in which they name what they are writing about and supply some information about the topic. | 2. | Write informative/explanatory texts in which they name a topic, supply some facts about the topic, and provide some sense of closure. | 2. | Write informative/explanatory texts in which they introduce a topic, use facts and definitions to develop points, and provide a concluding statement or section. |
| 3. | Use a combination of drawing, dictating, and writing to narrate a single event or several loosely linked events, tell about the events in the order in which they occurred, and provide a reaction to what happened. | 3. | Write narratives in which they recount two or more appropriately sequenced events, include some details regarding what happened, use temporal words to signal event order, and provide some sense of closure. | 3. | Write narratives in which they recount a well-elaborated event or short sequence of events, include details to describe actions, thoughts, and feelings, use temporal words to signal event order, and provide a sense of closure. |

Production and Distribution of Writing

- | | | | |
|----|--|----|--|
| 4. | (Begins in grade 3) | 4. | (Begins in grade 3) |
| 5. | With guidance and support from adults, respond to questions and suggestions from peers and add details to strengthen writing as needed. | 5. | With guidance and support from adults and peers, focus on a topic and strengthen writing as needed by revising and editing. |
| 6. | With guidance and support from adults, explore a variety of digital tools to produce and publish writing, including in collaboration with peers. | 6. | With guidance and support from adults, use a variety of digital tools to produce and publish writing, including in collaboration with peers. |

Research to Build and Present Knowledge

- | | | | | | |
|----|--|----|---|----|--|
| 7. | Participate in shared research and writing projects (e.g., explore a number of books by a favorite author and express opinions about them). | 7. | Participate in shared research and writing projects (e.g., explore a number of "how-to" books on a given topic and use them to write a sequence of instructions). | 7. | Participate in shared research and writing projects (e.g., read a number of books on a single topic to produce a report; record science observations). |
| 8. | With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question. | 8. | With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question. | 8. | Recall information from experiences or gather information from provided sources to answer a question. |

9. (Begins in grade 4)

9. (Begins in grade 4)

9. (Begins in grade 4)

Range of Writing

10. (Begins in grade 3)

10. (Begins in grade 3)

10. (Begins in grade 3)

Writing Standards K-5

W

Grade 3 students:

Text Types and Purposes

1. Write opinion pieces on topics or texts, supporting a point of view with reasons.
 - a. Introduce the topic or text they are writing about, state an opinion, and create an organizational structure that lists reasons.
 - b. Provide reasons that support the opinion.
 - c. Use linking words and phrases (e.g., *because*, *therefore*, *since*, *for example*) to connect opinion and reasons.
 - d. Provide a concluding statement or section.

Grade 4 students:

1. Write opinion pieces on topics or texts, supporting a point of view with reasons and information.
 - a. Introduce a topic or text clearly, state an opinion, and create an organizational structure in which related ideas are grouped to support the writer's purpose.
 - b. Provide reasons that are supported by facts and details.
 - c. Link opinion and reasons using words and phrases (e.g., *for instance*, *in order to*, *in addition*).
 - d. Provide a concluding statement or section related to the opinion presented.

Grade 5 students:

1. Write opinion pieces on topics or texts, supporting a point of view with reasons and information.
 - a. Introduce a topic or text clearly, state an opinion, and create an organizational structure in which ideas are logically grouped to support the writer's purpose.
 - b. Provide logically ordered reasons that are supported by facts and details.
 - c. Link opinion and reasons using words, phrases, and clauses (e.g., *consequently*, *specifically*).
 - d. Provide a concluding statement or section related to the opinion presented.

2. Write informative/explanatory texts to examine a topic and convey ideas and information clearly.
 - a. Introduce a topic and group related information together; include illustrations when useful to aiding comprehension.
 - b. Develop the topic with facts, definitions, and details.
 - c. Use linking words and phrases (e.g., *also*, *another*, *and*, *more*, *but*) to connect ideas within categories of information.
 - d. Provide a concluding statement or section.

2. Write informative/explanatory texts to examine a topic and convey ideas and information clearly.
 - a. Introduce a topic clearly and group related information in paragraphs and sections; include formatting (e.g., headings), illustrations, and multimedia when useful to aiding comprehension.
 - b. Develop the topic with facts, definitions, concrete details, quotations, or other information and examples related to the topic.
 - c. Link ideas within categories of information using words and phrases (e.g., *another*, *for example*, *also*, *because*).
 - d. Use precise language and domain-specific vocabulary to inform about or explain the topic.
 - e. Provide a concluding statement or section related to the information or explanation presented.

2. Write informative/explanatory texts to examine a topic and convey ideas and information clearly.
 - a. Introduce a topic clearly, provide a general observation and focus, and group related information logically; include formatting (e.g., headings), illustrations, and multimedia when useful to aiding comprehension.
 - b. Develop the topic with facts, definitions, concrete details, quotations, or other information and examples related to the topic.
 - c. Link ideas within and across categories of information using words, phrases, and clauses (e.g., *in contrast*, *especially*).
 - d. Use precise language and domain-specific vocabulary to inform about or explain the topic.
 - e. Provide a concluding statement or section related to the information or explanation presented.

3. Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.
 - a. Establish a situation and introduce a narrator and/or characters; organize an event sequence that unfolds naturally.
 - b. Use dialogue and descriptions of actions, thoughts, and feelings to develop experiences and events or show the response of characters to situations.
 - c. Use temporal words and phrases to signal event order.
 - d. Provide a sense of closure.

3. Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.
 - a. Orient the reader by establishing a situation and introducing a narrator and/or characters; organize an event sequence that unfolds naturally.
 - b. Use dialogue and description to develop experiences and events or show the responses of characters to situations.
 - c. Use a variety of transitional words and phrases to manage the sequence of events.
 - d. Use concrete words and phrases and sensory details to convey experiences and events precisely.
 - e. Provide a conclusion that follows from the narrated experiences or events.

3. Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.
 - a. Orient the reader by establishing a situation and introducing a narrator and/or characters; organize an event sequence that unfolds naturally.
 - b. Use narrative techniques, such as dialogue, description, and pacing, to develop experiences and events or show the responses of characters to situations.
 - c. Use a variety of transitional words, phrases, and clauses to manage the sequence of events.
 - d. Use concrete words and phrases and sensory details to convey experiences and events precisely.
 - e. Provide a conclusion that follows from the narrated experiences or events.

Writing Standards K-5

W

Grade 3 students:

Production and Distribution of Writing

4. With guidance and support from adults, produce writing in which the development and organization are appropriate to task and purpose. (Grade-specific expectations for writing types are defined in standards 1-3 above.)
5. With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, and editing. (Editing for conventions should demonstrate command of Language standards 1-3 up to and including grade 3 on pages 28 and 29.)
6. With guidance and support from adults, use technology to produce and publish writing (using keyboarding skills) as well as to interact and collaborate with others.

Grade 4 students:

4. Produce clear and coherent writing in which the development and organization are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1-3 above.)
5. With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, and editing. (Editing for conventions should demonstrate command of Language standards 1-3 up to and including grade 4 on pages 28 and 29.)
6. With some guidance and support from adults, use technology, including the internet, to produce and publish writing as well as to interact and collaborate with others; demonstrate sufficient command of keyboarding skills to type a minimum of one page in a single sitting.

Grade 5 students:

4. Produce clear and coherent writing in which the development and organization are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1-3 above.)
5. With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach. (Editing for conventions should demonstrate command of Language standards 1-3 up to and including grade 5 on pages 28 and 29.)
6. With some guidance and support from adults, use technology, including the internet, to produce and publish writing as well as to interact and collaborate with others; demonstrate sufficient command of keyboarding skills to type a minimum of two pages in a single sitting.

Research to Build and Present Knowledge

7. Conduct short research projects that build knowledge about a topic.
8. Recall information from experiences or gather information from print and digital sources; take brief notes on sources and sort evidence into provided categories.
9. (Begins in grade 4)

7. Conduct short research projects that build knowledge through investigation of different aspects of a topic.

8. Recall relevant information from experiences or gather relevant information from print and digital sources; take notes and categorize information, and provide a list of sources.

9. Draw evidence from literary or informational texts to support analysis, reflection, and research.
 - a. Apply *grade 4 Reading standards* to literature (e.g., "Describe in depth a character, setting, or event in a story or drama, drawing on specific details in the text [e.g., a character's thoughts, words, or actions]").
 - b. Apply *grade 4 Reading standards* to informational texts (e.g., "Explain how an author uses reasons and evidence to support particular points in a text").

9. Draw evidence from literary or informational texts to support analysis, reflection, and research.
 - a. Apply *grade 5 Reading standards* to literature (e.g., "Compare and contrast two or more characters, settings, or events in a story or a drama, drawing on specific details in the text [e.g., how characters interact]").
 - b. Apply *grade 5 Reading standards* to informational texts (e.g., "Explain how an author uses reasons and evidence to support particular points in a text, identifying which reasons and evidence support which point[s]").

Range of Writing

10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.

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10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.

College and Career Readiness Anchor Standards for Speaking and Listening

The K-5 standards on the following pages define what students should understand and be able to do by the end of each grade. They correspond to the College and Career Readiness (CCR) anchor standards below by number. The CCR and grade-specific standards are necessary complements—the former providing broad standards, the latter providing additional specificity—that together define the skills and understandings that all students must demonstrate.

Comprehension and Collaboration

1. Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively.
2. Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally.
3. Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric.

Presentation of Knowledge and Ideas

4. Present information, findings, and supporting evidence such that listeners can follow the line of reasoning and the organization, development, and style are appropriate to task, purpose, and audience.
5. Make strategic use of digital media and visual displays of data to express information and enhance understanding of presentations.
6. Adapt speech to a variety of contexts and communicative tasks, demonstrating command of formal English when indicated or appropriate.

Note on range and content of student speaking and listening

To build a foundation for college and career readiness, students must have ample opportunities to take part in a variety of rich, structured conversations—as part of a whole class, in small groups, and with a partner. Being productive members of these conversations requires that students contribute accurate, relevant information; respond to and develop what others have said; make comparisons and contrasts; and analyze and synthesize a multitude of ideas in various domains.

New technologies have broadened and expanded the role that speaking and listening play in acquiring and sharing knowledge and have tightened their link to other forms of communication. Digital texts confront students with the potential for continually updated content and dynamically changing combinations of words, graphics, images, hyperlinks, and embedded video and audio.

Speaking and Listening Standards K-5

SL

The following standards for K-5 offer a focus for instruction each year to help ensure that students gain adequate mastery of a range of skills and applications. *Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades.*

Kindergartners:

Comprehension and Collaboration

- Participate in collaborative conversations with diverse partners about *kindergarten topics and texts* with peers and adults in small and larger groups.
 - Follow agreed-upon rules for discussions (e.g., listening to others and taking turns speaking about the topics and texts under discussion).
 - Continue a conversation through multiple exchanges.

Grade 1 students:

- Participate in collaborative conversations with diverse partners about *grade 1 topics and texts* with peers and adults in small and larger groups.
 - Follow agreed-upon rules for discussions (e.g., listening to others with care, speaking one at a time about the topics and texts under discussion).
 - Build on others' talk in conversations by responding to the comments of others through multiple exchanges.
 - Ask questions to clear up any confusion about the topics and texts under discussion.

Grade 2 students:

- Participate in collaborative conversations with diverse partners about *grade 2 topics and texts* with peers and adults in small and larger groups.
 - Follow agreed-upon rules for discussions (e.g., gaining the floor in respectful ways, listening to others with care, speaking one at a time about the topics and texts under discussion).
 - Build on others' talk in conversations by linking their comments to the remarks of others.
 - Ask for clarification and further explanation as needed about the topics and texts under discussion.
- Confirm understanding of a text read aloud or information presented orally or through other media by asking and answering questions about key details and requesting clarification if something is not understood.
- Ask and answer questions in order to seek help, get information, or clarify something that is not understood.
 - Ask and answer questions about what a speaker says in order to gather additional information or clarify something that is not understood.
 - Ask and answer questions about key details in a text read aloud or information presented orally or through other media.
 - Ask and answer questions about what a speaker says in order to clarify comprehension, gather additional information, or deepen understanding of a topic or issue.

Presentation of Knowledge and Ideas

- Describe familiar people, places, things, and events and, with prompting and support, provide additional detail.
- Add drawings or other visual displays to descriptions as desired to provide additional detail.
- Speak audibly and express thoughts, feelings, and ideas clearly.
 - Describe people, places, things, and events with relevant details, expressing ideas and feelings clearly.
 - Add drawings or other visual displays to descriptions when appropriate to clarify ideas, thoughts, and feelings.
 - Produce complete sentences when appropriate to task and situation. (See grade 1 Language standards 1 and 3 on page 26 for specific expectations.)
- Speak audibly and express thoughts, feelings, and ideas clearly.
 - Describe people, places, things, and events with relevant details, expressing ideas and feelings clearly.
 - Add drawings or other visual displays to descriptions when appropriate to clarify ideas, thoughts, and feelings.
 - Produce complete sentences when appropriate to task and situation. (See grade 1 Language standards 1 and 3 on page 26 for specific expectations.)
- Speak audibly and express thoughts, feelings, and ideas clearly.
 - Describe people, places, things, and events with relevant details, expressing ideas and feelings clearly.
 - Add drawings or other visual displays to descriptions when appropriate to clarify ideas, thoughts, and feelings.
 - Produce complete sentences when appropriate to task and situation. (See grade 1 Language standards 1 and 3 on page 26 for specific expectations.)
- Speak audibly and express thoughts, feelings, and ideas clearly.
 - Describe people, places, things, and events with relevant details, expressing ideas and feelings clearly.
 - Add drawings or other visual displays to descriptions when appropriate to clarify ideas, thoughts, and feelings.
 - Produce complete sentences when appropriate to task and situation. (See grade 1 Language standards 1 and 3 on page 26 for specific expectations.)

Speaking and Listening Standards K-5

SL

Grade 3 students:

Comprehension and Collaboration

1. Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *grade 3 topics and texts*, building on others' ideas and expressing their own clearly.
 - a. Come to discussions prepared, having read or studied required material; explicitly draw on that preparation and other information known about the topic to explore ideas under discussion.
 - b. Follow agreed-upon rules for discussions (e.g., gaining the floor in respectful ways, listening to others with care, speaking one at a time about the topics and texts under discussion).
 - c. Ask questions to check understanding of information presented, stay on topic, and link their comments to the remarks of others.
 - d. Explain their own ideas and understanding in light of the discussion.
2. Determine the main ideas and supporting details of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.
3. Ask and answer questions about information from a speaker, offering appropriate elaboration and detail.

Presentation of Knowledge and Ideas

4. Report on a topic or text, tell a story, or recount an experience with appropriate facts and relevant, descriptive details, speaking clearly at an understandable pace.
5. Create engaging audio recordings of stories or poems that demonstrate fluid reading at an understandable pace; add visual displays when appropriate to emphasize or enhance certain facts or details.
6. Speak in complete sentences when appropriate to task and situation in order to provide requested detail or clarification. (See grade 3 Language standards 1 and 3 on pages 28 and 29 for specific expectations.)

Grade 4 students:

1. Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *grade 4 topics and texts*, building on others' ideas and expressing their own clearly.
 - a. Come to discussions prepared, having read or studied required material; explicitly draw on that preparation and other information known about the topic to explore ideas under discussion.
 - b. Follow agreed-upon rules for discussions and carry out assigned roles.
 - c. Pose and respond to specific questions to clarify or follow up on information, and make comments that contribute to the discussion and link to the remarks of others.
 - d. Review the key ideas expressed and explain their own ideas and understanding in light of the discussion.
2. Paraphrase portions of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.
3. Identify the reasons and evidence a speaker provides to support particular points.

Grade 5 students:

1. Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *grade 5 topics and texts*, building on others' ideas and expressing their own clearly.
 - a. Come to discussions prepared, having read or studied required material; explicitly draw on that preparation and other information known about the topic to explore ideas under discussion.
 - b. Follow agreed-upon rules for discussions and carry out assigned roles.
 - c. Pose and respond to specific questions by making comments that contribute to the discussion and elaborate on the remarks of others.
 - d. Review the key ideas expressed and draw conclusions in light of information and knowledge gained from the discussions.
2. Summarize a written text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.
3. Summarize the points a speaker makes and explain how each claim is supported by reasons and evidence.

4. Report on a topic or text, tell a story, or recount an experience in an organized manner, using appropriate facts and relevant, descriptive details to support main ideas or themes; speak clearly at an understandable pace.
5. Add audio recordings and visual displays to presentations when appropriate to enhance the development of main ideas or themes.
6. Differentiate between contexts that call for formal English (e.g., presenting ideas) and situations where informal discourse is appropriate (e.g., small-group discussion); use formal English when appropriate to task and situation. (See grade 4 Language standards 1 on pages 28 and 29 for specific expectations.)

4. Report on a topic or text or present an opinion, sequencing ideas logically and using appropriate facts and relevant, descriptive details to support main ideas or themes; speak clearly at an understandable pace.
5. Include multimedia components (e.g., graphics, sound) and visual displays in presentations when appropriate to enhance the development of main ideas or themes.
6. Adapt speech to a variety of contexts and tasks, using formal English when appropriate to task and situation. (See grade 5 Language standards 1 and 3 on pages 28 and 29 for specific expectations.)

College and Career Readiness Anchor Standards for Language

The K–5 standards on the following pages define what students should understand and be able to do by the end of each grade. They correspond to the College and Career Readiness (CCR) anchor standards below by number. The CCR and grade-specific standards are necessary complements—the former providing broad standards, the latter providing additional specificity—that together define the skills and understandings that all students must demonstrate.

Conventions of Standard English

1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.

Knowledge of Language

3. Apply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading or listening.

Vocabulary Acquisition and Use

4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases by using context clues, analyzing meaningful word parts, and consulting general and specialized reference materials, as appropriate.
5. Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.
6. Acquire and use accurately a range of general academic and domain-specific words and phrases sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when encountering an unknown term important to comprehension or expression.

Note on range and content of student language use

To build a foundation for college and career readiness in language, students must gain control over many conventions of standard English grammar, usage, and mechanics as well as learn other ways to use language to convey meaning effectively. They must also be able to determine or clarify the meaning of grade-appropriate words encountered through listening, reading, and media use; come to appreciate that words have nonliteral meanings, shadings of meaning, and relationships to other words; and expand their vocabulary in the course of studying content. The inclusion of Language standards in their own strand should not be taken as an indication that skills related to conventions, effective language use, and vocabulary are unimportant to reading, writing, speaking, and listening; indeed, they are inseparable from such contexts.

Language Standards K-5

L

The following standards for grades K-5 offer a focus for instruction each year to help ensure that students gain adequate mastery of a range of skills and applications. *Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades.* Beginning in grade 3, skills and understandings that are particularly likely to require continued attention in higher grades as they are applied to increasingly sophisticated writing and speaking are marked with an asterisk (*). See the table on page 30 for a complete list and Appendix A for an example of how these skills develop in sophistication.

Kindergartners:

Conventions of Standard English

1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
 - a. Print many upper- and lowercase letters.
 - b. Use frequently occurring nouns and verbs.
 - c. Form regular plural nouns orally by adding /s/ or /es/ (e.g., *dog, dogs; wish, wishes*).
 - d. Understand and use question words (interrogatives) (e.g., *who, what, where, when, why, how*).
 - e. Use the most frequently occurring prepositions (e.g., *to, from, in, out, on, off, for, of, by, with*).
 - f. Produce and expand complete sentences in shared language activities.

Grade 1 students:

1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
 - a. Print all upper- and lowercase letters.
 - b. Use common, proper, and possessive nouns.
 - c. Use singular and plural nouns with matching verbs in basic sentences (e.g., *He hops; We hop*).
 - d. Use personal, possessive, and indefinite pronouns (e.g., *I, me, my; they, them, their; anyone, everything*).
 - e. Use verbs to convey a sense of past, present, and future (e.g., *Yesterday I walked home; Today I walk home; Tomorrow I will walk home*).
 - f. Use frequently occurring adjectives.
 - g. Use frequently occurring conjunctions (e.g., *and, but, or, so, because*).
 - h. Use determiners (e.g., articles, demonstratives).
 - i. Use frequently occurring prepositions (e.g., *during, beyond, toward*).
 - j. Produce and expand complete simple and compound declarative, interrogative, imperative, and exclamatory sentences in response to prompts.
2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
 - a. Capitalize dates and names of people.
 - b. Use end punctuation for sentences.
 - c. Use commas in dates and to separate single words in a series.
 - d. Use conventional spelling for words with common spelling patterns and for frequently occurring irregular words.
 - e. Spell untaught words phonetically, drawing on phonemic awareness and spelling conventions.

Grade 2 students:

1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
 - a. Use collective nouns (e.g., *group*).
 - b. Form and use frequently occurring irregular plural nouns (e.g., *feet, children, teeth, mice, fish*).
 - c. Use reflexive pronouns (e.g., *myself, ourselves*).
 - d. Form and use the past tense of frequently occurring irregular verbs (e.g., *sat, hid, told*).
 - e. Use adjectives and adverbs, and choose between them depending on what is to be modified.
 - f. Produce, expand, and rearrange complete simple and compound sentences (e.g., *The boy watched the movie; The little boy watched the movie; The action movie was watched by the little boy*).
2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
 - a. Capitalize holidays, product names, and geographic names.
 - b. Use commas in greetings and closings of letters.
 - c. Use an apostrophe to form contractions and frequently occurring possessives.
 - d. Generalize learned spelling patterns when writing words (e.g., *cage → badge; boy → boil*).
 - e. Consult reference materials, including beginning dictionaries, as needed to check and correct spellings.

2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
 - a. Capitalize the first word in a sentence and the pronoun *I*.
 - b. Recognize and name end punctuation.
 - c. Write a letter or letters for most consonant and short-vowel sounds (phonemes).
 - d. Spell simple words phonetically, drawing on knowledge of sound-letter relationships.

2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
 - a. Capitalize dates and names of people.
 - b. Use end punctuation for sentences.
 - c. Use commas in dates and to separate single words in a series.
 - d. Use conventional spelling for words with common spelling patterns and for frequently occurring irregular words.
 - e. Spell untaught words phonetically, drawing on phonemic awareness and spelling conventions.

2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
 - a. Capitalize holidays, product names, and geographic names.
 - b. Use commas in greetings and closings of letters.
 - c. Use an apostrophe to form contractions and frequently occurring possessives.
 - d. Generalize learned spelling patterns when writing words (e.g., *cage → badge; boy → boil*).
 - e. Consult reference materials, including beginning dictionaries, as needed to check and correct spellings.

Language Standards K-5

L

Kindergartners:

Knowledge of Language

3. (Begins in grade 2)

Vocabulary Acquisition and Use

4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on *kindergarten reading and content*.
- Identify new meanings for familiar words and apply them accurately (e.g., knowing *duck* is a bird and learning the verb *to duck*).
 - Use the most frequently occurring inflections and affixes (e.g., *-ed*, *-s*, *re-*, *un-*, *pre-*, *-ful*, *-less*) as a clue to the meaning of an unknown word.

Grade 1 students:

3. (Begins in grade 2)

4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on *grade 1 reading and content*, choosing flexibly from an array of strategies.
- Use sentence-level context as a clue to the meaning of a word or phrase.
 - Use frequently occurring affixes as a clue to the meaning of a word.
 - Identify frequently occurring root words (e.g., *look*) and their inflectional forms (e.g., *looks*, *looked*, *looking*).

Grade 2 students:

3. Use knowledge of language and its conventions when writing, speaking, reading, or listening.
- Compare formal and informal uses of English.

4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on *grade 2 reading and content*, choosing flexibly from an array of strategies.
- Use sentence-level context as a clue to the meaning of a word or phrase.
 - Determine the meaning of the new word formed when a known prefix is added to a known word (e.g., *happy/unhappy*, *tell/retell*).
 - Use a known root word as a clue to the meaning of an unknown word with the same root (e.g., *addition*, *additional*).
 - Use knowledge of the meaning of individual words to predict the meaning of compound words (e.g., *birdhouse*, *lighthouse*, *housefly*; *bookshelf*, *notebook*, *bookmark*).
 - Use glossaries and beginning dictionaries, both print and digital, to determine or clarify the meaning of words and phrases.

5. With guidance and support from adults, explore word relationships and nuances in word meanings.
- Sort common objects into categories (e.g., shapes, foods) to gain a sense of the concepts the categories represent.
 - Demonstrate understanding of frequently occurring verbs and adjectives by relating them to their opposites (antonyms).
 - Identify real-life connections between words and their use (e.g., note places at school that are *colorful*).
 - Distinguish shades of meaning among verbs describing the same general action (e.g., *walk*, *march*, *strut*, *prance*) by acting out the meanings.

6. Use words and phrases acquired through conversations, reading and being read to, and responding to texts.

5. With guidance and support from adults, demonstrate understanding of word relationships and nuances in word meanings.
- Sort words into categories (e.g., colors, clothing) to gain a sense of the concepts the categories represent.
 - Define words by category and by one or more key attributes (e.g., a *duck* is a bird that swims; a *tiger* is a large cat with stripes).
 - Identify real-life connections between words and their use (e.g., note places at home that are *cozy*).
 - Distinguish shades of meaning among verbs differing in manner (e.g., *look*, *peek*, *glance*, *stare*, *glare*, *scow*) and adjectives differing in intensity (e.g., *large*, *gigantic*) by defining or choosing them or by acting out the meanings.

6. Use words and phrases acquired through conversations, reading and being read to, and responding to texts, including using frequently occurring conjunctions to signal simple relationships (e.g., *because*).

5. Demonstrate understanding of word relationships and nuances in word meanings.
- Identify real-life connections between words and their use (e.g., describe foods that are *spicy* or *juicy*).
 - Distinguish shades of meaning among closely related verbs (e.g., *toss*, *throw*, *hurt*) and closely related adjectives (e.g., *thin*, *slender*, *skinny*, *scrawny*).

6. Use words and phrases acquired through conversations, reading and being read to, and responding to texts, including using adjectives and adverbs to describe (e.g., *When other kids are happy that makes me happy*).

Language Standards K-5

L

Grade 3 students: Conventions of Standard English

1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
 - a. Explain the function of nouns, pronouns, verbs, adjectives, and adverbs in general and their functions in particular sentences.
 - b. Form and use regular and irregular plural nouns.
 - c. Use abstract nouns (e.g., *childhood*).
 - d. Form and use regular and irregular verbs.
 - e. Form and use the simple (e.g., *I walked; I walk; I will walk*) verb tenses.
 - f. Ensure subject-verb and pronoun-antecedent agreement.*
 - g. Form and use comparative and superlative adjectives and adverbs, and choose between them depending on what is to be modified.
 - h. Use coordinating and subordinating conjunctions.
 - i. Produce simple, compound, and complex sentences.
2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
 - a. Capitalize appropriate words in titles.
 - b. Use commas in addresses.
 - c. Use commas and quotation marks in dialogue.
 - d. Form and use possessives.
 - e. Use conventional spelling for high-frequency and other studied words and for adding suffixes to base words (e.g., *sitting, smiled, cries, happiness*).
 - f. Use spelling patterns and generalizations (e.g., word families, position-based spellings, syllable patterns, ending rules, meaningful word parts) in writing words.
 - g. Consult reference materials, including beginning dictionaries, as needed to check and correct spellings.

Grade 4 students:

1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
 - a. Use relative pronouns (*who, whose, whom, which, that*) and relative adverbs (*where, when, why*).
 - b. Form and use the progressive (e.g., *I was walking; I am walking; I will be walking*) verb tenses.
 - c. Use modal auxiliaries (e.g., *can, may, must*) to convey various conditions.
 - d. Order adjectives within sentences according to conventional patterns (e.g., *a small red bag* rather than *a red small bag*).
 - e. Form and use prepositional phrases.
 - f. Produce complete sentences, recognizing and correcting inappropriate fragments and run-ons.*
 - g. Correctly use frequently confused words (e.g., *to, too, two; there, their*).*

Grade 5 students:

1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
 - a. Explain the function of conjunctions, prepositions, and interjections in general and their function in particular sentences.
 - b. Form and use the perfect (e.g., *I had walked; I have walked; I will have walked*) verb tenses.
 - c. Use verb tense to convey various times, sequences, states, and conditions.
 - d. Recognize and correct inappropriate shifts in verb tense.*
 - e. Use correlative conjunctions (e.g., *either/or, neither/nor*).
2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
 - a. Use punctuation to separate items in a series.*
 - b. Use a comma to separate an introductory element from the rest of the sentence.
 - c. Use a comma to set off the words *yes* and *no* (e.g., *Yes, thank you*), to set off a tag question from the rest of the sentence (e.g., *It's true, isn't it?*), and to indicate direct address (e.g., *Is that you, Steve?*).
 - d. Use underlining, quotation marks, or italics to indicate titles of works.
 - e. Spell grade-appropriate words correctly, consulting references as needed.

Language Standards K-5

L

Grade 3 students:

Knowledge of Language

3. Use knowledge of language and its conventions when writing, speaking, reading, or listening.
 - a. Choose words and phrases for effect.*
 - b. Recognize and observe differences between the conventions of spoken and written standard English.

Grade 4 students:

3. Use knowledge of language and its conventions when writing, speaking, reading, or listening.
 - a. Choose words and phrases to convey ideas precisely.*
 - b. Choose punctuation for effect.*
 - c. Differentiate between contexts that call for formal English (e.g., presenting ideas) and situations where informal discourse is appropriate (e.g., small-group discussion).

Grade 5 students:

3. Use knowledge of language and its conventions when writing, speaking, reading, or listening.
 - a. Expand, combine, and reduce sentences for meaning, reader/listener interest, and style.
 - b. Compare and contrast the varieties of English (e.g., dialects, registers) used in stories, dramas, or poems.

Vocabulary Acquisition and Use

4. Determine or clarify the meaning of unknown and multiple-meaning word and phrases based on *grade 3 reading and content*, choosing flexibly from a range of strategies.
 - a. Use sentence-level context as a clue to the meaning of a word or phrase.
 - b. Determine the meaning of the new word formed when a known affix is added to a known word (e.g., *agreeable/disagreeable*, *comfortable/uncomfortable*, *care/careless*, *heat/preheat*).
 - c. Use a known root word as a clue to the meaning of an unknown word with the same root (e.g., *company*, *companion*).
 - d. Use glossaries or beginning dictionaries, both print and digital, to determine or clarify the precise meaning of key words and phrases.

4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on *grade 4 reading and content*, choosing flexibly from a range of strategies.
 - a. Use context (e.g., definitions, examples, or restatements in text) as a clue to the meaning of a word or phrase.
 - b. Use common, grade-appropriate Greek and Latin affixes and roots as clues to the meaning of a word (e.g., *telegraph*, *photograph*, *autograph*).
 - c. Consult reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation and determine or clarify the precise meaning of key words and phrases.

4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on *grade 5 reading and content*, choosing flexibly from a range of strategies.

- a. Use context (e.g., cause/effect relationships and comparisons in text) as a clue to the meaning of a word or phrase.
- b. Use common, grade-appropriate Greek and Latin affixes and roots as clues to the meaning of a word (e.g., *photograph*, *photosynthesis*).
- c. Consult reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation and determine or clarify the precise meaning of key words and phrases.

5. Demonstrate understanding of word relationships and nuances in word meanings.
 - a. Distinguish the literal and nonliteral meanings of words and phrases in context (e.g., *take steps*).
 - b. Identify real-life connections between words and their use (e.g., describe people who are *friendly* or *helpful*).
 - c. Distinguish shades of meaning among related words that describe states of mind or degrees of certainty (e.g., *knew*, *believed*, *suspected*, *heard*, *wondered*).

5. Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.
 - a. Explain the meaning of simple similes and metaphors (e.g., *as pretty as a picture*) in context.
 - b. Recognize and explain the meaning of common idioms, adages, and proverbs.
 - c. Demonstrate understanding of words by relating them to their opposites (antonyms) and to words with similar but not identical meanings (synonyms).

5. Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.
 - a. Interpret figurative language, including similes and metaphors, in context.
 - b. Recognize and explain the meaning of common idioms, adages, and proverbs.
 - c. Use the relationship between particular words (e.g., synonyms, antonyms, homographs) to better understand each of the words.

6. Acquire and use accurately grade-appropriate conversational, general academic, and domain-specific words and phrases, including those that signal spatial and temporal relationships (e.g., *After dinner that night we went looking for them*).

6. Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal precise actions, emotions, or states of being (e.g., *quizzed*, *whined*, *stammered*) and that are basic to a particular topic (e.g., *wildlife*, *conservation*, and *endangered* when discussing animal preservation).

6. Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal contrast, addition, and other logical relationships (e.g., *however*, *although*, *nevertheless*, *similarly*, *moreover*, *in addition*).

Language Progressive Skills, by Grade

The following skills, marked with an asterisk (*) in Language standards 1-3, are particularly likely to require continued attention in higher grades as they are applied to increasingly sophisticated writing and speaking.

| Standard | Grade(s) | | | | | | | |
|--|----------|---|---|---|---|---|------|-------|
| | 3 | 4 | 5 | 6 | 7 | 8 | 9-10 | 11-12 |
| L.3.1f. Ensure subject-verb and pronoun-antecedent agreement. | | | | | | | | |
| L.3.3a. Choose words and phrases for effect. | | | | | | | | |
| L.4.1f. Produce complete sentences; recognizing and correcting inappropriate fragments and run-ons. | | | | | | | | |
| L.4.1g. Correctly use frequently confused words (e.g., <i>to/too/two</i> ; <i>there/their</i>). | | | | | | | | |
| L.4.3a. Choose words and phrases to convey ideas precisely.* | | | | | | | | |
| L.4.3b. Choose punctuation for effect. | | | | | | | | |
| L.5.1d. Recognize and correct inappropriate shifts in verb tense. | | | | | | | | |
| L.5.2a. Use punctuation to separate items in a series. ¹ | | | | | | | | |
| L.6.1c. Recognize and correct inappropriate shifts in pronoun number and person. | | | | | | | | |
| L.6.1d. Recognize and correct vague pronouns (i.e., ones with unclear or ambiguous antecedents). | | | | | | | | |
| L.6.1e. Recognize variations from standard English in their own and others' writing and speaking, and identify and use strategies to improve expression in conventional language. | | | | | | | | |
| L.6.2a. Use punctuation (commas, parentheses, dashes) to set off nonrestrictive/parenthetical elements. | | | | | | | | |
| L.6.3a. Vary sentence patterns for meaning, reader/listener interest, and style. ² | | | | | | | | |
| L.6.3b. Maintain consistency in style and tone. | | | | | | | | |
| L.7.1c. Place phrases and clauses within a sentence, recognizing and correcting misplaced and dangling modifiers. | | | | | | | | |
| L.7.3a. Choose language that expresses ideas precisely and concisely, recognizing and eliminating wordiness and redundancy. | | | | | | | | |
| L.8.1d. Recognize and correct inappropriate shifts in verb voice and mood. | | | | | | | | |
| L.9-10.1a. Use parallel structure. | | | | | | | | |

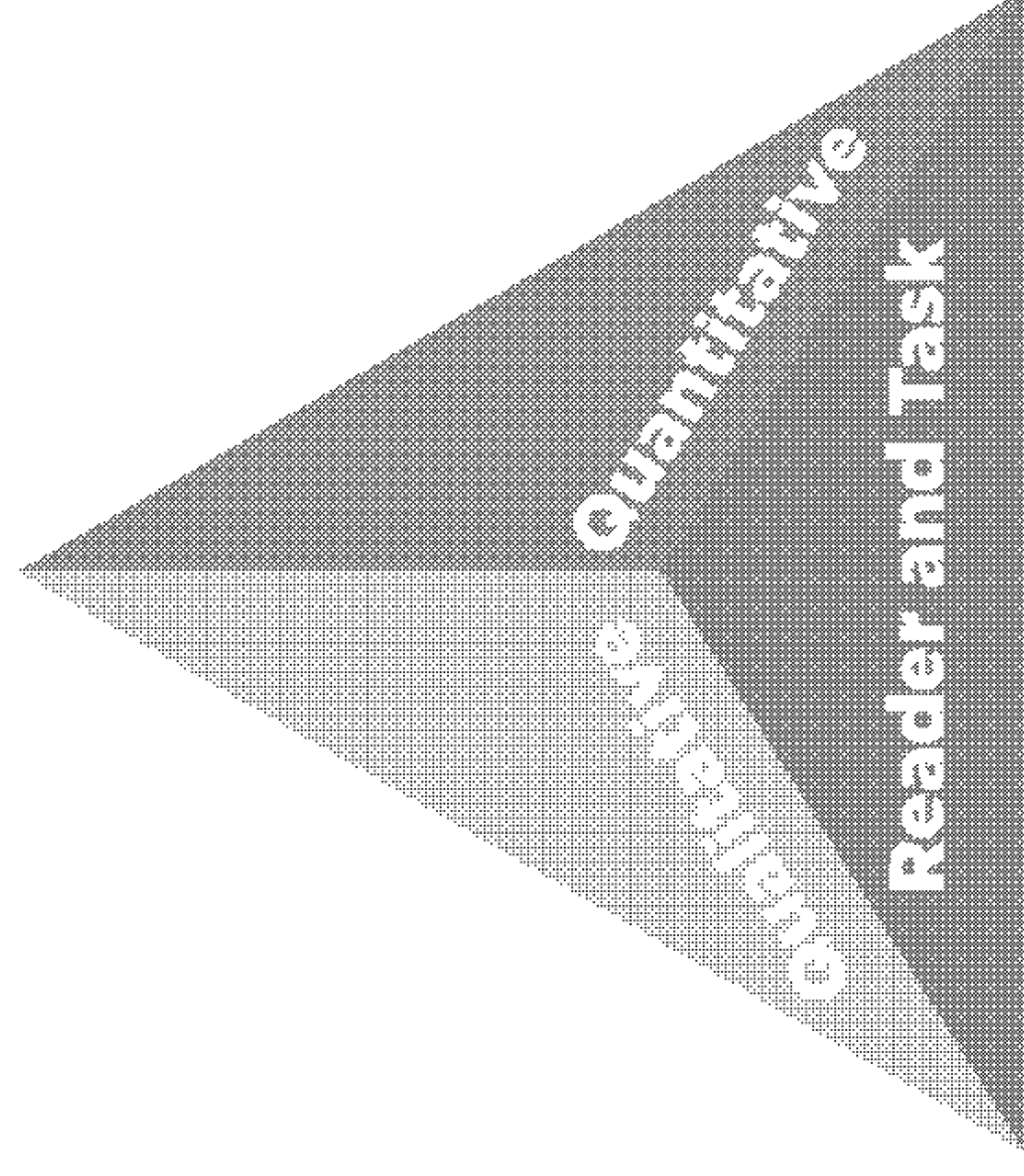
*Subsumed by L.7.3a

¹Subsumed by L.9-10.1a

²Subsumed by L.11-12.3a

Standard 10: Range, Quality, and Complexity of Student Reading K-5

Measuring Text Complexity: Three Factors



Qualitative evaluation of the text: Levels of meaning, structure, language conventionality and clarity, and knowledge demands

Quantitative evaluation of the text: Readability measures and other scores of text complexity

Matching reader to text and task: Reader variables (such as motivation, knowledge, and experiences) and task variables (such as purpose and the complexity generated by the task assigned and the questions posed)

Note: More detailed information on text complexity and how it is measured is contained in Appendix A.

Range of Text Types for K-5

Students in K-5 apply the Reading standards to the following range of text types, with texts selected from a broad range of cultures and periods.

| Literature | | Informational Text | |
|---|--|--|--|
| Stories | Dramas | Poetry | Literary Nonfiction and Historical, Scientific, and Technical Texts |
| Includes children's adventure stories, folktales, legends, fables, fantasy, realistic fiction, and myth | Includes staged dialogue and brief familiar scenes | Includes nursery rhymes and the subgenres of the narrative poem, limerick, and free verse poem | Includes biographies and autobiographies; books about history, social studies, science, and the arts; technical texts, including directions, forms, and information displayed in graphs, charts, or maps; and digital sources on a range of topics |

* Read-aloud
** Read-along

Texts Illustrating the Complexity, Quality, and Range of Student Reading K-5

| | Literature: Stories, Drama, Poetry | Informational Texts: Literary Nonfiction and Historical, Scientific, and Technical Texts |
|-----|---|--|
| K* | <ul style="list-style-type: none"> ▪ <i>Over in the Meadow</i> by John Langstaff (traditional) (c1800)* ▪ <i>A Boy, a Dog, and a Frog</i> by Mercer Mayer (1967) ▪ <i>Pancakes for Breakfast</i> by Tomie DePaola (1978) ▪ <i>A Story, A Story</i> by Gail E. Haley (1970)* ▪ <i>Kitten's First Full Moon</i> by Kevin Henkes (2004)* | <ul style="list-style-type: none"> ▪ <i>My Five Senses</i> by Ailiki (1962)** ▪ <i>Truck</i> by Donald Crews (1980) ▪ <i>I Read Signs</i> by Tana Hoban (1987) ▪ <i>What Do You Do With a Tail Like This?</i> by Steve Jenkins and Robin Page (2003)* ▪ <i>Amazing Whales!</i> by Sarah L. Thomson (2005)* |
| 1* | <ul style="list-style-type: none"> ▪ "Mix a Pancake" by Christina G. Rossetti (1893)** ▪ <i>Mr. Popper's Penguins</i> by Richard Atwater (1938)* ▪ <i>Little Bear</i> by Else Holmelund Minarik, illustrated by Maurice Sendak (1957)** ▪ <i>Frog and Toad Together</i> by Arnold Lobel (1971)** ▪ <i>Hill Fly Guy</i> by Tedd Arnold (2006) | <ul style="list-style-type: none"> ▪ <i>A Tree Is a Plant</i> by Clyde Robert Bulla, illustrated by Stacey Schuett (1960)** ▪ <i>Starfish</i> by Edith Thacher Hurd (1962) ▪ <i>Follow the Water from Brook to Ocean</i> by Arthur Dorros (1991)** ▪ <i>From Seed to Pumpkin</i> by Wendy Pfeffer, illustrated by James Graham Hale (2004)* ▪ <i>How People Learned to Fly</i> by Fran Hodgkins and True Kelley (2007)* |
| 2-3 | <ul style="list-style-type: none"> ▪ "Who Has Seen the Wind?" by Christina G. Rossetti (1893) ▪ <i>Charlotte's Web</i> by E. B. White (1952)* ▪ <i>Sarah, Plain and Tall</i> by Patricia MacLachlan (1985) ▪ <i>Tops and Bottoms</i> by Janet Stevens (1995) ▪ <i>Poppleton in Winter</i> by Cynthia Rylant, illustrated by Mark Teague (2001) | <ul style="list-style-type: none"> ▪ <i>A Medieval Feast</i> by Ailiki (1983) ▪ <i>From Seed to Plant</i> by Gail Gibbons (1991) ▪ <i>The Story of Ruby Bridges</i> by Robert Coles (1995)* ▪ <i>A Drop of Water: A Book of Science and Wonder</i> by Walter Wick (1997) ▪ <i>Moonshot: The Flight of Apollo 11</i> by Brian Floca (2009) |
| 4-5 | <ul style="list-style-type: none"> ▪ <i>Alice's Adventures in Wonderland</i> by Lewis Carroll (1865) ▪ "Casey at the Bat" by Ernest Lawrence Thayer (1888) ▪ <i>The Black Stallion</i> by Walter Farley (1941) ▪ "Zlateh the Goat" by Isaac Bashevis Singer (1984) ▪ <i>Where the Mountain Meets the Moon</i> by Grace Lin (2009) | <ul style="list-style-type: none"> ▪ <i>Discovering Mars: The Amazing Story of the Red Planet</i> by Melvin Berger (1992) ▪ <i>Hurricanes: Earth's Mightiest Storms</i> by Patricia Lauber (1996) ▪ <i>A History of US</i> by Joy Hakim (2005) ▪ <i>Horses</i> by Seymour Simon (2006) ▪ <i>Quest for the Tree Kangaroo: An Expedition to the Cloud Forest of New Guinea</i> by Sy Montgomery (2006) |

Note:

Given space limitations, the illustrative texts listed above are meant only to show individual titles that are representative of a wide range of topics and genres. (See Appendix B for excerpts of these and other texts illustrative of K-5 text complexity, quality, and range.) At a curricular or instructional level, within and across grade levels, texts need to be selected around topics or themes that generate knowledge and allow students to study those topics or themes in depth. On the next page is an example of progressions of texts building knowledge across grade levels.

*Children at the kindergarten and grade 1 levels should be expected to read texts independently that have been specifically written to correlate to their reading level and their word knowledge. Many of the titles listed above are meant to supplement carefully structured independent reading with books to read along with a teacher or that are read aloud to students to build knowledge and cultivate a joy in reading.

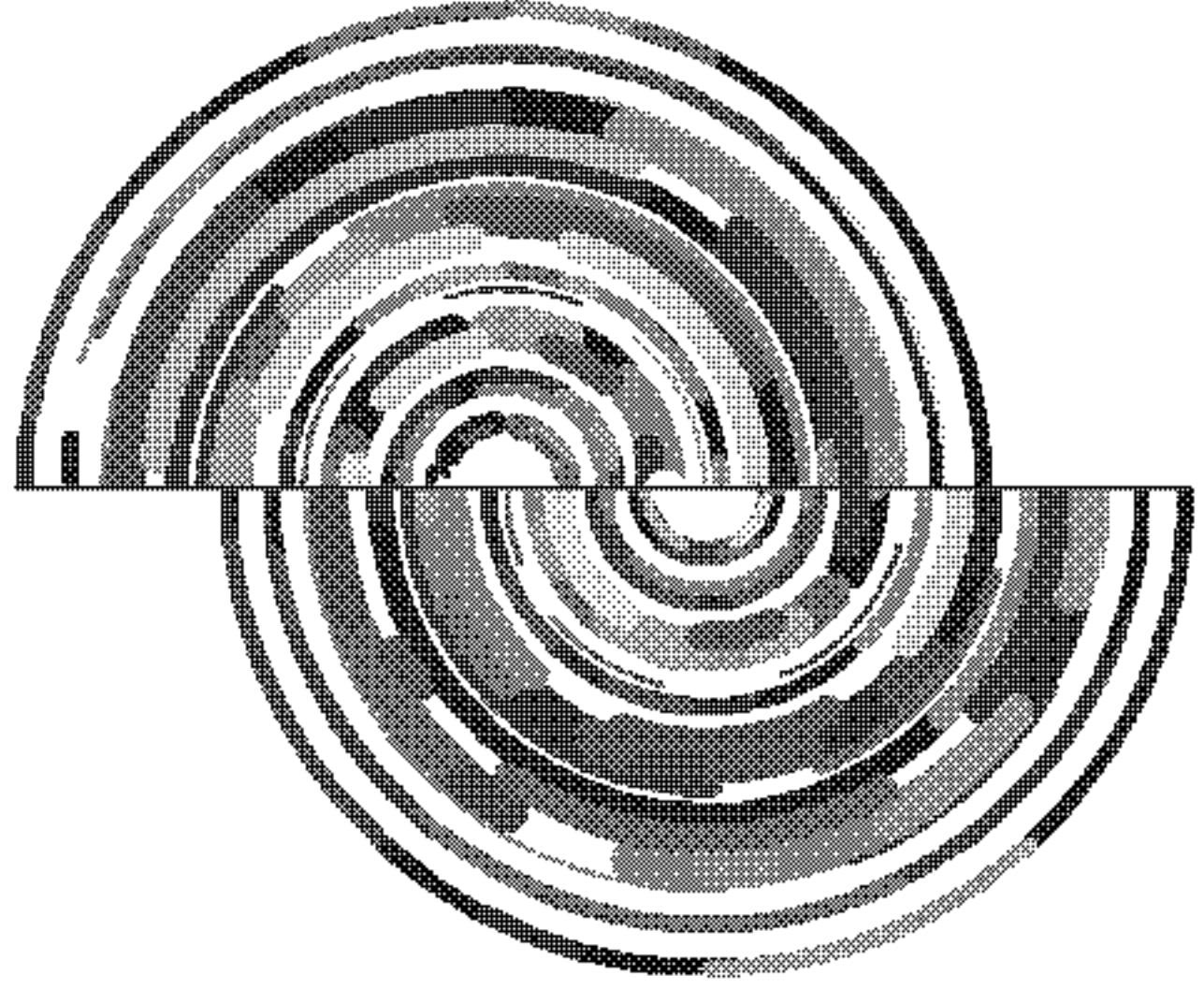
Staying on Topic Within a Grade and Across Grades: How to Build Knowledge Systematically in English Language Arts K-5

Building knowledge systematically in English language arts is like giving children various pieces of a puzzle in each grade that, over time, will form one big picture. At a curricular or instructional level, texts—within and across grade levels—need to be selected around topics or themes that systematically develop the knowledge base of students. Within a grade level, there should be an adequate number of titles on a single topic that would allow children to study that topic for a sustained period. The knowledge children have learned about particular topics in early grade levels should then be expanded and developed in subsequent grade levels to ensure an increasingly deeper understanding of these topics. Children in the upper elementary grades will generally be expected to read these texts independently and reflect on them in writing. However, children in the early grades (particularly K-2) should participate in rich, structured conversations with an adult in response to the written texts that are read aloud, orally comparing and contrasting as well as analyzing and synthesizing, in the manner called for by the *Standards*.

Preparation for reading complex informational texts should begin at the very earliest elementary school grades. What follows is one example that uses domain-specific nonfiction titles across grade levels to illustrate how curriculum designers and classroom teachers can infuse the English language arts block with rich, age-appropriate content knowledge and vocabulary in history/social studies, science, and the arts. Having students listen to informational read-alouds in the early grades helps lay the necessary foundation for students' reading and understanding of increasingly complex texts on their own in subsequent grades.

Exemplar Texts on a Topic Across Grades

| | K | 1 | 2-3 | 4-5 |
|--|---|--|--|--|
| The Human Body | | | | |
| Students can begin learning about the human body starting in kindergarten and then review and extend their learning during each subsequent grade. | <p>The five senses and associated body parts</p> <ul style="list-style-type: none"> • <i>My Five Senses</i> by Ailiki (1989) • <i>Hearing</i> by Maria Rius (1985) • <i>Sight</i> by Maria Rius (1985) • <i>Smell</i> by Maria Rius (1985) • <i>Taste</i> by Maria Rius (1985) • <i>Touch</i> by Maria Rius (1985) <p>Taking care of your body: Overview (hygiene, diet, exercise, rest)</p> <ul style="list-style-type: none"> • <i>My Amazing Body: A First Look at Health & Fitness</i> by Pat Thomas (2001) • <i>Get Up and Go!</i> by Nancy Carlson (2008) • <i>Go Wash Up</i> by Doering Tourville (2008) • <i>Sleep</i> by Paul Showers (1997) • <i>Fuel the Body</i> by Doering Tourville (2008) | <p>Introduction to the systems of the human body and associated body parts</p> <ul style="list-style-type: none"> • <i>Under Your Skin: Your Amazing Body</i> by Mick Manning (2007) • <i>Me and My Amazing Body</i> by Joan Sweeney (1999) • <i>The Human Body</i> by Gallimard Jeunesse (2007) • <i>The Busy Body Book</i> by Lizzy Rockwell (2008) • <i>First Encyclopedia of the Human Body</i> by Fiona Chandler (2004) <p>Taking care of your body: Germs, diseases, and preventing illness</p> <ul style="list-style-type: none"> • <i>Germs Make Me Sick</i> by Marilyn Berger (1995) • <i>Tiny Life on Your Body</i> by Christine Taylor-Butler (2005) • <i>Germ Stories</i> by Arthur Kornberg (2007) • <i>All About Scabs</i> by Genichiro Yagu (1998) | <p>Digestive and excretory systems</p> <ul style="list-style-type: none"> • <i>What Happens to a Hamburger</i> by Paul Showers (1985) • <i>The Digestive System</i> by Christine Taylor-Butler (2008) • <i>The Digestive System</i> by Rebecca L. Johnson (2006) • <i>The Digestive System</i> by Kristin Petrie (2007) <p>Taking care of your body: Healthy eating and nutrition</p> <ul style="list-style-type: none"> • <i>Good Enough to Eat</i> by Lizzy Rockwell (1999) • <i>Showdown at the Food Pyramid</i> by Rex Barron (2004) <p>Muscular, skeletal, and nervous systems</p> <ul style="list-style-type: none"> • <i>The Mighty Muscular and Skeletal Systems</i> Crabtree Publishing (2009) • <i>Muscles</i> by Seymour Simon (1998) • <i>Bones</i> by Seymour Simon (1998) • <i>The Astounding Nervous System</i> Crabtree Publishing (2009) • <i>The Nervous System</i> by Joelle Riley (2004) | <p>Circulatory system</p> <ul style="list-style-type: none"> • <i>The Heart</i> by Seymour Simon (2006) • <i>The Heart and Circulation</i> by Carol Ballard (2005) • <i>The Circulatory System</i> by Kristin Petrie (2007) • <i>The Amazing Circulatory System</i> by John Burstein (2009) <p>Respiratory system</p> <ul style="list-style-type: none"> • <i>The Lungs</i> by Seymour Simon (2007) • <i>The Respiratory System</i> by Susan Glass (2004) • <i>The Respiratory System</i> by Kristin Petrie (2007) • <i>The Remarkable Respiratory System</i> by John Burstein (2009) <p>Endocrine system</p> <ul style="list-style-type: none"> • <i>The Endocrine System</i> by Rebecca Olien (2006) • <i>The Exciting Endocrine System</i> by John Burstein (2009) |



STANDARDS FOR

English Language Arts

6-12

College and Career Readiness Anchor Standards for Reading

The grades 6-12 standards on the following pages define what students should understand and be able to do by the end of each grade. They correspond to the College and Career Readiness (CCR) anchor standards below by number. The CCR and grade-specific standards are necessary complements—the former providing broad standards, the latter providing additional specificity—that together define the skills and understandings that all students must demonstrate.

Key Ideas and Details

1. Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.
2. Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.
3. Analyze how and why individuals, events, and ideas develop and interact over the course of a text.

Craft and Structure

4. Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone.
5. Analyze the structure of texts, including how specific sentences, paragraphs, and larger portions of the text (e.g., a section, chapter, scene, or stanza) relate to each other and the whole.
6. Assess how point of view or purpose shapes the content and style of a text.

Integration of Knowledge and Ideas

7. Integrate and evaluate content presented in diverse formats and media, including visually and quantitatively, as well as in words.*
8. Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence.
9. Analyze how two or more texts address similar themes or topics in order to build knowledge or to compare the approaches the authors take.

Range of Reading and Level of Text Complexity

10. Read and comprehend complex literary and informational texts independently and proficiently.

Note on range and content of student reading

To become college and career ready, students must grapple with works of exceptional craft and thought whose range extends across genres, cultures, and centuries. Such works offer profound insights into the human condition and serve as models for students' own thinking and writing. Along with high-quality contemporary works, these texts should be chosen from among seminal U.S. documents, the classics of American literature, and the timeless dramas of Shakespeare. Through wide and deep reading of literature and literary nonfiction of steadily increasing sophistication, students gain a reservoir of literary and cultural knowledge, references, and images; the ability to evaluate intricate arguments; and the capacity to surmount the challenges posed by complex texts.

*Please see “Research to Build Knowledge” in Writing and “Comprehension and Collaboration” in Speaking and Listening for additional standards relevant to gathering, assessing, and applying information from print and digital sources.

Reading Standards for Literature 6–12

RL

The following standards offer a focus for instruction each year and help ensure that students gain adequate exposure to a range of texts and tasks. Rigor is also infused through the requirement that students read increasingly complex texts through the grades. *Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades.*

Grade 6 students:

Key Ideas and Details

1. Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.
2. Determine a theme or central idea of a text and how it is conveyed through particular details; provide a summary of the text distinct from personal opinions or judgments.
3. Describe how a particular story's or drama's plot unfolds in a series of episodes as well as how the characters respond or change as the plot moves toward a resolution.

Craft and Structure

4. Determine the meaning of words and phrases as they are used in a text, including figurative and connotative meanings; analyze the impact of a specific word choice on meaning and tone.
5. Analyze how a particular sentence, chapter, scene, or stanza fits into the overall structure of a text and contributes to the development of the theme, setting, or plot.
6. Explain how an author develops the point of view of the narrator or speaker in a text.

Grade 7 students:

1. Cite several pieces of textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.
2. Determine a theme or central idea of a text and analyze its development over the course of the text; provide an objective summary of the text.
3. Analyze how particular elements of a story or drama interact (e.g., how setting shapes the characters or plot).

Craft and Structure

4. Determine the meaning of words and phrases as they are used in a text, including figurative and connotative meanings; analyze the impact of rhymes and other repetitions of sounds (e.g., alliteration) on a specific verse or stanza of a poem or section of a story or drama.
5. Analyze how a drama's or poem's form or structure (e.g., soliloquy, sonnet) contributes to its meaning.
6. Analyze how an author develops and contrasts the points of view of different characters or narrators in a text.

Grade 8 students:

1. Cite the textual evidence that most strongly supports an analysis of what the text says explicitly as well as inferences drawn from the text.
2. Determine a theme or central idea of a text and analyze its development over the course of the text, including its relationship to the characters, setting, and plot; provide an objective summary of the text.
3. Analyze how particular lines of dialogue or incidents in a story or drama propel the action, reveal aspects of a character, or provoke a decision.

Craft and Structure

4. Determine the meaning of words and phrases as they are used in a text, including figurative and connotative meanings; analyze the impact of specific word choices on meaning and tone, including analogies or allusions to other texts.
5. Compare and contrast the structure of two or more texts and analyze how the differing structure of each text contributes to its meaning and style.
6. Analyze how differences in the points of view of the characters and the audience or reader (e.g., created through the use of dramatic irony) create such effects as suspense or humor.

Reading Standards for Literature 6-12

RL

Grade 6 students:

Integration of Knowledge and Ideas

7. Compare and contrast the experience of reading a story, drama, or poem to listening to or viewing an audio, video, or live version of the text, including contrasting what they “see” and “hear” when reading the text to what they perceive when they listen or watch.

8. (Not applicable to literature)

9. Compare and contrast texts in different forms or genres (e.g., stories and poems; historical novels and fantasy stories) in terms of their approaches to similar themes and topics.

Grade 7 students:

7. Compare and contrast a written story, drama, or poem to its audio, filmed, staged, or multimedia version, analyzing the effects of techniques unique to each medium (e.g., lighting, sound, color, or camera focus and angles in a film).

8. (Not applicable to literature)

9. Compare and contrast a fictional portrayal of a time, place, or character and a historical account of the same period as a means of understanding how authors of fiction use or alter history.

Grade 8 students:

7. Analyze the extent to which a filmed or live production of a story or drama stays faithful to or departs from the text or script, evaluating the choices made by the director or actors.

8. (Not applicable to literature)

9. Analyze how a modern work of fiction draws on themes, patterns of events, or character types from myths, traditional stories, or religious works such as the Bible, including describing how the material is rendered new.

Range of Reading and Level of Text Complexity

10. By the end of the year, read and comprehend literature, including stories, dramas, and poems, in the grades 6-8 text complexity band proficiently, with scaffolding as needed at the high end of the range.

10. By the end of the year, read and comprehend literature, including stories, dramas, and poems, in the grades 6-8 text complexity band proficiently, with scaffolding as needed at the high end of the range.

10. By the end of the year, read and comprehend literature, including stories, dramas, and poems, at the high end of grades 6-8 text complexity band independently and proficiently.

Reading Standards for Literature 6-12

RL

The CCR anchor standards and high school grade-specific standards work in tandem to define college and career readiness expectations—the former providing broad standards, the latter providing additional specificity.

Grades 9–10 students:

Key Ideas and Details

1. Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.
2. Determine a theme or central idea of a text and analyze in detail its development over the course of the text, including how it emerges and is shaped and refined by specific details; provide an objective summary of the text.
3. Analyze how complex characters (e.g., those with multiple or conflicting motivations) develop over the course of a text, interact with other characters, and advance the plot or develop the theme.

Craft and Structure

4. Determine the meaning of words and phrases as they are used in the text, including figurative and connotative meanings; analyze the cumulative impact of specific word choices on meaning and tone (e.g., how the language evokes a sense of time and place; how it sets a formal or informal tone).
5. Analyze how an author's choices concerning how to structure a text, order events within it (e.g., parallel plots), and manipulate time (e.g., pacing, flashbacks) create such effects as mystery, tension, or surprise.
6. Analyze a particular point of view or cultural experience reflected in a work of literature from outside the United States, drawing on a wide reading of world literature.

Integration of Knowledge and Ideas

7. Analyze the representation of a subject or a key scene in two different artistic mediums, including what is emphasized or absent in each treatment (e.g., Auden's "Musée des Beaux Arts" and Breughel's *Landscape with the Fall of Icarus*).
8. (Not applicable to literature)
9. Analyze how an author draws on and transforms source material in a specific work (e.g., how Shakespeare treats a theme or topic from Ovid or the Bible or how a later author draws on a play by Shakespeare).

Range of Reading and Level of Text Complexity

10. By the end of grade 9, read and comprehend literature, including stories, dramas, and poems, in the grades 9-10 text complexity band proficiently, with scaffolding as needed at the high end of the range.
By the end of grade 10, read and comprehend literature, including stories, dramas, and poems, at the high end of the grades 9-10 text complexity band independently and proficiently.

Grades 11-12 students:

Key Ideas and Details

1. Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, including determining where the text leaves matters uncertain.
2. Determine two or more themes or central ideas of a text and analyze their development over the course of the text, including how they interact and build on one another to produce a complex account; provide an objective summary of the text.
3. Analyze the impact of the author's choices regarding how to develop and relate elements of a story or drama (e.g., where a story is set, how the action is ordered, how the characters are introduced and developed).

Craft and Structure

4. Determine the meaning of words and phrases as they are used in the text, including figurative and connotative meanings; analyze the impact of specific word choices on meaning and tone, including words with multiple meanings or language that is particularly fresh, engaging, or beautiful. (Include Shakespeare as well as other authors.)
5. Analyze how an author's choices concerning how to structure specific parts of a text (e.g., the choice of where to begin or end a story, the choice to provide a comedic or tragic resolution) contribute to its overall structure and meaning as well as its aesthetic impact.
6. Analyze a case in which grasping point of view requires distinguishing what is directly stated in a text from what is really meant (e.g., satire, sarcasm, irony, or understatement).

Integration of Knowledge and Ideas

7. Analyze multiple interpretations of a story, drama, or poem (e.g., recorded or live production of a play or recorded novel or poetry), evaluating how each version interprets the source text. (Include at least one play by Shakespeare and one play by an American dramatist.)
8. (Not applicable to literature)
9. Demonstrate knowledge of eighteenth-, nineteenth- and early-twentieth-century foundational works of American literature, including how two or more texts from the same period treat similar themes or topics.

Range of Reading and Level of Text Complexity

10. By the end of grade 11, read and comprehend literature, including stories, dramas, and poems, in the grades 11-CCR text complexity band proficiently, with scaffolding as needed at the high end of the range.
By the end of grade 12, read and comprehend literature, including stories, dramas, and poems, at the high end of the grades 11-CCR text complexity band independently and proficiently.

Reading Standards for Informational Text 6-12

RI

Grade 6 students:

Key Ideas and Details

1. Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.
2. Determine a central idea of a text and how it is conveyed through particular details; provide a summary of the text distinct from personal opinions or judgments.
3. Analyze in detail how a key individual, event, or idea is introduced, illustrated, and elaborated in a text (e.g., through examples or anecdotes).

Grade 7 students:

1. Cite several pieces of textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.
2. Determine two or more central ideas in a text and analyze their development over the course of the text; provide an objective summary of the text.
3. Analyze the interactions between individuals, events, and ideas in a text (e.g., how ideas influence individuals or events, or how individuals influence ideas or events).

Grade 8 students:

1. Cite the textual evidence that most strongly supports an analysis of what the text says explicitly as well as inferences drawn from the text.
2. Determine a central idea of a text and analyze its development over the course of the text, including its relationship to supporting ideas; provide an objective summary of the text.
3. Analyze how a text makes connections among and distinctions between individuals, ideas, or events (e.g., through comparisons, analogies, or categories).

Craft and Structure

4. Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings.
5. Analyze how a particular sentence, paragraph, chapter, or section fits into the overall structure of a text and contributes to the development of the ideas.
6. Determine an author's point of view or purpose in a text and explain how it is conveyed in the text.
4. Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze the impact of a specific word choice on meaning and tone.
5. Analyze the structure an author uses to organize a text, including how the major sections contribute to the whole and to the development of the ideas.
6. Determine an author's point of view or purpose in a text and analyze how the author distinguishes his or her position from that of others.

Integration of Knowledge and Ideas

7. Integrate information presented in different media or formats (e.g., visually, quantitatively) as well as in words to develop a coherent understanding of a topic or issue.
8. Trace and evaluate the argument and specific claims in a text, distinguishing claims that are supported by reasons and evidence from claims that are not.
9. Compare and contrast one author's presentation of events with that of another (e.g., a memoir written by and a biography on the same person).
7. Compare and contrast a text to an audio, video, or multimedia version of the text, analyzing each medium's portrayal of the subject (e.g., how the delivery of a speech affects the impact of the words).
8. Trace and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient to support the claims.
9. Analyze how two or more authors writing about the same topic shape their presentations of key information by emphasizing different evidence or advancing different interpretations of facts.

Range of Reading and Level of Text Complexity

10. By the end of the year, read and comprehend literary nonfiction in the grades 6-8 text complexity band proficiently, with scaffolding as needed at the high end of the range.
10. By the end of the year, read and comprehend literary nonfiction in the grades 6-8 text complexity band proficiently, with scaffolding as needed at the high end of the range.

Reading Standards for Informational Text 6-12

RI

The CCR anchor standards and high school grade-specific standards work in tandem to define college and career readiness expectations—the former providing broad standards, the latter providing additional specificity.

Grades 9–10 students:

Key Ideas and Details

1. Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.
2. Determine a central idea of a text and analyze its development over the course of the text, including how it emerges and is shaped and refined by specific details; provide an objective summary of the text.
3. Analyze how the author unfolds an analysis or series of ideas or events, including the order in which the points are made, how they are introduced and developed, and the connections that are drawn between them.

Craft and Structure

4. Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze the cumulative impact of specific word choices on meaning and tone (e.g., how the language of a court opinion differs from that of a newspaper).
5. Analyze in detail how an author's ideas or claims are developed and refined by particular sentences, paragraphs, or larger portions of a text (e.g., a section or chapter).
6. Determine an author's point of view or purpose in a text and analyze how an author uses rhetoric to advance that point of view or purpose.

Integration of Knowledge and Ideas

7. Analyze various accounts of a subject told in different mediums (e.g., a person's life story in both print and multimedia), determining which details are emphasized in each account.
8. Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is valid and the evidence is relevant and sufficient; identify false statements and fallacious reasoning.
9. Analyze seminal U.S. documents of historical and literary significance (e.g., Washington's Farewell Address, the Gettysburg Address, Roosevelt's Four Freedoms speech, King's "Letter from Birmingham Jail"), including how they address related themes and concepts.

Range of Reading and Level of Text Complexity

10. By the end of grade 9, read and comprehend literary nonfiction in the grades 9–10 text complexity band proficiently, with scaffolding as needed at the high end of the range.
By the end of grade 10, read and comprehend literary nonfiction at the high end of the grades 9–10 text complexity band independently and proficiently.

Grades 11–12 students:

1. Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, including determining where the text leaves matters uncertain.
2. Determine two or more central ideas of a text and analyze their development over the course of the text, including how they interact and build on one another to provide a complex analysis; provide an objective summary of the text.
3. Analyze a complex set of ideas or sequence of events and explain how specific individuals, ideas, or events interact and develop over the course of the text.
4. Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze how an author uses and refines the meaning of a key term or terms over the course of a text (e.g., how Madison defines *faction* in *Federalist* No. 10).
5. Analyze and evaluate the effectiveness of the structure an author uses in his or her exposition or argument, including whether the structure makes points clear, convincing, and engaging.
6. Determine an author's point of view or purpose in a text in which the rhetoric is particularly effective, analyzing how style and content contribute to the power, persuasiveness, or beauty of the text.
7. Integrate and evaluate multiple sources of information presented in different media or formats (e.g., visually, quantitatively) as well as in words in order to address a question or solve a problem.
8. Delineate and evaluate the reasoning in seminal U.S. texts, including the application of constitutional principles and use of legal reasoning (e.g., in U.S. Supreme Court majority opinions and dissents) and the premises, purposes, and arguments in works of public advocacy (e.g., *The Federalist*, presidential addresses).
9. Analyze seventeenth-, eighteenth-, and nineteenth-century foundational U.S. documents of historical and literary significance (including The Declaration of Independence, the Preamble to the Constitution, the Bill of Rights, and Lincoln's Second Inaugural Address) for their themes, purposes, and rhetorical features.
10. By the end of grade 11, read and comprehend literary nonfiction in the grades 11–CCR text complexity band proficiently, with scaffolding as needed at the high end of the range.
By the end of grade 12, read and comprehend literary nonfiction at the high end of the grades 11–CCR text complexity band independently and proficiently.

College and Career Readiness Anchor Standards for Writing

The grades 6-12 standards on the following pages define what students should understand and be able to do by the end of each grade. They correspond to the College and Career Readiness (CCR) anchor standards below by number. The CCR and grade-specific standards are necessary complements—the former providing broad standards, the latter providing additional specificity—that together define the skills and understandings that all students must demonstrate.

Text Types and Purposes*

1. Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.
2. Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content.
3. Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences.

Production and Distribution of Writing

4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
5. Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.
6. Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others.

Research to Build and Present Knowledge

7. Conduct short as well as more sustained research projects based on focused questions, demonstrating understanding of the subject under investigation.
8. Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.
9. Draw evidence from literary or informational texts to support analysis, reflection, and research.

Range of Writing

10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.

*These broad types of writing include many subgenres. See Appendix A for definitions of key writing types.

Note on range and content of student writing

For students, writing is a key means of asserting and defending claims, showing what they know about a subject, and conveying what they have experienced, imagined, thought, and felt. To be college- and career-ready writers, students must take task, purpose, and audience into careful consideration, choosing words, information, structures, and formats deliberately. They need to know how to combine elements of different kinds of writing—for example, to use narrative strategies within argument and explanation within narrative—to produce complex and nuanced writing. They need to be able to use technology strategically when creating, refining, and collaborating on writing. They have to become adept at gathering information, evaluating sources, and citing material accurately, reporting findings from their research and analysis of sources in a clear and cogent manner. They must have the flexibility, concentration, and fluency to produce high-quality first-draft text under a tight deadline as well as the capacity to revisit and make improvements to a piece of writing over multiple drafts when circumstances encourage or require it.

Writing Standards 6-12

W

The following standards for grades 6-12 offer a focus for instruction each year to help ensure that students gain adequate mastery of a range of skills and applications. Each year in their writing, students should demonstrate increasing sophistication in all aspects of language use, from vocabulary and syntax to the development and organization of ideas, and they should address increasingly demanding content and sources. *Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades.* The expected growth in student writing ability is reflected both in the standards themselves and in the collection of annotated student writing samples in Appendix C.

Grade 6 students:

Text Types and Purposes

1. Write arguments to support claims with clear reasons and relevant evidence.
 - a. Introduce claim(s) and organize the reasons and evidence clearly.
 - b. Support claim(s) with clear reasons and relevant evidence, using credible sources and demonstrating an understanding of the topic or text.
 - c. Use words, phrases, and clauses to clarify the relationships among claim(s) and reasons.
 - d. Establish and maintain a formal style.
 - e. Provide a concluding statement or section that follows from the argument presented.

Grade 7 students:

1. Write arguments to support claims with clear reasons and relevant evidence.
 - a. Introduce claim(s), acknowledge alternate or opposing claims, and organize the reasons and evidence logically.
 - b. Support claim(s) with logical reasoning and relevant evidence, using accurate, credible sources and demonstrating an understanding of the topic or text.
 - c. Use words, phrases, and clauses to create cohesion and clarify the relationships among claim(s), reasons, and evidence.
 - d. Establish and maintain a formal style.
 - e. Provide a concluding statement or section that follows from and supports the argument presented.

Grade 8 students:

1. Write arguments to support claims with clear reasons and relevant evidence.
 - a. Introduce claim(s), acknowledge and distinguish the claim(s) from alternate or opposing claims, and organize the reasons and evidence logically.
 - b. Support claim(s) with logical reasoning and relevant evidence, using accurate, credible sources and demonstrating an understanding of the topic or text.
 - c. Use words, phrases, and clauses to create cohesion and clarify the relationships among claim(s), counterclaims, reasons, and evidence.
 - d. Establish and maintain a formal style.
 - e. Provide a concluding statement or section that follows from and supports the argument presented.

2. Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.
 - a. Introduce a topic; organize ideas, concepts, and information, using strategies such as definition, classification, comparison/contrast, and cause/effect; include formatting (e.g., headings), graphics (e.g., charts, tables), and multimedia when useful to aiding comprehension.
 - b. Develop the topic with relevant facts, definitions, concrete details, quotations, or other information and examples.
 - c. Use appropriate transitions to clarify the relationships among ideas and concepts.
 - d. Use precise language and domain-specific vocabulary to inform about or explain the topic.
 - e. Establish and maintain a formal style.
 - f. Provide a concluding statement or section that follows from the information or explanation presented.

2. Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.
 - a. Introduce a topic clearly, previewing what is to follow; organize ideas, concepts, and information, using strategies such as definition, classification, comparison/contrast, and cause/effect; include formatting (e.g., headings), graphics (e.g., charts, tables), and multimedia when useful to aiding comprehension.
 - b. Develop the topic with relevant facts, definitions, concrete details, quotations, or other information and examples.
 - c. Use appropriate transitions to create cohesion and clarify the relationships among ideas and concepts.
 - d. Use precise language and domain-specific vocabulary to inform about or explain the topic.
 - e. Establish and maintain a formal style.
 - f. Provide a concluding statement or section that follows from and supports the information or explanation presented.

2. Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.
 - a. Introduce a topic clearly, previewing what is to follow; organize ideas, concepts, and information into broader categories; include formatting (e.g., headings), graphics (e.g., charts, tables), and multimedia when useful to aiding comprehension.
 - b. Develop the topic with relevant, well-chosen facts, definitions, concrete details, quotations, or other information and examples.
 - c. Use appropriate and varied transitions to create cohesion and clarify the relationships among ideas and concepts.
 - d. Use precise language and domain-specific vocabulary to inform about or explain the topic.
 - e. Establish and maintain a formal style.
 - f. Provide a concluding statement or section that follows from and supports the information or explanation presented.

Writing Standards 6-12

W

Grade 6 students:

Text Types and Purposes (continued)

3. Write narratives to develop real or imagined experiences or events using effective technique, relevant descriptive details, and well-structured event sequences.
 - a. Engage and orient the reader by establishing a context and introducing a narrator and/or characters; organize an event sequence that unfolds naturally and logically.
 - b. Use narrative techniques, such as dialogue, pacing, and description, to develop experiences, events, and/or characters.
 - c. Use a variety of transition words, phrases, and clauses to convey sequence and signal shifts from one time frame or setting to another.
 - d. Use precise words and phrases, relevant descriptive details, and sensory language to convey experiences and events.
 - e. Provide a conclusion that follows from the narrated experiences or events.

Grade 7 students:

3. Write narratives to develop real or imagined experiences or events using effective technique, relevant descriptive details, and well-structured event sequences.
 - a. Engage and orient the reader by establishing a context and point of view and introducing a narrator and/or characters; organize an event sequence that unfolds naturally and logically.
 - b. Use narrative techniques, such as dialogue, pacing, and description, to develop experiences, events, and/or characters.
 - c. Use a variety of transition words, phrases, and clauses to convey sequence and signal shifts from one time frame or setting to another.
 - d. Use precise words and phrases, relevant descriptive details, and sensory language to capture the action and convey experiences and events.
 - e. Provide a conclusion that follows from and reflects on the narrated experiences or events.

Grade 8 students:

3. Write narratives to develop real or imagined experiences or events using effective technique, relevant descriptive details, and well-structured event sequences.
 - a. Engage and orient the reader by establishing a context and point of view and introducing a narrator and/or characters; organize an event sequence that unfolds naturally and logically.
 - b. Use narrative techniques, such as dialogue, pacing, description, and reflection, to develop experiences, events, and/or characters.
 - c. Use a variety of transition words, phrases, and clauses to convey sequence, signal shifts from one time frame or setting to another, and show the relationships among experiences and events.
 - d. Use precise words and phrases, relevant descriptive details, and sensory language to capture the action and convey experiences and events.
 - e. Provide a conclusion that follows from and reflects on the narrated experiences or events.

Production and Distribution of Writing

4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1-3 above.)
5. With some guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach. (Editing for conventions should demonstrate command of Language standards 1-3 up to and including grade 6 on page 52.)
6. Use technology, including the Internet, to produce and publish writing as well as to interact and collaborate with others; demonstrate sufficient command of keyboarding skills to type a minimum of three pages in a single sitting.

4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1-3 above.)
5. With some guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on how well purpose and audience have been addressed. (Editing for conventions should demonstrate command of Language standards 1-3 up to and including grade 8 on page 52.)
6. Use technology, including the Internet, to produce and publish writing and present the relationships between information and ideas efficiently as well as to interact and collaborate with others.

Writing Standards 6-12

W

Grade 6 students:

Research to Build and Present Knowledge

7. Conduct short research projects to answer a question, drawing on several sources and refocusing the inquiry when appropriate.
8. Gather relevant information from multiple print and digital sources; assess the credibility of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and providing basic bibliographic information for sources.
9. Draw evidence from literary or informational texts to support analysis, reflection, and research.
 - a. Apply *grade 6 Reading standards* to literature (e.g., “Compare and contrast texts in different forms or genres [e.g., stories and poems; historical novels and fantasy stories] in terms of their approaches to similar themes and topics”).
 - b. Apply *grade 6 Reading standards* to literary nonfiction (e.g., “Trace and evaluate the argument and specific claims in a text, distinguishing claims that are supported by reasons and evidence from claims that are not”).

Grade 7 students:

7. Conduct short research projects to answer a question, drawing on several sources and generating additional related, focused questions for further research and investigation.
8. Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.
9. Draw evidence from literary or informational texts to support analysis, reflection, and research.
 - a. Apply *grade 7 Reading standards* to literature (e.g., “Compare and contrast a fictional portrayal of a time, place, or character and a historical account of the same period as a means of understanding how authors of fiction use or alter history”).
 - b. Apply *grade 7 Reading standards* to literary nonfiction (e.g., “Trace and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient to support the claims”).

Grade 8 students:

7. Conduct short research projects to answer a question (including a self-generated question), drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration.
8. Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.
9. Draw evidence from literary or informational texts to support analysis, reflection, and research.
 - a. Apply *grade 8 Reading standards* to literature (e.g., “Analyze how a modern work of fiction draws on themes, patterns of events, or character types from myths, traditional stories, or religious works such as the Bible, including describing how the material is rendered new”).
 - b. Apply *grade 8 Reading standards* to literary nonfiction (e.g., “Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient; recognize when irrelevant evidence is introduced”).

Range of Writing

10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.
10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.

Writing Standards 6–12

W

The CCR anchor standards and high school grade-specific standards work in tandem to define college and career readiness expectations—the former providing broad standards, the latter providing additional specificity.

Grades 9–10 students:

Text Types and Purposes

1. Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.
 - a. Introduce precise claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that establishes clear relationships among claim(s), counterclaims, reasons, and evidence.
 - b. Develop claim(s) and counterclaims fairly, supplying evidence for each while pointing out the strengths and limitations of both in a manner that anticipates the audience's knowledge level and concerns.
 - c. Use words, phrases, and clauses to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims.
 - d. Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing.
 - e. Provide a concluding statement or section that follows from and supports the argument presented.

Grades 11–12 students:

1. Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.
 - a. Introduce precise, knowledgeable claim(s), establish the significance of the claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that logically sequences claim(s), counterclaims, reasons, and evidence.
 - b. Develop claim(s) and counterclaims fairly and thoroughly, supplying the most relevant evidence for each while pointing out the strengths and limitations of both in a manner that anticipates the audience's knowledge level, concerns, values, and possible biases.
 - c. Use words, phrases, and clauses as well as varied syntax to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims.
 - d. Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing.
 - e. Provide a concluding statement or section that follows from and supports the argument presented.
2. Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of content.
 - a. Introduce a topic; organize complex ideas, concepts, and information so that each new element builds on that which precedes it to create a unified whole; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension.
 - b. Develop the topic thoroughly by selecting the most significant and relevant facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic.
 - c. Use appropriate and varied transitions and syntax to link the major sections of the text, create cohesion, and clarify the relationships among complex ideas and concepts.
 - d. Use precise language, domain-specific vocabulary, and techniques such as metaphor, simile, and analogy to manage the complexity of the topic.
 - e. Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing.
 - f. Provide a concluding statement or section that follows from and supports the information or explanation presented (e.g., articulating implications or the significance of the topic).

Writing Standards 6-12

W

Grades 9-10 students:

Text Types and Purposes (continued)

3. Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences.
 - a. Engage and orient the reader by setting out a problem, situation, or observation, establishing one or multiple point(s) of view, and introducing a narrator and/or characters; create a smooth progression of experiences or events.
 - b. Use narrative techniques, such as dialogue, pacing, description, reflection, and multiple plot lines, to develop experiences, events, and/or characters.
 - c. Use a variety of techniques to sequence events so that they build on one another to create a coherent whole.
 - d. Use precise words and phrases, telling details, and sensory language to convey a vivid picture of the experiences, events, setting, and/or characters.
 - e. Provide a conclusion that follows from and reflects on what is experienced, observed, or resolved over the course of the narrative.

Production and Distribution of Writing

4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1-3 above.)
5. Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. (Editing for conventions should demonstrate command of Language standards 1-3 up to and including grades 9-10 on page 54.)
6. Use technology, including the Internet, to produce, publish, and update individual or shared writing products, taking advantage of technology's capacity to link to other information and to display information flexibly and dynamically.

Research to Build and Present Knowledge

7. Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.
8. Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation.

Grades 11-12 students:

3. Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences.
 - a. Engage and orient the reader by setting out a problem, situation, or observation and its significance, establishing one or multiple point(s) of view, and introducing a narrator and/or characters; create a smooth progression of experiences or events.
 - b. Use narrative techniques, such as dialogue, pacing, description, reflection, and multiple plot lines, to develop experiences, events, and/or characters.
 - c. Use a variety of techniques to sequence events so that they build on one another to create a coherent whole and build toward a particular tone and outcome (e.g., a sense of mystery, suspense, growth, or resolution).
 - d. Use precise words and phrases, telling details, and sensory language to convey a vivid picture of the experiences, events, setting, and/or characters.
 - e. Provide a conclusion that follows from and reflects on what is experienced, observed, or resolved over the course of the narrative.

4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1-3 above.)
5. Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. (Editing for conventions should demonstrate command of Language standards 1-3 up to and including grades 11-12 on page 54.)
6. Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.

7. Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.
8. Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.

Writing Standards 6-12

W

Grades 9-10 students:

Research to Build and Present Knowledge (continued)

9. Draw evidence from literary or informational texts to support analysis, reflection, and research.
- Apply *grades 9-10 Reading standards* to literature (e.g., “Analyze how an author draws on and transforms source material in a specific work [e.g., how Shakespeare treats a theme or topic from Ovid or the Bible or how a later author draws on a play by Shakespeare]”).
 - Apply *grades 9-10 Reading standards* to literary nonfiction (e.g., “Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is valid and the evidence is relevant and sufficient; identify false statements and fallacious reasoning”).

Grades 11-12 students:

9. Draw evidence from literary or informational texts to support analysis, reflection, and research.
- Apply *grades 11-12 Reading standards* to literature (e.g., “Demonstrate knowledge of eighteenth-, nineteenth- and early-twentieth-century foundational works of American literature, including how two or more texts from the same period treat similar themes or topics”).
 - Apply *grades 11-12 Reading standards* to literary nonfiction (e.g., “Delineate and evaluate the reasoning in seminal U.S. texts, including the application of constitutional principles and use of legal reasoning [e.g., in U.S. Supreme Court Case majority opinions and dissents] and the premises, purposes, and arguments in works of public advocacy [e.g., *The Federalist*, presidential addresses]”).

Range of Writing

10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.
10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.

College and Career Readiness Anchor Standards for Speaking and Listening

The grades 6–12 standards on the following pages define what students should understand and be able to do by the end of each grade. They correspond to the College and Career Readiness (CCR) anchor standards below by number. The CCR and grade-specific standards are necessary complements—the former providing broad standards, the latter providing additional specificity—that together define the skills and understandings that all students must demonstrate.

Comprehension and Collaboration

1. Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively.
2. Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally.
3. Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric.

Presentation of Knowledge and Ideas

4. Present information, findings, and supporting evidence such that listeners can follow the line of reasoning and the organization, development, and style are appropriate to task, purpose, and audience.
5. Make strategic use of digital media and visual displays of data to express information and enhance understanding of presentations.
6. Adapt speech to a variety of contexts and communicative tasks, demonstrating command of formal English when indicated or appropriate.

Note on range and content of student speaking and listening

To become college and career ready, students must have ample opportunities to take part in a variety of rich, structured conversations—as part of a whole class, in small groups, and with a partner—built around important content in various domains. They must be able to contribute appropriately to these conversations, to make comparisons and contrasts, and to analyze and synthesize a multitude of ideas in accordance with the standards of evidence appropriate to a particular discipline. Whatever their intended major or profession, high school graduates will depend heavily on their ability to listen attentively to others so that they are able to build on others' meritorious ideas while expressing their own clearly and persuasively.

New technologies have broadened and expanded the role that speaking and listening play in acquiring and sharing knowledge and have tightened their link to other forms of communication. The Internet has accelerated the speed at which connections between speaking, listening, reading, and writing can be made, requiring that students be ready to use these modalities nearly simultaneously. Technology itself is changing quickly, creating a new urgency for students to be adaptable in response to change.

Speaking and Listening Standards 6-12

SL

The following standards for grades 6-12 offer a focus for instruction in each year to help ensure that students gain adequate mastery of a range of skills and applications. *Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades.*

Grade 6 students:

Comprehension and Collaboration

- Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *grade 6 topics, texts, and issues*, building on others' ideas and expressing their own clearly.
 - Come to discussions prepared, having read or studied required material; explicitly draw on that preparation by referring to evidence on the topic, text, or issue to probe and reflect on ideas under discussion.
 - Follow rules for collegial discussions, set specific goals and deadlines, and define individual roles as needed.
 - Pose and respond to specific questions with elaboration and detail by making comments that contribute to the topic, text, or issue under discussion.
 - Review the key ideas expressed and demonstrate understanding of multiple perspectives through reflection and paraphrasing.

Grade 7 students:

- Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *grade 7 topics, texts, and issues*, building on others' ideas and expressing their own clearly.
 - Come to discussions prepared, having read or researched material under study; explicitly draw on that preparation by referring to evidence on the topic, text, or issue to probe and reflect on ideas under discussion.
 - Follow rules for collegial discussions, track progress toward specific goals and deadlines, and define individual roles as needed.
 - Pose questions that elicit elaboration and respond to others' questions and comments with relevant observations and ideas that bring the discussion back on topic as needed.
 - Acknowledge new information expressed by others and, when warranted, modify their own views.

Grade 8 students:

- Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *grade 8 topics, texts, and issues*, building on others' ideas and expressing their own clearly.
 - Come to discussions prepared, having read or researched material under study; explicitly draw on that preparation by referring to evidence on the topic, text, or issue to probe and reflect on ideas under discussion.
 - Follow rules for collegial discussions and decision-making, track progress toward specific goals and deadlines, and define individual roles as needed.
 - Pose questions that connect the ideas of several speakers and respond to others' questions and comments with relevant evidence, observations, and ideas.
 - Acknowledge new information expressed by others, and, when warranted, qualify or justify their own views in light of the evidence presented.

- Interpret information presented in diverse media and formats (e.g., visually, quantitatively, orally) and explain how it contributes to a topic, text, or issue under study.
- Delineate a speaker's argument and specific claims, distinguishing claims that are supported by reasons and evidence from claims that are not.

Presentation of Knowledge and Ideas

- Present claims and findings, sequencing ideas logically and using pertinent descriptions, facts, and details to accentuate main ideas or themes; use appropriate eye contact, adequate volume, and clear pronunciation.
- Include multimedia components (e.g., graphics, images, music, sound) and visual displays in presentations to clarify information.
- Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate. (See grade 6 Language standards 1 and 3 on page 52 for specific expectations.)

- Analyze the main ideas and supporting details presented in diverse media and formats (e.g., visually, quantitatively, orally) and explain how the ideas clarify a topic, text, or issue under study.
- Delineate a speaker's argument and specific claims, evaluating the soundness of the reasoning and the relevance and sufficiency of the evidence.

- Present claims and findings, emphasizing salient points in a focused, coherent manner with pertinent descriptions, facts, details, and examples; use appropriate eye contact, adequate volume, and clear pronunciation.
- Include multimedia components and visual displays in presentations to clarify claims and findings and emphasize salient points.

- Analyze the purpose of information presented in diverse media and formats (e.g., visually, quantitatively, orally) and evaluate the motives (e.g., social, commercial, political) behind its presentation.
- Delineate a speaker's argument and specific claims, evaluating the soundness of the reasoning and relevance and sufficiency of the evidence and identifying when irrelevant evidence is introduced.

- Present claims and findings, emphasizing salient points in a focused, coherent manner with relevant evidence, sound valid reasoning, and well-chosen details; use appropriate eye contact, adequate volume, and clear pronunciation.
- Integrate multimedia and visual displays into presentations to clarify information, strengthen claims and evidence, and add interest.

- Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate. (See grade 8 Language standards 1 and 3 on page 52 for specific expectations.)

Speaking and Listening Standards 6-12

SL

The CCR anchor standards and high school grade-specific standards work in tandem to define college and career readiness expectations—the former providing broad standards, the latter providing additional specificity.

Grades 9–10 students:

Comprehension and Collaboration

1. Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *grades 9–10 topics, texts, and issues*, building on others' ideas and expressing their own clearly and persuasively.
 - a. Come to discussions prepared, having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well-reasoned exchange of ideas.
 - b. Work with peers to set rules for collegial discussions and decision-making (e.g., informal consensus, taking votes on key issues, presentation of alternate views), clear goals and deadlines, and individual roles as needed.
 - c. Propel conversations by posing and responding to questions that relate the current discussion to broader themes or larger ideas; actively incorporate others into the discussion; and clarify, verify, or challenge ideas and conclusions.
 - d. Respond thoughtfully to diverse perspectives, summarize points of agreement and disagreement, and, when warranted, qualify or justify their own views and understanding and make new connections in light of the evidence and reasoning presented.

Grades 11–12 students:

Comprehension and Collaboration

1. Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *grades 11–12 topics, texts, and issues*, building on others' ideas and expressing their own clearly and persuasively.
 - a. Come to discussions prepared, having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well-reasoned exchange of ideas.
 - b. Work with peers to promote civil, democratic discussions and decision-making, set clear goals and deadlines, and establish individual roles as needed.
 - c. Propel conversations by posing and responding to questions that probe reasoning and evidence; ensure a hearing for a full range of positions on a topic or issue; clarify, verify, or challenge ideas and conclusions; and promote divergent and creative perspectives.
 - d. Respond thoughtfully to diverse perspectives; synthesize comments, claims, and evidence made on all sides of an issue; resolve contradictions when possible; and determine what additional information or research is required to deepen the investigation or complete the task.
2. Integrate multiple sources of information presented in diverse media or formats (e.g., visually, quantitatively, orally) evaluating the credibility and accuracy of each source.
3. Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric, identifying any fallacious reasoning or exaggerated or distorted evidence.

Presentation of Knowledge and Ideas

4. Present information, findings, and supporting evidence clearly, concisely, and logically such that listeners can follow the line of reasoning and the organization, development, substance, and style are appropriate to purpose, audience, and task.
5. Make strategic use of digital media (e.g., textual, graphical, audio, visual, and interactive elements) in presentations to enhance understanding of findings, reasoning, and evidence and to add interest.
6. Adapt speech to a variety of contexts and tasks, demonstrating a command of formal English when indicated or appropriate. (See grades 9–10 Language standards 1 and 3 on pages 54 for specific expectations.)

College and Career Readiness Anchor Standards for Language

The grades 6-12 standards on the following pages define what students should understand and be able to do by the end of each grade. They correspond to the College and Career Readiness (CCR) anchor standards below by number. The CCR and grade-specific standards are necessary complements—the former providing broad standards, the latter providing additional specificity—that together define the skills and understandings that all students must demonstrate.

Conventions of Standard English

1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.

Knowledge of Language

3. Apply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading or listening.

Vocabulary Acquisition and Use

4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases by using context clues, analyzing meaningful word parts, and consulting general and specialized reference materials, as appropriate.
5. Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.
6. Acquire and use accurately a range of general academic and domain-specific words and phrases sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when considering a word or phrase important to comprehension or expression.

Note on range and content of student language use

To be college and career ready in language, students must have firm control over the conventions of standard English. At the same time, they must come to appreciate that language is as at least as much a matter of craft as of rules and be able to choose words, syntax, and punctuation to express themselves and achieve particular functions and rhetorical effects. They must also have extensive vocabularies, built through reading and study, enabling them to comprehend complex texts and engage in purposeful writing about and conversations around content. They need to become skilled in determining or clarifying the meaning of words and phrases they encounter, choosing flexibly from an array of strategies to aid them. They must learn to see an individual word as part of a network of other words—words, for example, that have similar denotations but different connotations. The inclusion of Language standards in their own strand should not be taken as an indication that skills related to conventions, effective language use, and vocabulary are unimportant to reading, writing, speaking, and listening; indeed, they are inseparable from such contexts.

Language Standards 6-12

L

The following standards for grades 6-12 offer a focus for instruction each year to help ensure that students gain adequate mastery of a range of skills and applications. *Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades.* Beginning in grade 3, skills and understandings that are particularly likely to require continued attention in higher grades as they are applied to increasingly sophisticated writing and speaking are marked with an asterisk (*). See the table on page 56 for a complete listing and Appendix A for an example of how these skills develop in sophistication.

Grade 6 students: Conventions of Standard English

1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
 - a. Ensure that pronouns are in the proper case (subjective, objective, possessive).
 - b. Use intensive pronouns (e.g., *myself*, *ourselves*).
 - c. Recognize and correct inappropriate shifts in pronoun number and person.*
 - d. Recognize and correct vague pronouns (i.e., ones with unclear or ambiguous antecedents)*
 - e. Recognize variations from standard English in their own and others' writing and speaking, and identify and use strategies to improve expression in conventional language.*

Grade 7 students:

1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
 - a. Explain the function of phrases and clauses in general and their function in specific sentences.
 - b. Choose among simple, compound, complex, and compound-complex sentences to signal differing relationships among ideas.
 - c. Place phrases and clauses within a sentence, recognizing and correcting misplaced and dangling modifiers.*

Grade 8 students:

1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
 - a. Explain the function of verbals (gerunds, participles, infinitives) in general and their function in particular sentences.
 - b. Form and use verbs in the active and passive voice.
 - c. Form and use verbs in the indicative, imperative, interrogative, conditional, and subjunctive mood.
 - d. Recognize and correct inappropriate shifts in verb voice and mood.*
2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
 - a. Use a comma to separate coordinate adjectives (e.g., *it was a fascinating, enjoyable movie* but not *He wore an old[,] green shirt*).
 - b. Spell correctly.

2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
 - a. Use punctuation (commas, parentheses, dashes) to set off nonrestrictive/parenthetical elements.*
 - b. Spell correctly.

2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
 - a. Use a comma to separate coordinate adjectives (e.g., *it was a fascinating, enjoyable movie* but not *He wore an old[,] green shirt*).
 - b. Spell correctly.

2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
 - a. Use punctuation (comma, ellipsis, dash) to indicate a pause or break.
 - b. Use an ellipsis to indicate an omission.
 - c. Spell correctly.

Knowledge of Language

3. Use knowledge of language and its conventions when writing, speaking, reading, or listening.
 - a. Vary sentence patterns for meaning, reader/listener interest, and style.*
 - b. Maintain consistency in style and tone.*

3. Use knowledge of language and its conventions when writing, speaking, reading, or listening.
 - a. Choose language that expresses ideas precisely and concisely, recognizing and eliminating wordiness and redundancy.*

3. Use knowledge of language and its conventions when writing, speaking, reading, or listening.
 - a. Use verbs in the active and passive voice and in the conditional and subjunctive mood to achieve particular effects (e.g., emphasizing the actor or the action; expressing uncertainty or describing a state contrary to fact).

Language Standards 6-12

L

Grade 6 students: Vocabulary Acquisition and Use

4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on *grade 6 reading and content*, choosing flexibly from a range of strategies.
- Use context (e.g., the overall meaning of a sentence or paragraph; a word's position or function in a sentence) as a clue to the meaning of a word or phrase.
 - Use common, grade-appropriate Greek or Latin affixes and roots as clues to the meaning of a word (e.g., *audience, auditory, audible*).
 - Consult reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning or its part of speech.
 - Verify the preliminary determination of the meaning of a word or phrase (e.g., by checking the inferred meaning in context or in a dictionary).

4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on *grade 7 reading and content*, choosing flexibly from a range of strategies.
- Use context (e.g., the overall meaning of a sentence or paragraph; a word's position or function in a sentence) as a clue to the meaning of a word or phrase.
 - Use common, grade-appropriate Greek or Latin affixes and roots as clues to the meaning of a word (e.g., *belligerent, belliflouse, rebel*).
 - Consult general and specialized reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning or its part of speech.
 - Verify the preliminary determination of the meaning of a word or phrase (e.g., by checking the inferred meaning in context or in a dictionary).

Grade 7 students:

Grade 8 students:

4. Determine or clarify the meaning of unknown and multiple-meaning words or phrases based on *grade 8 reading and content*, choosing flexibly from a range of strategies.
- Use context (e.g., the overall meaning of a sentence or paragraph; a word's position or function in a sentence) as a clue to the meaning of a word or phrase.
 - Use common, grade-appropriate Greek or Latin affixes and roots as clues to the meaning of a word (e.g., *precede, recede, secede*).
 - Consult general and specialized reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning or its part of speech.
 - Verify the preliminary determination of the meaning of a word or phrase (e.g., by checking the inferred meaning in context or in a dictionary).
5. Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.
- Interpret figures of speech (e.g., literary, biblical, and mythological allusions) in context.
 - Use the relationship between particular words (e.g., synonym/antonym, analogy) to better understand each of the words.
 - Distinguish among the connotations (associations) of words with similar denotations (definitions) (e.g., *refined, respectful, polite, diplomatic, condescending*).
6. Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases; gather vocabulary knowledge when considering a word or phrase important to comprehension or expression.
4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on *grade 8 reading and content*, choosing flexibly from a range of strategies.
- Use context (e.g., the overall meaning of a sentence or paragraph; a word's position or function in a sentence) as a clue to the meaning of a word or phrase.
 - Use common, grade-appropriate Greek or Latin affixes and roots as clues to the meaning of a word (e.g., *precede, recede, secede*).
 - Consult general and specialized reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning or its part of speech.
 - Verify the preliminary determination of the meaning of a word or phrase (e.g., by checking the inferred meaning in context or in a dictionary).
5. Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.
- Interpret figures of speech (e.g., verbal irony, puns) in context.
 - Use the relationship between particular words to better understand each of the words.
 - Distinguish among the connotations (associations) of words with similar denotations (definitions) (e.g., *willful, firm, persistent, resolute*).
6. Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases; gather vocabulary knowledge when considering a word or phrase important to comprehension or expression.

Language Standards 6-12

L

The CCR anchor standards and high school grade-specific standards work in tandem to define college and career readiness expectations—the former providing broad standards, the latter providing additional specificity.

Grades 9–10 students:

Conventions of Standard English

1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
 - a. Use parallel structure.*
 - b. Use various types of phrases (noun, verb, adjectival, adverbial, participial, prepositional, absolute) and clauses (independent, dependent, noun, relative, adverbial) to convey specific meanings and add variety and interest to writing or presentations.
2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
 - a. Use a semicolon (and perhaps a conjunctive adverb) to link two or more closely related independent clauses.
 - b. Use a colon to introduce a list or quotation.
 - c. Spell correctly.

Grades 11–12 students:

Conventions of Standard English

1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
 - a. Apply the understanding that usage is a matter of convention, can change over time, and is sometimes contested.
 - b. Resolve issues of complex or contested usage, consulting references (e.g., *Merriam-Webster's Dictionary of English Usage*, *Garner's Modern American Usage*) as needed.
2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
 - a. Observe hyphenation conventions.
 - b. Spell correctly.

Knowledge of Language

3. Apply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading or listening.
 - a. Write and edit work so that it conforms to the guidelines in a style manual (e.g., *MLA Handbook*, *Turabian's Manual for Writers*) appropriate for the discipline and writing type.
3. Apply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading or listening.
 - a. Vary syntax for effect, consulting references (e.g., *Tufte's Artful Sentences*) for guidance as needed; apply an understanding of syntax to the study of complex texts when reading.

Language Standards 6-12

L

Grades 9–10 students:

Vocabulary Acquisition and Use

4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on *grades 9–10 reading and content*, choosing flexibly from a range of strategies.
 - a. Use context (e.g., the overall meaning of a sentence, paragraph, or text; a word's position or function in a sentence) as a clue to the meaning of a word or phrase.
 - b. Identify and correctly use patterns of word changes that indicate different meanings or parts of speech (e.g., *analyze, analysis, analytical; advocate, advocacy*).
 - c. Consult general and specialized reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning, its part of speech, or its etymology.
 - d. Verify the preliminary determination of the meaning of a word or phrase (e.g., by checking the inferred meaning in context or in a dictionary).

Grades 11–12 students:

4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on *grades 11–12 reading and content*, choosing flexibly from a range of strategies.
 - a. Use context (e.g., the overall meaning of a sentence, paragraph, or text; a word's position or function in a sentence) as a clue to the meaning of a word or phrase.
 - b. Identify and correctly use patterns of word changes that indicate different meanings or parts of speech (e.g., *conceive, conception, conceivable*).
 - c. Consult general and specialized reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning, its part of speech, its etymology, or its standard usage.
 - d. Verify the preliminary determination of the meaning of a word or phrase (e.g., by checking the inferred meaning in context or in a dictionary).
5. Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.
 - a. Interpret figures of speech (e.g., euphemism, oxymoron) in context and analyze their role in the text.
 - b. Analyze nuances in the meaning of words with similar denotations.
6. Acquire and use accurately general academic and domain-specific words and phrases, sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when considering a word or phrase important to comprehension or expression.

Language Progressive Skills, by Grade

The following skills, marked with an asterisk (*) in Language standards 1-3, are particularly likely to require continued attention in higher grades as they are applied to increasingly sophisticated writing and speaking.

| Standard | Grade(s) | | | | | | | |
|--|----------|---|---|---|---|---|------|-------|
| | 3 | 4 | 5 | 6 | 7 | 8 | 9-10 | 11-12 |
| L.3.1f. Ensure subject-verb and pronoun-antecedent agreement. | | | | | | | | |
| L.3.3a. Choose words and phrases for effect. | | | | | | | | |
| L.4.1f. Produce complete sentences; recognizing and correcting inappropriate fragments and run-ons. | | | | | | | | |
| L.4.1g. Correctly use frequently confused words (e.g., <i>to/too/two</i> ; <i>there/their</i>). | | | | | | | | |
| L.4.3a. Choose words and phrases to convey ideas precisely.* | | | | | | | | |
| L.4.3b. Choose punctuation for effect. | | | | | | | | |
| L.5.1d. Recognize and correct inappropriate shifts in verb tense. | | | | | | | | |
| L.5.2a. Use punctuation to separate items in a series.* | | | | | | | | |
| L.6.1c. Recognize and correct inappropriate shifts in pronoun number and person. | | | | | | | | |
| L.6.1d. Recognize and correct vague pronouns (i.e., ones with unclear or ambiguous antecedents). | | | | | | | | |
| L.6.1e. Recognize variations from standard English in their own and others' writing and speaking, and identify and use strategies to improve expression in conventional language. | | | | | | | | |
| L.6.2a. Use punctuation (commas, parentheses, dashes) to set off nonrestrictive/parenthetical elements. | | | | | | | | |
| L.6.3a. Vary sentence patterns for meaning, reader/listener interest, and style.* | | | | | | | | |
| L.6.3b. Maintain consistency in style and tone. | | | | | | | | |
| L.7.1c. Place phrases and clauses within a sentence, recognizing and correcting misplaced and dangling modifiers. | | | | | | | | |
| L.7.3a. Choose language that expresses ideas precisely and concisely, recognizing and eliminating wordiness and redundancy. | | | | | | | | |
| L.8.1d. Recognize and correct inappropriate shifts in verb voice and mood. | | | | | | | | |
| L.9-10.1a. Use parallel structure | | | | | | | | |

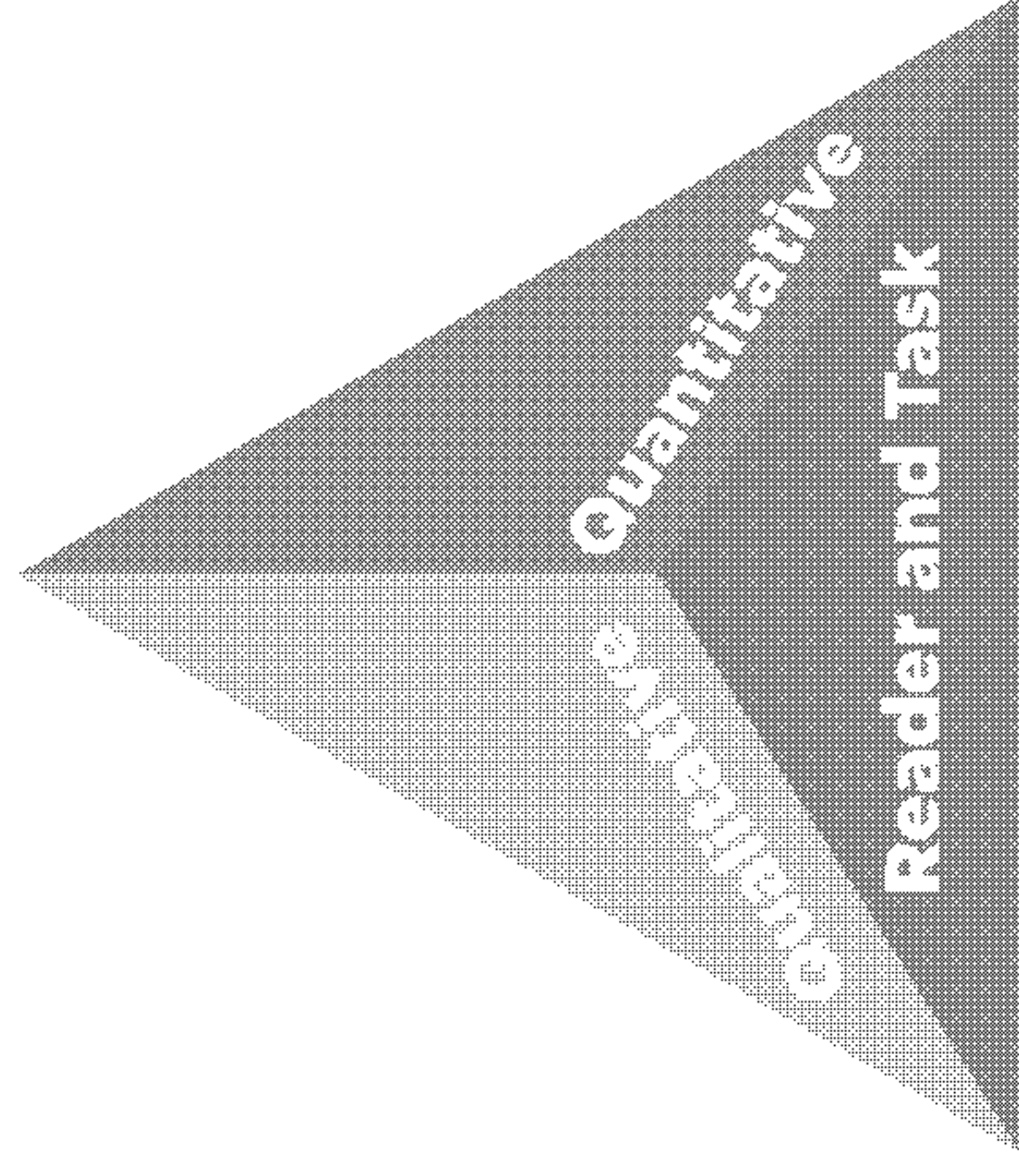
* Subsumed by L.7.3a

† Subsumed by L.9-10.1a

‡ Subsumed by L.11-12.3a

Standard 10: Range, Quality, and Complexity of Student Reading 6-12

Measuring Text Complexity: Three Factors



Qualitative evaluation of the text: Levels of meaning, structure, language conventionality and clarity, and knowledge demands

Quantitative evaluation of the text: Readability measures and other scores of text complexity

Matching reader to text and task: Reader variables (such as motivation, knowledge, and experiences) and task variables (such as purpose and the complexity generated by the task assigned and the questions posed)

Note: More detailed information on text complexity and how it is measured is contained in Appendix A.

Range of Text Types for 6-12

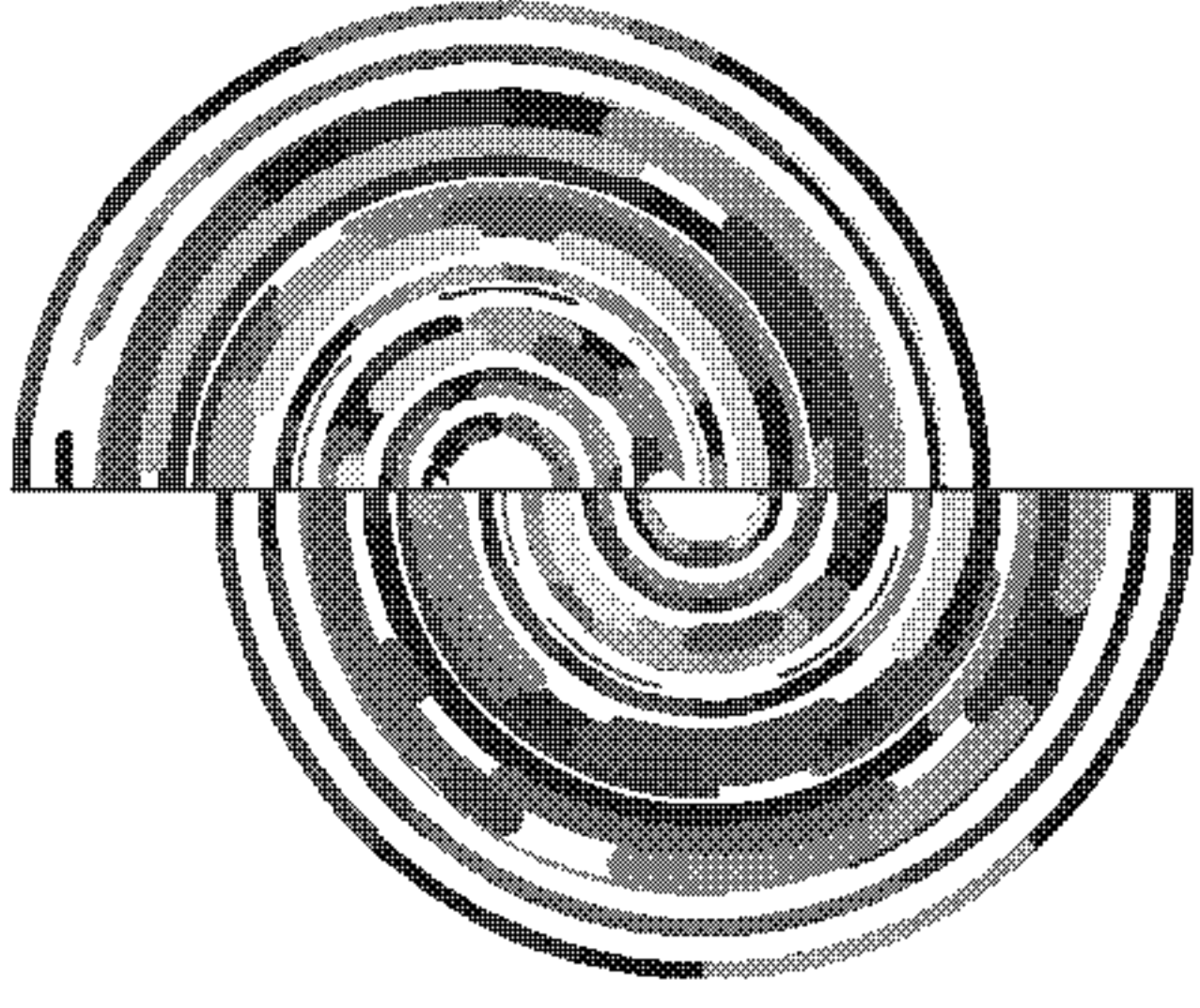
Students in grades 6-12 apply the Reading standards to the following range of text types, with texts selected from a broad range of cultures and periods.

| Literature | | Informational Text | |
|----------------|---|----------------------------|--|
| Stories | Includes the subgenres of adventure stories, historical fiction, mysteries, myths, science fiction, realistic fiction, allegories, parodies, satire, and graphic novels | Poetry | Includes the subgenres of narrative poems, lyrical poems, free verse poems, sonnets, odes, ballads, and epics |
| Drama | Includes one-act and multi-act plays, both in written form and on film | Literary Nonfiction | Includes the subgenres of exposition, argument, and functional text in the form of personal essays, speeches, opinion pieces, essays about art or literature, biographies, memoirs, journalism, and historical, scientific, technical, or economic accounts (including digital sources) written for a broad audience |

Texts Illustrating the Complexity, Quality, and Range of Student Reading 6–12

| | Literature: Stories, Dramas, Poetry | Informational Texts: Literary Nonfiction |
|--------|---|--|
| 6–8 | <ul style="list-style-type: none"> ▪ <i>Little Women</i> by Louisa May Alcott (1869) ▪ <i>The Adventures of Tom Sawyer</i> by Mark Twain (1876) ▪ “The Road Not Taken” by Robert Frost (1915) ▪ <i>The Dark Is Rising</i> by Susan Cooper (1973) ▪ <i>Dragonwings</i> by Laurence Yep (1975) ▪ <i>Roll of Thunder, Hear My Cry</i> by Mildred Taylor (1976) | <ul style="list-style-type: none"> ▪ “Letter on Thomas Jefferson” by John Adams (1776) ▪ <i>Narrative of the Life of Frederick Douglass, an American Slave</i> by Frederick Douglass (1845) ▪ “Blood, Toil, Tears and Sweat: Address to Parliament on May 13th, 1940” by Winston Churchill (1940) ▪ <i>Harriet Tubman: Conductor on the Underground Railroad</i> by Ann Petry (1955) ▪ <i>Travels with Charley: in Search of America</i> by John Steinbeck (1962) |
| 9–10 | <ul style="list-style-type: none"> ▪ <i>The Tragedy of Macbeth</i> by William Shakespeare (1592) ▪ “Ozymandias” by Percy Bysshe Shelley (1817) ▪ “The Raven” by Edgar Allan Poe (1845) ▪ “The Gift of the Magi” by O. Henry (1906) ▪ <i>The Grapes of Wrath</i> by John Steinbeck (1939) ▪ <i>Fahrenheit 451</i> by Ray Bradbury (1953) ▪ <i>The Killer Angels</i> by Michael Shaara (1975) | <ul style="list-style-type: none"> ▪ “Speech to the Second Virginia Convention” by Patrick Henry (1775) ▪ “Farewell Address” by George Washington (1796) ▪ “Gettysburg Address” by Abraham Lincoln (1863) ▪ “State of the Union Address” by Franklin Delano Roosevelt (1941) ▪ “Letter from Birmingham Jail” by Martin Luther King, Jr. (1964) ▪ “Hope, Despair and Memory” by Elie Wiesel (1997) |
| 11–CCR | <ul style="list-style-type: none"> ▪ “Ode on a Grecian Urn” by John Keats (1820) ▪ <i>Jane Eyre</i> by Charlotte Brontë (1848) ▪ “Because I Could Not Stop for Death” by Emily Dickinson (1890) ▪ <i>The Great Gatsby</i> by F. Scott Fitzgerald (1925) ▪ <i>Their Eyes Were Watching God</i> by Zora Neale Hurston (1937) ▪ <i>A Raisin in the Sun</i> by Lorraine Hansberry (1959) ▪ <i>The Namesake</i> by Jhumpa Lahiri (2003) | <ul style="list-style-type: none"> ▪ <i>Common Sense</i> by Thomas Paine (1776) ▪ <i>Walden</i> by Henry David Thoreau (1854) ▪ “Society and Solitude” by Ralph Waldo Emerson (1857) ▪ “The Fallacy of Success” by G. K. Chesterton (1909) ▪ <i>Black Boy</i> by Richard Wright (1945) ▪ “Politics and the English Language” by George Orwell (1946) ▪ “Take the Tortillas Out of Your Poetry” by Rudolfo Anaya (1995) |

Note: Given space limitations, the illustrative texts listed above are meant only to show individual titles that are representative of a range of topics and genres. (See Appendix B for excerpts of these and other texts illustrative of grades 6–12 text complexity, quality, and range.) At a curricular or instructional level, within and across grade levels, texts need to be selected around topics or themes that generate knowledge and allow students to study those topics or themes in depth.



STANDARDS FOR

**Literacy in
History/Social Studies,
Science, and Technical Subjects**

6-12

College and Career Readiness Anchor Standards for Reading

The grades 6-12 standards on the following pages define what students should understand and be able to do by the end of each grade span. They correspond to the College and Career Readiness (CCR) anchor standards below by number. The CCR and grade-specific standards are necessary complements—the former providing broad standards, the latter providing additional specificity—that together define the skills and understandings that all students must demonstrate.

Key Ideas and Details

1. Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.
2. Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.
3. Analyze how and why individuals, events, or ideas develop and interact over the course of a text.

Craft and Structure

4. Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone.
5. Analyze the structure of texts, including how specific sentences, paragraphs, and larger portions of the text (e.g., a section, chapter, scene, or stanza) relate to each other and the whole.
6. Assess how point of view or purpose shapes the content and style of a text.

Integration of Knowledge and Ideas

7. Integrate and evaluate content presented in diverse formats and media, including visually and quantitatively, as well as in words.*
8. Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence.
9. Analyze how two or more texts address similar themes or topics in order to build knowledge or to compare the approaches the authors take.

Range of Reading and Level of Text Complexity

10. Read and comprehend complex literary and informational texts independently and proficiently.

Note on range and content of student reading

Reading is critical to building knowledge in history/social studies as well as in science and technical subjects. College and career ready reading in these fields requires an appreciation of the norms and conventions of each discipline, such as the kinds of evidence used in history and science; an understanding of domain-specific words and phrases; an attention to precise details; and the capacity to evaluate intricate arguments, synthesize complex information, and follow detailed descriptions of events and concepts. In history/social studies, for example, students need to be able to analyze, evaluate, and differentiate primary and secondary sources. When reading scientific and technical texts, students need to be able to gain knowledge from challenging texts that often make extensive use of elaborate diagrams and data to convey information and illustrate concepts. Students must be able to read complex informational texts in these fields with independence and confidence because the vast majority of reading in college and workforce training programs will be sophisticated nonfiction. It is important to note that these Reading standards are meant to complement the specific content demands of the disciplines, not replace them.

*Please see “Research to Build and Present Knowledge” in Writing for additional standards relevant to gathering, assessing, and applying information from print and digital sources.

Reading Standards for Literacy in History/Social Studies 6–12

RH

The standards below begin at grade 6; standards for K–5 reading in history/social studies, science, and technical subjects are integrated into the K–5 Reading standards. The CCR anchor standards and high school standards in literacy work in tandem to define college and career readiness expectations—the former providing broad standards, the latter providing additional specificity.

Grades 6–8 students:

Key Ideas and Details

1. Cite specific textual evidence to support analysis of primary and secondary sources.
2. Determine the central ideas or information of a primary or secondary source; provide an accurate summary of the source distinct from prior knowledge or opinions.
3. Identify key steps in a text’s description of a process related to history/social studies (e.g., how a bill becomes law, how interest rates are raised or lowered).

Grades 9–10 students:

1. Cite specific textual evidence to support analysis of primary and secondary sources, attending to such features as the date and origin of the information.
2. Determine the central ideas or information of a primary or secondary source; provide an accurate summary of how key events or ideas develop over the course of the text.
3. Analyze in detail a series of events described in a text; determine whether earlier events caused later ones or simply preceded them.

Craft and Structure

4. Determine the meaning of words and phrases as they are used in a text, including vocabulary specific to domains related to history/social studies.
5. Describe how a text presents information (e.g., sequentially, comparatively, causally).

6. Identify aspects of a text that reveal an author’s point of view or purpose (e.g., loaded language, inclusion or avoidance of particular facts).

Integration of Knowledge and Ideas

7. Integrate visual information (e.g., in charts, graphs, photographs, videos, or maps) with other information in print and digital texts.
8. Distinguish among fact, opinion, and reasoned judgment in a text.
9. Analyze the relationship between a primary and secondary source on the same topic.

Range of Reading and Level of Text Complexity

10. By the end of grade 8, read and comprehend history/social studies texts in the grades 6–8 text complexity band independently and proficiently.

Grades 11–12 students:

1. Cite specific textual evidence to support analysis of primary and secondary sources, connecting insights gained from specific details to an understanding of the text as a whole.
2. Determine the central ideas or information of a primary or secondary source; provide an accurate summary that makes clear the relationships among the key details and ideas.
3. Evaluate various explanations for actions or events and determine which explanation best accords with textual evidence, acknowledging where the text leaves matters uncertain.

4. Determine the meaning of words and phrases as they are used in a text, including analyzing how an author uses and refines the meaning of a key term over the course of a text (e.g., how Madison defines *faction* in *Federalist* No. 10).

5. Analyze in detail how a complex primary source is structured, including how key sentences, paragraphs, and larger portions of the text contribute to the whole.

6. Evaluate authors’ differing points of view on the same historical event or issue by assessing the authors’ claims, reasoning, and evidence.

7. Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, as well as in words) in order to address a question or solve a problem.

8. Evaluate an author’s premises, claims, and evidence by corroborating or challenging them with other information.

9. Integrate information from diverse sources, both primary and secondary, into a coherent understanding of an idea or event, noting discrepancies among sources.

10. By the end of grade 12, read and comprehend history/social studies texts in the grades 11–CCR text complexity band independently and proficiently.

Reading Standards for Literacy in Science and Technical Subjects 6-12

RST

Grades 6–8 students:

Grades 9–10 students:

Grades 11–12 students:

Key Ideas and Details

- | | | |
|---|--|--|
| <ol style="list-style-type: none"> 1. Cite specific textual evidence to support analysis of science and technical texts. | <ol style="list-style-type: none"> 1. Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions. | <ol style="list-style-type: none"> 1. Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account. |
| <ol style="list-style-type: none"> 2. Determine the central ideas or conclusions of a text; provide an accurate summary of the text distinct from prior knowledge or opinions. | <ol style="list-style-type: none"> 2. Determine the central ideas or conclusions of a text; trace the text's explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text. | <ol style="list-style-type: none"> 2. Determine the central ideas or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms. |
| <ol style="list-style-type: none"> 3. Follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks. | <ol style="list-style-type: none"> 3. Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text. | <ol style="list-style-type: none"> 3. Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text. |

Craft and Structure

- | | | |
|--|---|--|
| <ol style="list-style-type: none"> 4. Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to <i>grades 6–8 texts and topics</i>. | <ol style="list-style-type: none"> 4. Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to <i>grades 9–10 texts and topics</i>. | <ol style="list-style-type: none"> 4. Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to <i>grades 11–12 texts and topics</i>. |
| <ol style="list-style-type: none"> 5. Analyze the structure an author uses to organize a text, including how the major sections contribute to the whole and to an understanding of the topic. | <ol style="list-style-type: none"> 5. Analyze the structure of the relationships among concepts in a text, including relationships among key terms (e.g., <i>force, friction, reaction force, energy</i>). | <ol style="list-style-type: none"> 5. Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas. |
| <ol style="list-style-type: none"> 6. Analyze the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text. | <ol style="list-style-type: none"> 6. Analyze the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, defining the question the author seeks to address. | <ol style="list-style-type: none"> 6. Analyze the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved. |

Integration of Knowledge and Ideas

- | | | |
|--|---|--|
| <ol style="list-style-type: none"> 7. Integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually (e.g., in a flowchart, diagram, model, graph, or table). | <ol style="list-style-type: none"> 7. Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words. | <ol style="list-style-type: none"> 7. Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. |
| <ol style="list-style-type: none"> 8. Distinguish among facts, reasoned judgment based on research findings, and speculation in a text. | <ol style="list-style-type: none"> 8. Assess the extent to which the reasoning and evidence in a text support the author's claim or a recommendation for solving a scientific or technical problem. | <ol style="list-style-type: none"> 8. Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. |
| <ol style="list-style-type: none"> 9. Compare and contrast the information gained from experiments, simulations, video, or multimedia sources with that gained from reading a text on the same topic. | <ol style="list-style-type: none"> 9. Compare and contrast findings presented in a text to those from other sources (including their own experiments), noting when the findings support or contradict previous explanations or accounts. | <ol style="list-style-type: none"> 9. Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible. |

Range of Reading and Level of Text Complexity

- | | | |
|---|---|---|
| <ol style="list-style-type: none"> 10. By the end of grade 8, read and comprehend science/technical texts in the grades 6–8 text complexity band independently and proficiently. | <ol style="list-style-type: none"> 10. By the end of grade 10, read and comprehend science/technical texts in the grades 9–10 text complexity band independently and proficiently. | <ol style="list-style-type: none"> 10. By the end of grade 12, read and comprehend science/technical texts in the grades 11–CCR text complexity band independently and proficiently. |
|---|---|---|

College and Career Readiness Anchor Standards for Writing

The grades 6-12 standards on the following pages define what students should understand and be able to do by the end of each grade span. They correspond to the College and Career Readiness (CCR) anchor standards below by number. The CCR and grade-specific standards are necessary complements—the former providing broad standards, the latter providing additional specificity—that together define the skills and understandings that all students must demonstrate.

Text Types and Purposes*

1. Write arguments to support claims in an analysis of substantive topics or texts using valid reasoning and relevant and sufficient evidence.
2. Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content.
3. Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details and well-structured event sequences.

Production and Distribution of Writing

4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
5. Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.
6. Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others.

Research to Build and Present Knowledge

7. Conduct short as well as more sustained research projects based on focused questions, demonstrating understanding of the subject under investigation.
8. Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.
9. Draw evidence from literary or informational texts to support analysis, reflection, and research.

Range of Writing

10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.

Note on range and content of student writing

For students, writing is a key means of asserting and defending claims, showing what they know about a subject, and conveying what they have experienced, imagined, thought, and felt. To be college and career ready writers, students must take task, purpose, and audience into careful consideration, choosing words, information, structures, and formats deliberately. They need to be able to use technology strategically when creating, refining, and collaborating on writing. They have to become adept at gathering information, evaluating sources, and citing material accurately, reporting findings from their research and analysis of sources in a clear and cogent manner. They must have the flexibility, concentration, and fluency to produce high-quality first-draft text under a tight deadline and the capacity to revisit and make improvements to a piece of writing over multiple drafts when circumstances encourage or require it. To meet these goals, students must devote significant time and effort to writing, producing numerous pieces over short and long time frames throughout the year.

*These broad types of writing include many subgenres. See Appendix A for definitions of key writing types.

Writing Standards for Literacy in History/Social Studies, Science, and Technical Subjects 6–12

WHST

The standards below begin at grade 6; standards for K–5 writing in history/social studies, science, and technical subjects are integrated into the K–5 Writing standards. The CCR anchor standards and high school standards in literacy work in tandem to define college and career readiness expectations—the former providing broad standards, the latter providing additional specificity.

Grades 6–8 students:

Text Types and Purposes

1. Write arguments focused on *discipline-specific content*.
 - a. Introduce claim(s) about a topic or issue, acknowledge and distinguish the claim(s) from alternate or opposing claims, and organize the reasons and evidence logically.
 - b. Support claim(s) with logical reasoning and relevant, accurate data and evidence that demonstrate an understanding of the topic or text, using credible sources.
 - c. Use words, phrases, and clauses to create cohesion and clarify the relationships among claim(s), counterclaims, reasons, and evidence.
 - d. Establish and maintain a formal style.
 - e. Provide a concluding statement or section that follows from and supports the argument presented.

Grades 9–10 students:

1. Write arguments focused on *discipline-specific content*.
 - a. Introduce precise claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that establishes clear relationships among the claim(s), counterclaims, reasons, and evidence.
 - b. Develop claim(s) and counterclaims fairly, supplying data and evidence for each while pointing out the strengths and limitations of both claim(s) and counterclaims in a discipline-appropriate form and in a manner that anticipates the audience's knowledge level and concerns.
 - c. Use words, phrases, and clauses to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between claim(s) and evidence, and between claim(s) and counterclaims.
 - d. Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing.
 - e. Provide a concluding statement or section that follows from or supports the argument presented.

Grades 11–12 students:

1. Write arguments focused on *discipline-specific content*.
 - a. Introduce precise, knowledgeable claim(s), establish the significance of the claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that logically sequences the claim(s), counterclaims, reasons, and evidence.
 - b. Develop claim(s) and counterclaims fairly and thoroughly, supplying the most relevant data and evidence for each while pointing out the strengths and limitations of both claim(s) and counterclaims in a discipline-appropriate form that anticipates the audience's knowledge level, concerns, values, and possible biases.
 - c. Use words, phrases, and clauses as well as varied syntax to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims.
 - d. Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing.
 - e. Provide a concluding statement or section that follows from or supports the argument presented.

Writing Standards for Literacy in History/Social Studies, Science, and Technical Subjects 6–12

WHST

Grades 6–8 students:

Text Types and Purposes (continued)

2. Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes.
- Introduce a topic clearly, previewing what is to follow; organize ideas, concepts, and information into broader categories as appropriate to achieving purpose; include formatting (e.g., headings), graphics (e.g., charts, tables), and multimedia when useful to aiding comprehension.
 - Develop the topic with relevant, well-chosen facts, definitions, concrete details, quotations, or other information and examples.
 - Use appropriate and varied transitions to create cohesion and clarify the relationships among ideas and concepts.
 - Use precise language and domain-specific vocabulary to inform about or explain the topic.
 - Establish and maintain a formal style and objective tone.
 - Provide a concluding statement or section that follows from and supports the information or explanation presented.

Grades 9–10 students:

2. Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes.
- Introduce a topic and organize ideas, concepts, and information to make important connections and distinctions; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension.
 - Develop the topic with well-chosen, relevant, and sufficient facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic.
 - Use varied transitions and sentence structures to link the major sections of the text, create cohesion, and clarify the relationships among ideas and concepts.
 - Use precise language and domain-specific vocabulary to manage the complexity of the topic and convey a style appropriate to the discipline and context as well as to the expertise of likely readers.
 - Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing.
 - Provide a concluding statement or section that follows from and supports the information or explanation presented (e.g., articulating implications or the significance of the topic).

3. (See note; not applicable as a separate requirement)

Grades 11–12 students:

2. Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes.
- Introduce a topic and organize complex ideas, concepts, and information so that each new element builds on that which precedes it to create a unified whole; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension.
 - Develop the topic thoroughly by selecting the most significant and relevant facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic.
 - Use varied transitions and sentence structures to link the major sections of the text, create cohesion, and clarify the relationships among complex ideas and concepts.
 - Use precise language, domain-specific vocabulary and techniques such as metaphor, simile, and analogy to manage the complexity of the topic; convey a knowledgeable stance in a style that responds to the discipline and context as well as to the expertise of likely readers.
 - Provide a concluding statement or section that follows from and supports the information or explanation provided (e.g., articulating implications or the significance of the topic).

3. (See note; not applicable as a separate requirement)

Note:

Students' narrative skills continue to grow in these grades. The Standards require that students be able to incorporate narrative elements effectively into arguments and informative/explanatory texts. In history/social studies, students must be able to incorporate narrative accounts into their analyses of individuals or events of historical import. In science and technical subjects, students must be able to write precise enough descriptions of the step-by-step procedures they use in their investigations or technical work that others can replicate them and (possibly) reach the same results.

Writing Standards for Literacy in History/Social Studies, Science, and Technical Subjects 6–12

WHST

Grades 6–8 students:

Production and Distribution of Writing

4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
5. With some guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on how well purpose and audience have been addressed.

Grades 9–10 students:

4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
5. Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.

Grades 11–12 students:

4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
5. Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.
6. Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.

Research to Build and Present Knowledge

7. Conduct short research projects to answer a question (including a self-generated question), drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration.
8. Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.

6. Use technology, including the Internet, to produce, publish, and update individual or shared writing products, taking advantage of technology's capacity to link to other information and to display information flexibly and dynamically.
7. Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.

8. Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation.

8. Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.

9. Draw evidence from informational texts to support analysis, reflection, and research.

9. Draw evidence from informational texts to support analysis, reflection, and research.

9. Draw evidence from informational texts to support analysis, reflection, and research.

Range of Writing

10. Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.

10. Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.

10. Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.

COMMON CORE STATE STANDARDS FOR

Mathematics



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Introduction

Toward greater focus and coherence

Mathematics experiences in early childhood settings should concentrate on (1) number (which includes whole number, operations, and relations) and (2) geometry, spatial relations, and measurement, with more mathematics learning time devoted to number than to other topics. Mathematical process goals should be integrated in these content areas.

— Mathematics Learning in Early Childhood, National Research Council, 2009

The composite standards [of Hong Kong, Korea and Singapore] have a number of features that can inform an international benchmarking process for the development of K-6 mathematics standards in the U.S. First, the composite standards concentrate the early learning of mathematics on the number, measurement, and geometry strands with less emphasis on data analysis and little exposure to algebra. The Hong Kong standards for grades 1-3 devote approximately half the targeted time to numbers and almost all the time remaining to geometry and measurement.

— Ginsburg, Leinwand and Decker, 2009

Because the mathematics concepts in [U.S.] textbooks are often weak, the presentation becomes more mechanical than is ideal. We looked at both traditional and non-traditional textbooks used in the US and found this conceptual weakness in both.

— Ginsburg et al., 2005

There are many ways to organize curricula. The challenge, now rarely met, is to avoid those that distort mathematics and turn off students.

— Steen, 2007

For over a decade, research studies of mathematics education in high-performing countries have pointed to the conclusion that the mathematics curriculum in the United States must become substantially more focused and coherent in order to improve mathematics achievement in this country. To deliver on the promise of common standards, the standards must address the problem of a curriculum that is “a mile wide and an inch deep.” These Standards are a substantial answer to that challenge.

It is important to recognize that “fewer standards” are no substitute for focused standards. Achieving “fewer standards” would be easy to do by resorting to broad, general statements. Instead, these Standards aim for clarity and specificity.

Assessing the coherence of a set of standards is more difficult than assessing their focus. William Schmidt and Richard Houang (2002) have said that content standards and curricula are coherent if they are:

*articulated over time as a sequence of topics and performances that are logical and reflect, where appropriate, the sequential or hierarchical nature of the disciplinary content from which the subject matter derives. That is, what and how students are taught should reflect not only the topics that fall within a certain academic discipline, **but also the key ideas** that determine how knowledge is organized and generated within that discipline. This implies*

that to be coherent, a set of content standards must evolve from particulars (e.g., the meaning and operations of whole numbers, including simple math facts and routine computational procedures associated with whole numbers and fractions) to deeper structures inherent in the discipline. These deeper structures then serve as a means for connecting the particulars (such as an understanding of the rational number system and its properties). (emphasis added)

These Standards endeavor to follow such a design, not only by stressing conceptual understanding of key ideas, but also by continually returning to organizing principles such as place value or the properties of operations to structure those ideas.

In addition, the “sequence of topics and performances” that is outlined in a body of mathematics standards must also respect what is known about how students learn. As Confrey (2007) points out, developing “sequenced obstacles and challenges for students...absent the insights about meaning that derive from careful study of learning, would be unfortunate and unwise.” In recognition of this, the development of these Standards began with research-based learning progressions detailing what is known today about how students’ mathematical knowledge, skill, and understanding develop over time.

Understanding mathematics

These Standards define what students should understand and be able to do in their study of mathematics. Asking a student to understand something means asking a teacher to assess whether the student has understood it. But what does mathematical understanding look like? One hallmark of mathematical understanding is the ability to justify, in a way appropriate to the student’s mathematical maturity, *why* a particular mathematical statement is true or where a mathematical rule comes from. There is a world of difference between a student who can summon a mnemonic device to expand a product such as $(a + b)(x + y)$ and a student who can explain where the mnemonic comes from. The student who can explain the rule understands the mathematics, and may have a better chance to succeed at a less familiar task such as expanding $(a + b + c)(x + y)$. Mathematical understanding and procedural skill are equally important, and both are assessable using mathematical tasks of sufficient richness.

The Standards set grade-specific standards but do not define the intervention methods or materials necessary to support students who are well below or well above grade-level expectations. It is also beyond the scope of the Standards to define the full range of supports appropriate for English language learners and for students with special needs. At the same time, all students must have the opportunity to learn and meet the same high standards if they are to access the knowledge and skills necessary in their post-school lives. The Standards should be read as allowing for the widest possible range of students to participate fully from the outset, along with appropriate accommodations to ensure maximum participation of students with special education needs. For example, for students with disabilities reading should allow for use of Braille, screen reader technology, or other assistive devices, while writing should include the use of a scribe, computer, or speech-to-text technology. In a similar vein, speaking and listening should be interpreted broadly to include sign language. No set of grade-specific standards can fully reflect the great variety in abilities, needs, learning rates, and achievement levels of students in any given classroom. However, the Standards do provide clear signposts along the way to the goal of college and career readiness for all students.

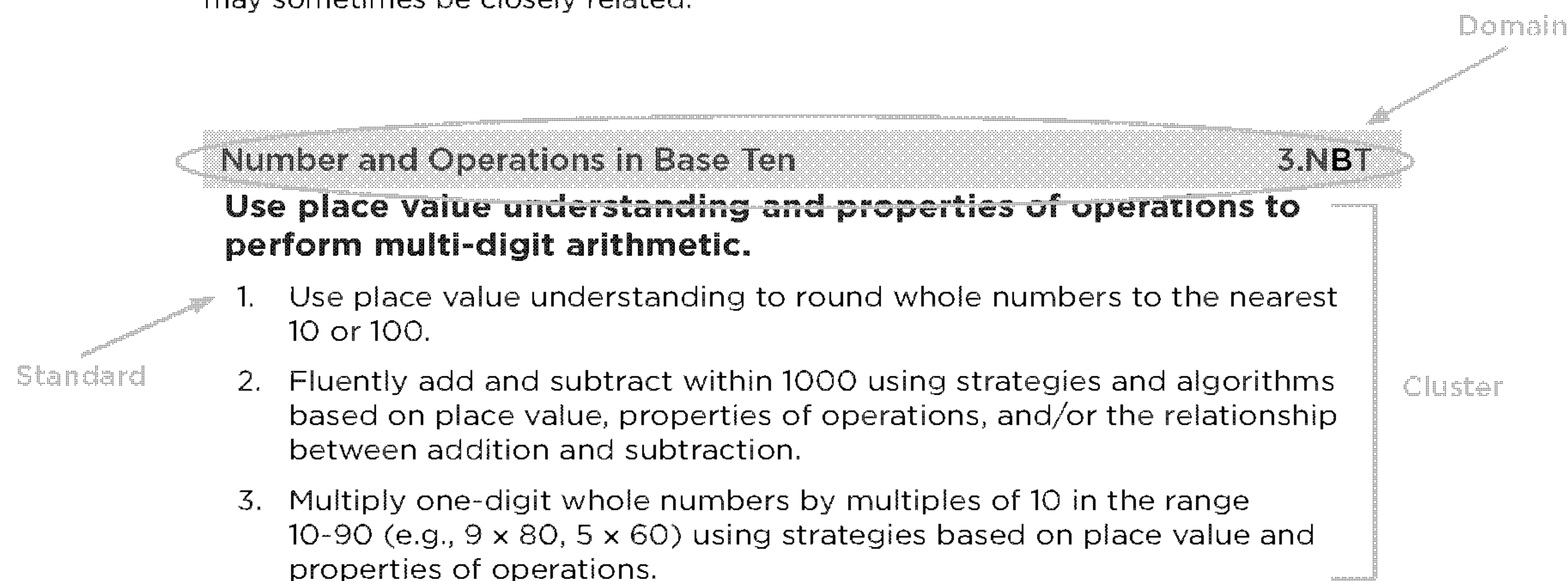
The Standards begin on page 6 with eight Standards for Mathematical Practice.

How to read the grade level standards

Standards define what students should understand and be able to do.

Clusters are groups of related standards. Note that standards from different clusters may sometimes be closely related, because mathematics is a connected subject.

Domains are larger groups of related standards. Standards from different domains may sometimes be closely related.



These Standards do not dictate curriculum or teaching methods. For example, just because topic A appears before topic B in the standards for a given grade, it does not necessarily mean that topic A must be taught before topic B. A teacher might prefer to teach topic B before topic A, or might choose to highlight connections by teaching topic A and topic B at the same time. Or, a teacher might prefer to teach a topic of his or her own choosing that leads, as a byproduct, to students reaching the standards for topics A and B.

What students can learn at any particular grade level depends upon what they have learned before. Ideally then, each standard in this document might have been phrased in the form, “Students who already know ... should next come to learn” But at present this approach is unrealistic—not least because existing education research cannot specify all such learning pathways. Of necessity therefore, grade placements for specific topics have been made on the basis of state and international comparisons and the collective experience and collective professional judgment of educators, researchers and mathematicians. One promise of common state standards is that over time they will allow research on learning progressions to inform and improve the design of standards to a much greater extent than is possible today. Learning opportunities will continue to vary across schools and school systems, and educators should make every effort to meet the needs of individual students based on their current understanding.

These Standards are not intended to be new names for old ways of doing business. They are a call to take the next step. It is time for states to work together to build on lessons learned from two decades of standards based reforms. It is time to recognize that standards are not just promises to our children, but promises we intend to keep.

Mathematics | Standards for Mathematical Practice

The Standards for Mathematical Practice describe varieties of expertise that mathematics educators at all levels should seek to develop in their students. These practices rest on important “processes and proficiencies” with longstanding importance in mathematics education. The first of these are the NCTM process standards of problem solving, reasoning and proof, communication, representation, and connections. The second are the strands of mathematical proficiency specified in the National Research Council’s report *Adding It Up*: adaptive reasoning, strategic competence, conceptual understanding (comprehension of mathematical concepts, operations and relations), procedural fluency (skill in carrying out procedures flexibly, accurately, efficiently and appropriately), and productive disposition (habitual inclination to see mathematics as sensible, useful, and worthwhile, coupled with a belief in diligence and one’s own efficacy).

1 Make sense of problems and persevere in solving them.

Mathematically proficient students start by explaining to themselves the meaning of a problem and looking for entry points to its solution. They analyze givens, constraints, relationships, and goals. They make conjectures about the form and meaning of the solution and plan a solution pathway rather than simply jumping into a solution attempt. They consider analogous problems, and try special cases and simpler forms of the original problem in order to gain insight into its solution. They monitor and evaluate their progress and change course if necessary. Older students might, depending on the context of the problem, transform algebraic expressions or change the viewing window on their graphing calculator to get the information they need. Mathematically proficient students can explain correspondences between equations, verbal descriptions, tables, and graphs or draw diagrams of important features and relationships, graph data, and search for regularity or trends. Younger students might rely on using concrete objects or pictures to help conceptualize and solve a problem. Mathematically proficient students check their answers to problems using a different method, and they continually ask themselves, “Does this make sense?” They can understand the approaches of others to solving complex problems and identify correspondences between different approaches.

2 Reason abstractly and quantitatively.

Mathematically proficient students make sense of quantities and their relationships in problem situations. They bring two complementary abilities to bear on problems involving quantitative relationships: the ability to *decontextualize*—to abstract a given situation and represent it symbolically and manipulate the representing symbols as if they have a life of their own, without necessarily attending to their referents—and the ability to *contextualize*, to pause as needed during the manipulation process in order to probe into the referents for the symbols involved. Quantitative reasoning entails habits of creating a coherent representation of the problem at hand; considering the units involved; attending to the meaning of quantities, not just how to compute them; and knowing and flexibly using different properties of operations and objects.

3 Construct viable arguments and critique the reasoning of others.

Mathematically proficient students understand and use stated assumptions, definitions, and previously established results in constructing arguments. They make conjectures and build a logical progression of statements to explore the truth of their conjectures. They are able to analyze situations by breaking them into cases, and can recognize and use counterexamples. They justify their conclusions,

communicate them to others, and respond to the arguments of others. They reason inductively about data, making plausible arguments that take into account the context from which the data arose. Mathematically proficient students are also able to compare the effectiveness of two plausible arguments, distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in an argument—explain what it is. Elementary students can construct arguments using concrete referents such as objects, drawings, diagrams, and actions. Such arguments can make sense and be correct, even though they are not generalized or made formal until later grades. Later, students learn to determine domains to which an argument applies. Students at all grades can listen or read the arguments of others, decide whether they make sense, and ask useful questions to clarify or improve the arguments.

4 Model with mathematics.

Mathematically proficient students can apply the mathematics they know to solve problems arising in everyday life, society, and the workplace. In early grades, this might be as simple as writing an addition equation to describe a situation. In middle grades, a student might apply proportional reasoning to plan a school event or analyze a problem in the community. By high school, a student might use geometry to solve a design problem or use a function to describe how one quantity of interest depends on another. Mathematically proficient students who can apply what they know are comfortable making assumptions and approximations to simplify a complicated situation, realizing that these may need revision later. They are able to identify important quantities in a practical situation and map their relationships using such tools as diagrams, two-way tables, graphs, flowcharts and formulas. They can analyze those relationships mathematically to draw conclusions. They routinely interpret their mathematical results in the context of the situation and reflect on whether the results make sense, possibly improving the model if it has not served its purpose.

5 Use appropriate tools strategically.

Mathematically proficient students consider the available tools when solving a mathematical problem. These tools might include pencil and paper, concrete models, a ruler, a protractor, a calculator, a spreadsheet, a computer algebra system, a statistical package, or dynamic geometry software. Proficient students are sufficiently familiar with tools appropriate for their grade or course to make sound decisions about when each of these tools might be helpful, recognizing both the insight to be gained and their limitations. For example, mathematically proficient high school students analyze graphs of functions and solutions generated using a graphing calculator. They detect possible errors by strategically using estimation and other mathematical knowledge. When making mathematical models, they know that technology can enable them to visualize the results of varying assumptions, explore consequences, and compare predictions with data. Mathematically proficient students at various grade levels are able to identify relevant external mathematical resources, such as digital content located on a website, and use them to pose or solve problems. They are able to use technological tools to explore and deepen their understanding of concepts.

6 Attend to precision.

Mathematically proficient students try to communicate precisely to others. They try to use clear definitions in discussion with others and in their own reasoning. They state the meaning of the symbols they choose, including using the equal sign consistently and appropriately. They are careful about specifying units of measure, and labeling axes to clarify the correspondence with quantities in a problem. They calculate accurately and efficiently, express numerical answers with a degree of precision appropriate for the problem context. In the elementary grades, students give carefully formulated explanations to each other. By the time they reach high school they have learned to examine claims and make explicit use of definitions.

7 Look for and make use of structure.

Mathematically proficient students look closely to discern a pattern or structure. Young students, for example, might notice that three and seven more is the same amount as seven and three more, or they may sort a collection of shapes according to how many sides the shapes have. Later, students will see 7×8 equals the well remembered $7 \times 5 + 7 \times 3$, in preparation for learning about the distributive property. In the expression $x^2 + 9x + 14$, older students can see the 14 as 2×7 and the 9 as $2 + 7$. They recognize the significance of an existing line in a geometric figure and can use the strategy of drawing an auxiliary line for solving problems. They also can step back for an overview and shift perspective. They can see complicated things, such as some algebraic expressions, as single objects or as being composed of several objects. For example, they can see $5 - 3(x - y)^2$ as 5 minus a positive number times a square and use that to realize that its value cannot be more than 5 for any real numbers x and y .

8 Look for and express regularity in repeated reasoning.

Mathematically proficient students notice if calculations are repeated, and look both for general methods and for shortcuts. Upper elementary students might notice when dividing 25 by 11 that they are repeating the same calculations over and over again, and conclude they have a repeating decimal. By paying attention to the calculation of slope as they repeatedly check whether points are on the line through (1, 2) with slope 3, middle school students might abstract the equation $(y - 2)/(x - 1) = 3$. Noticing the regularity in the way terms cancel when expanding $(x - 1)(x + 1)$, $(x - 1)(x^2 + x + 1)$, and $(x - 1)(x^3 + x^2 + x + 1)$ might lead them to the general formula for the sum of a geometric series. As they work to solve a problem, mathematically proficient students maintain oversight of the process, while attending to the details. They continually evaluate the reasonableness of their intermediate results.

Connecting the Standards for Mathematical Practice to the Standards for Mathematical Content

The Standards for Mathematical Practice describe ways in which developing student practitioners of the discipline of mathematics increasingly ought to engage with the subject matter as they grow in mathematical maturity and expertise throughout the elementary, middle and high school years. Designers of curricula, assessments, and professional development should all attend to the need to connect the mathematical practices to mathematical content in mathematics instruction.

The Standards for Mathematical Content are a balanced combination of procedure and understanding. Expectations that begin with the word “understand” are often especially good opportunities to connect the practices to the content. Students who lack understanding of a topic may rely on procedures too heavily. Without a flexible base from which to work, they may be less likely to consider analogous problems, represent problems coherently, justify conclusions, apply the mathematics to practical situations, use technology mindfully to work with the mathematics, explain the mathematics accurately to other students, step back for an overview, or deviate from a known procedure to find a shortcut. In short, a lack of understanding effectively prevents a student from engaging in the mathematical practices.

In this respect, those content standards which set an expectation of understanding are potential “points of intersection” between the Standards for Mathematical Content and the Standards for Mathematical Practice. These points of intersection are intended to be weighted toward central and generative concepts in the school mathematics curriculum that most merit the time, resources, innovative energies, and focus necessary to qualitatively improve the curriculum, instruction, assessment, professional development, and student achievement in mathematics.

Mathematics | Kindergarten

In Kindergarten, instructional time should focus on two critical areas: (1) representing, relating, and operating on whole numbers, initially with sets of objects; (2) describing shapes and space. More learning time in Kindergarten should be devoted to number than to other topics.

(1) Students use numbers, including written numerals, to represent quantities and to solve quantitative problems, such as counting objects in a set; counting out a given number of objects; comparing sets or numerals; and modeling simple joining and separating situations with sets of objects, or eventually with equations such as $5 + 2 = 7$ and $7 - 2 = 5$. (Kindergarten students should see addition and subtraction equations, and student writing of equations in kindergarten is encouraged, but it is not required.) Students choose, combine, and apply effective strategies for answering quantitative questions, including quickly recognizing the cardinalities of small sets of objects, counting and producing sets of given sizes, counting the number of objects in combined sets, or counting the number of objects that remain in a set after some are taken away.

(2) Students describe their physical world using geometric ideas (e.g., shape, orientation, spatial relations) and vocabulary. They identify, name, and describe basic two-dimensional shapes, such as squares, triangles, circles, rectangles, and hexagons, presented in a variety of ways (e.g., with different sizes and orientations), as well as three-dimensional shapes such as cubes, cones, cylinders, and spheres. They use basic shapes and spatial reasoning to model objects in their environment and to construct more complex shapes.

Grade K Overview

Counting and Cardinality

- Know number names and the count sequence.
- Count to tell the number of objects.
- Compare numbers.

Operations and Algebraic Thinking

- Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.

Number and Operations in Base Ten

- Work with numbers 11–19 to gain foundations for place value.

Measurement and Data

- Describe and compare measurable attributes.
- Classify objects and count the number of objects in categories.

Geometry

- Identify and describe shapes.
- Analyze, compare, create, and compose shapes.

Mathematical Practices

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

Counting and Cardinality**K.CC****Know number names and the count sequence.**

1. Count to 100 by ones and by tens.
2. Count forward beginning from a given number within the known sequence (instead of having to begin at 1).
3. Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).

Count to tell the number of objects.

4. Understand the relationship between numbers and quantities; connect counting to cardinality.
 - a. When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object.
 - b. Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.
 - c. Understand that each successive number name refers to a quantity that is one larger.
5. Count to answer “how many?” questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1-20, count out that many objects.

Compare numbers.

6. Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies.¹
7. Compare two numbers between 1 and 10 presented as written numerals.

Operations and Algebraic Thinking**K.OA****Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.**

1. Represent addition and subtraction with objects, fingers, mental images, drawings², sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.
2. Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.
3. Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation (e.g., $5 = 2 + 3$ and $5 = 4 + 1$).
4. For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or equation.
5. Fluently add and subtract within 5.

¹Include groups with up to ten objects.

²Drawings need not show details, but should show the mathematics in the problem. (This applies wherever drawings are mentioned in the Standards.)

Number and Operations in Base Ten

K.NBT

Work with numbers 11–19 to gain foundations for place value.

1. Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (e.g., $18 = 10 + 8$); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.

Measurement and Data

K.MD

Describe and compare measurable attributes.

1. Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.
2. Directly compare two objects with a measurable attribute in common, to see which object has “more of”/“less of” the attribute, and describe the difference. *For example, directly compare the heights of two children and describe one child as taller/shorter.*

Classify objects and count the number of objects in each category.

3. Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.³

Geometry

K.G

Identify and describe shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres).

1. Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as *above*, *below*, *beside*, *in front of*, *behind*, and *next to*.
2. Correctly name shapes regardless of their orientations or overall size.
3. Identify shapes as two-dimensional (lying in a plane, “flat”) or three-dimensional (“solid”).

Analyze, compare, create, and compose shapes.

4. Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/“corners”) and other attributes (e.g., having sides of equal length).
5. Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.
6. Compose simple shapes to form larger shapes. *For example, “Can you join these two triangles with full sides touching to make a rectangle?”*

³Limit category counts to be less than or equal to 10.

Mathematics | Grade 1

In Grade 1, instructional time should focus on four critical areas: (1) developing understanding of addition, subtraction, and strategies for addition and subtraction within 20; (2) developing understanding of whole number relationships and place value, including grouping in tens and ones; (3) developing understanding of linear measurement and measuring lengths as iterating length units; and (4) reasoning about attributes of, and composing and decomposing geometric shapes.

(1) Students develop strategies for adding and subtracting whole numbers based on their prior work with small numbers. They use a variety of models, including discrete objects and length-based models (e.g., cubes connected to form lengths), to model add-to, take-from, put-together, take-apart, and compare situations to develop meaning for the operations of addition and subtraction, and to develop strategies to solve arithmetic problems with these operations. Students understand connections between counting and addition and subtraction (e.g., adding two is the same as counting on two). They use properties of addition to add whole numbers and to create and use increasingly sophisticated strategies based on these properties (e.g., “making tens”) to solve addition and subtraction problems within 20. By comparing a variety of solution strategies, children build their understanding of the relationship between addition and subtraction.

(2) Students develop, discuss, and use efficient, accurate, and generalizable methods to add within 100 and subtract multiples of 10. They compare whole numbers (at least to 100) to develop understanding of and solve problems involving their relative sizes. They think of whole numbers between 10 and 100 in terms of tens and ones (especially recognizing the numbers 11 to 19 as composed of a ten and some ones). Through activities that build number sense, they understand the order of the counting numbers and their relative magnitudes.

(3) Students develop an understanding of the meaning and processes of measurement, including underlying concepts such as iterating (the mental activity of building up the length of an object with equal-sized units) and the transitivity principle for indirect measurement.¹

(4) Students compose and decompose plane or solid figures (e.g., put two triangles together to make a quadrilateral) and build understanding of part-whole relationships as well as the properties of the original and composite shapes. As they combine shapes, they recognize them from different perspectives and orientations, describe their geometric attributes, and determine how they are alike and different, to develop the background for measurement and for initial understandings of properties such as congruence and symmetry.

¹Students should apply the principle of transitivity of measurement to make indirect comparisons, but they need not use this technical term.

Grade 1 Overview

Operations and Algebraic Thinking

- Represent and solve problems involving addition and subtraction.
- Understand and apply properties of operations and the relationship between addition and subtraction.
- Add and subtract within 20.
- Work with addition and subtraction equations.

Number and Operations in Base Ten

- Extend the counting sequence.
- Understand place value.
- Use place value understanding and properties of operations to add and subtract.

Measurement and Data

- Measure lengths indirectly and by iterating length units.
- Tell and write time.
- Represent and interpret data.

Geometry

- Reason with shapes and their attributes.

Mathematical Practices

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

Operations and Algebraic Thinking

1.OA

Represent and solve problems involving addition and subtraction.

1. Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.²
2. Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.

Understand and apply properties of operations and the relationship between addition and subtraction.

3. Apply properties of operations as strategies to add and subtract.³ *Examples: If $8 + 3 = 11$ is known, then $3 + 8 = 11$ is also known. (Commutative property of addition.) To add $2 + 6 + 4$, the second two numbers can be added to make a ten, so $2 + 6 + 4 = 2 + 10 = 12$. (Associative property of addition.)*
4. Understand subtraction as an unknown-addend problem. *For example, subtract $10 - 8$ by finding the number that makes 10 when added to 8.*

Add and subtract within 20.

5. Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).
6. Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$); decomposing a number leading to a ten (e.g., $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$); using the relationship between addition and subtraction (e.g., knowing that $8 + 4 = 12$, one knows $12 - 8 = 4$); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent $6 + 6 + 1 = 12 + 1 = 13$).

Work with addition and subtraction equations.

7. Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. *For example, which of the following equations are true and which are false? $6 = 6$, $7 = 8 - 1$, $5 + 2 = 2 + 5$, $4 + 1 = 5 + 2$.*
8. Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. *For example, determine the unknown number that makes the equation true in each of the equations $8 + ? = 11$, $5 = \square - 3$, $6 + 6 = \square$.*

Number and Operations in Base Ten

1.NBT

Extend the counting sequence.

1. Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.

Understand place value.

2. Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases:
 - a. 10 can be thought of as a bundle of ten ones — called a “ten.”
 - b. The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.
 - c. The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones).

²See Glossary, Table 1.³Students need not use formal terms for these properties.

3. Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols $>$, $=$, and $<$.

Use place value understanding and properties of operations to add and subtract.

4. Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten.
5. Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.
6. Subtract multiples of 10 in the range 10–90 from multiples of 10 in the range 10–90 (positive or zero differences), using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.

Measurement and Data

1.MD

Measure lengths indirectly and by iterating length units.

1. Order three objects by length; compare the lengths of two objects indirectly by using a third object.
2. Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. *Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.*

Tell and write time.

3. Tell and write time in hours and half-hours using analog and digital clocks.

Represent and interpret data.

4. Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.

Geometry

1.G

Reason with shapes and their attributes.

1. Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes.
2. Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape.⁴
3. Partition circles and rectangles into two and four equal shares, describe the shares using the words *halves*, *fourths*, and *quarters*, and use the phrases *half of*, *fourth of*, and *quarter of*. Describe the whole as two of, or four of the shares. Understand for these examples that decomposing into more equal shares creates smaller shares.

⁴Students do not need to learn formal names such as “right rectangular prism.”

Mathematics | Grade 2

In Grade 2, instructional time should focus on four critical areas: (1) extending understanding of base-ten notation; (2) building fluency with addition and subtraction; (3) using standard units of measure; and (4) describing and analyzing shapes.

(1) Students extend their understanding of the base-ten system. This includes ideas of counting in fives, tens, and multiples of hundreds, tens, and ones, as well as number relationships involving these units, including comparing. Students understand multi-digit numbers (up to 1000) written in base-ten notation, recognizing that the digits in each place represent amounts of thousands, hundreds, tens, or ones (e.g., 853 is 8 hundreds + 5 tens + 3 ones).

(2) Students use their understanding of addition to develop fluency with addition and subtraction within 100. They solve problems within 1000 by applying their understanding of models for addition and subtraction, and they develop, discuss, and use efficient, accurate, and generalizable methods to compute sums and differences of whole numbers in base-ten notation, using their understanding of place value and the properties of operations. They select and accurately apply methods that are appropriate for the context and the numbers involved to mentally calculate sums and differences for numbers with only tens or only hundreds.

(3) Students recognize the need for standard units of measure (centimeter and inch) and they use rulers and other measurement tools with the understanding that linear measure involves an iteration of units. They recognize that the smaller the unit, the more iterations they need to cover a given length.

(4) Students describe and analyze shapes by examining their sides and angles. Students investigate, describe, and reason about decomposing and combining shapes to make other shapes. Through building, drawing, and analyzing two- and three-dimensional shapes, students develop a foundation for understanding area, volume, congruence, similarity, and symmetry in later grades.

Grade 2 Overview

Operations and Algebraic Thinking

- Represent and solve problems involving addition and subtraction.
- Add and subtract within 20.
- Work with equal groups of objects to gain foundations for multiplication.

Number and Operations in Base Ten

- Understand place value.
- Use place value understanding and properties of operations to add and subtract.

Measurement and Data

- Measure and estimate lengths in standard units.
- Relate addition and subtraction to length.
- Work with time and money.
- Represent and interpret data.

Geometry

- Reason with shapes and their attributes.

Mathematical Practices

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

Operations and Algebraic Thinking

2.OA

Represent and solve problems involving addition and subtraction.

1. Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.¹

Add and subtract within 20.

2. Fluently add and subtract within 20 using mental strategies.² By end of Grade 2, know from memory all sums of two one-digit numbers.

Work with equal groups of objects to gain foundations for multiplication.

3. Determine whether a group of objects (up to 20) has an odd or even number of members, e.g., by pairing objects or counting them by 2s; write an equation to express an even number as a sum of two equal addends.
4. Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends.

Number and Operations in Base Ten

2.NBT

Understand place value.

1. Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. Understand the following as special cases:
 - a. 100 can be thought of as a bundle of ten tens — called a “hundred.”
 - b. The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones).
2. Count within 1000; skip-count by 5s, 10s, and 100s.
3. Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.
4. Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using $>$, $=$, and $<$ symbols to record the results of comparisons.

Use place value understanding and properties of operations to add and subtract.

5. Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.
6. Add up to four two-digit numbers using strategies based on place value and properties of operations.
7. Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method. Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds.
8. Mentally add 10 or 100 to a given number 100–900, and mentally subtract 10 or 100 from a given number 100–900.
9. Explain why addition and subtraction strategies work, using place value and the properties of operations.³

¹See Glossary, Table 1.²See standard 1.OA.6 for a list of mental strategies.³Explanations may be supported by drawings or objects.

Measurement and Data**2.MD****Measure and estimate lengths in standard units.**

1. Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.
2. Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen.
3. Estimate lengths using units of inches, feet, centimeters, and meters.
4. Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.

Relate addition and subtraction to length.

5. Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem.
6. Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, ..., and represent whole-number sums and differences within 100 on a number line diagram.

Work with time and money.

7. Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.
8. Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using \$ and ¢ symbols appropriately. *Example: If you have 2 dimes and 3 pennies, how many cents do you have?*

Represent and interpret data.

9. Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. Show the measurements by making a line plot, where the horizontal scale is marked off in whole-number units.
10. Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems⁴ using information presented in a bar graph.

Geometry**2.G****Reason with shapes and their attributes.**

1. Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces.⁵ Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.
2. Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.
3. Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words *halves*, *thirds*, *half of*, *a third of*, etc., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.

⁴See Glossary, Table 1.⁵Sizes are compared directly or visually, not compared by measuring.

Mathematics | Grade 3

In Grade 3, instructional time should focus on four critical areas: (1) developing understanding of multiplication and division and strategies for multiplication and division within 100; (2) developing understanding of fractions, especially unit fractions (fractions with numerator 1); (3) developing understanding of the structure of rectangular arrays and of area; and (4) describing and analyzing two-dimensional shapes.

(1) Students develop an understanding of the meanings of multiplication and division of whole numbers through activities and problems involving equal-sized groups, arrays, and area models; multiplication is finding an unknown product, and division is finding an unknown factor in these situations. For equal-sized group situations, division can require finding the unknown number of groups or the unknown group size. Students use properties of operations to calculate products of whole numbers, using increasingly sophisticated strategies based on these properties to solve multiplication and division problems involving single-digit factors. By comparing a variety of solution strategies, students learn the relationship between multiplication and division.

(2) Students develop an understanding of fractions, beginning with unit fractions. Students view fractions in general as being built out of unit fractions, and they use fractions along with visual fraction models to represent parts of a whole. Students understand that the size of a fractional part is relative to the size of the whole. For example, $\frac{1}{2}$ of the paint in a small bucket could be less paint than $\frac{1}{3}$ of the paint in a larger bucket, but $\frac{1}{3}$ of a ribbon is longer than $\frac{1}{5}$ of the same ribbon because when the ribbon is divided into 3 equal parts, the parts are longer than when the ribbon is divided into 5 equal parts. Students are able to use fractions to represent numbers equal to, less than, and greater than one. They solve problems that involve comparing fractions by using visual fraction models and strategies based on noticing equal numerators or denominators.

(3) Students recognize area as an attribute of two-dimensional regions. They measure the area of a shape by finding the total number of same-size units of area required to cover the shape without gaps or overlaps, a square with sides of unit length being the standard unit for measuring area. Students understand that rectangular arrays can be decomposed into identical rows or into identical columns. By decomposing rectangles into rectangular arrays of squares, students connect area to multiplication, and justify using multiplication to determine the area of a rectangle.

(4) Students describe, analyze, and compare properties of two-dimensional shapes. They compare and classify shapes by their sides and angles, and connect these with definitions of shapes. Students also relate their fraction work to geometry by expressing the area of part of a shape as a unit fraction of the whole.

Grade 3 Overview

Operations and Algebraic Thinking

- Represent and solve problems involving multiplication and division.
- Understand properties of multiplication and the relationship between multiplication and division.
- Multiply and divide within 100.
- Solve problems involving the four operations, and identify and explain patterns in arithmetic.

Number and Operations in Base Ten

- Use place value understanding and properties of operations to perform multi-digit arithmetic.

Number and Operations—Fractions

- Develop understanding of fractions as numbers.

Measurement and Data

- Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects.
- Represent and interpret data.
- Geometric measurement: understand concepts of area and relate area to multiplication and to addition.
- Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures.

Geometry

- Reason with shapes and their attributes.

Mathematical Practices

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

Operations and Algebraic Thinking

3.OA

Represent and solve problems involving multiplication and division.

1. Interpret products of whole numbers, e.g., interpret 5×7 as the total number of objects in 5 groups of 7 objects each. *For example, describe a context in which a total number of objects can be expressed as 5×7 .*
2. Interpret whole-number quotients of whole numbers, e.g., interpret $56 \div 8$ as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each. *For example, describe a context in which a number of shares or a number of groups can be expressed as $56 \div 8$.*
3. Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.¹
4. Determine the unknown whole number in a multiplication or division equation relating three whole numbers. *For example, determine the unknown number that makes the equation true in each of the equations $8 \times ? = 48$, $5 = \square \div 3$, $6 \times 6 = ?$.*

Understand properties of multiplication and the relationship between multiplication and division.

5. Apply properties of operations as strategies to multiply and divide.² *Examples: If $6 \times 4 = 24$ is known, then $4 \times 6 = 24$ is also known. (Commutative property of multiplication.) $3 \times 5 \times 2$ can be found by $3 \times 5 = 15$, then $15 \times 2 = 30$, or by $5 \times 2 = 10$, then $3 \times 10 = 30$. (Associative property of multiplication.) Knowing that $8 \times 5 = 40$ and $8 \times 2 = 16$, one can find 8×7 as $8 \times (5 + 2) = (8 \times 5) + (8 \times 2) = 40 + 16 = 56$. (Distributive property.)*
6. Understand division as an unknown-factor problem. *For example, find $32 \div 8$ by finding the number that makes 32 when multiplied by 8.*

Multiply and divide within 100.

7. Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$, one knows $40 \div 5 = 8$) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.

Solve problems involving the four operations, and identify and explain patterns in arithmetic.

8. Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.³
9. Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. *For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends.*

¹See Glossary, Table 2.²Students need not use formal terms for these properties.³This standard is limited to problems posed with whole numbers and having whole-number answers; students should know how to perform operations in the conventional order when there are no parentheses to specify a particular order (Order of Operations).

Number and Operations in Base Ten

3.NBT

Use place value understanding and properties of operations to perform multi-digit arithmetic.⁴

1. Use place value understanding to round whole numbers to the nearest 10 or 100.
2. Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.
3. Multiply one-digit whole numbers by multiples of 10 in the range 10–90 (e.g., 9×80 , 5×60) using strategies based on place value and properties of operations.

Number and Operations—Fractions⁵

3.NF

Develop understanding of fractions as numbers.

1. Understand a fraction $1/b$ as the quantity formed by 1 part when a whole is partitioned into b equal parts; understand a fraction a/b as the quantity formed by a parts of size $1/b$.
2. Understand a fraction as a number on the number line; represent fractions on a number line diagram.
 - a. Represent a fraction $1/b$ on a number line diagram by defining the interval from 0 to 1 as the whole and partitioning it into b equal parts. Recognize that each part has size $1/b$ and that the endpoint of the part based at 0 locates the number $1/b$ on the number line.
 - b. Represent a fraction a/b on a number line diagram by marking off a lengths $1/b$ from 0. Recognize that the resulting interval has size a/b and that its endpoint locates the number a/b on the number line.
3. Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size.
 - a. Understand two fractions as equivalent (equal) if they are the same size, or the same point on a number line.
 - b. Recognize and generate simple equivalent fractions, e.g., $1/2 = 2/4$, $4/6 = 2/3$. Explain why the fractions are equivalent, e.g., by using a visual fraction model.
 - c. Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers. *Examples: Express 3 in the form $3 = 3/1$; recognize that $6/1 = 6$; locate $4/4$ and 1 at the same point of a number line diagram.*
 - d. Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with the symbols $>$, $=$, or $<$, and justify the conclusions, e.g., by using a visual fraction model.

Measurement and Data

3.MD

Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects.

1. Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram.

⁴A range of algorithms may be used.

⁵Grade 3 expectations in this domain are limited to fractions with denominators 2, 3, 4, 6, and 8.

2. Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l).⁶ Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem.⁷

Represent and interpret data.

3. Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step “how many more” and “how many less” problems using information presented in scaled bar graphs. *For example, draw a bar graph in which each square in the bar graph might represent 5 pets.*
4. Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units—whole numbers, halves, or quarters.

Geometric measurement: understand concepts of area and relate area to multiplication and to addition.

5. Recognize area as an attribute of plane figures and understand concepts of area measurement.
 - a. A square with side length 1 unit, called “a unit square,” is said to have “one square unit” of area, and can be used to measure area.
 - b. A plane figure which can be covered without gaps or overlaps by n unit squares is said to have an area of n square units.
6. Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvised units).
7. Relate area to the operations of multiplication and addition.
 - a. Find the area of a rectangle with whole-number side lengths by tiling it, and show that the area is the same as would be found by multiplying the side lengths.
 - b. Multiply side lengths to find areas of rectangles with whole-number side lengths in the context of solving real world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning.
 - c. Use tiling to show in a concrete case that the area of a rectangle with whole-number side lengths a and $b + c$ is the sum of $a \times b$ and $a \times c$. Use area models to represent the distributive property in mathematical reasoning.
 - d. Recognize area as additive. Find areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts, applying this technique to solve real world problems.

Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures.

8. Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.

⁶Excludes compound units such as cm^3 and finding the geometric volume of a container.

⁷Excludes multiplicative comparison problems (problems involving notions of “times as much”; see Glossary, Table 2).

Geometry

3.G

Reason with shapes and their attributes.

1. Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.
2. Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. *For example, partition a shape into 4 parts with equal area, and describe the area of each part as $\frac{1}{4}$ of the area of the shape.*

Mathematics | Grade 4

In Grade 4, instructional time should focus on three critical areas: (1) developing understanding and fluency with multi-digit multiplication, and developing understanding of dividing to find quotients involving multi-digit dividends; (2) developing an understanding of fraction equivalence, addition and subtraction of fractions with like denominators, and multiplication of fractions by whole numbers; (3) understanding that geometric figures can be analyzed and classified based on their properties, such as having parallel sides, perpendicular sides, particular angle measures, and symmetry.

(1) Students generalize their understanding of place value to 1,000,000, understanding the relative sizes of numbers in each place. They apply their understanding of models for multiplication (equal-sized groups, arrays, area models), place value, and properties of operations, in particular the distributive property, as they develop, discuss, and use efficient, accurate, and generalizable methods to compute products of multi-digit whole numbers. Depending on the numbers and the context, they select and accurately apply appropriate methods to estimate or mentally calculate products. They develop fluency with efficient procedures for multiplying whole numbers; understand and explain why the procedures work based on place value and properties of operations; and use them to solve problems. Students apply their understanding of models for division, place value, properties of operations, and the relationship of division to multiplication as they develop, discuss, and use efficient, accurate, and generalizable procedures to find quotients involving multi-digit dividends. They select and accurately apply appropriate methods to estimate and mentally calculate quotients, and interpret remainders based upon the context.

(2) Students develop understanding of fraction equivalence and operations with fractions. They recognize that two different fractions can be equal (e.g., $15/9 = 5/3$), and they develop methods for generating and recognizing equivalent fractions. Students extend previous understandings about how fractions are built from unit fractions, composing fractions from unit fractions, decomposing fractions into unit fractions, and using the meaning of fractions and the meaning of multiplication to multiply a fraction by a whole number.

(3) Students describe, analyze, compare, and classify two-dimensional shapes. Through building, drawing, and analyzing two-dimensional shapes, students deepen their understanding of properties of two-dimensional objects and the use of them to solve problems involving symmetry.

Grade 4 Overview

Operations and Algebraic Thinking

- Use the four operations with whole numbers to solve problems.
- Gain familiarity with factors and multiples.
- Generate and analyze patterns.

Number and Operations in Base Ten

- Generalize place value understanding for multi-digit whole numbers.
- Use place value understanding and properties of operations to perform multi-digit arithmetic.

Number and Operations—Fractions

- Extend understanding of fraction equivalence and ordering.
- Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.
- Understand decimal notation for fractions, and compare decimal fractions.

Measurement and Data

- Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.
- Represent and interpret data.
- Geometric measurement: understand concepts of angle and measure angles.

Geometry

- Draw and identify lines and angles, and classify shapes by properties of their lines and angles.

Mathematical Practices

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

Operations and Algebraic Thinking

4.OA

Use the four operations with whole numbers to solve problems.

1. Interpret a multiplication equation as a comparison, e.g., interpret $35 = 5 \times 7$ as a statement that 35 is 5 times as many as 7 and 7 times as many as 5. Represent verbal statements of multiplicative comparisons as multiplication equations.
2. Multiply or divide to solve word problems involving multiplicative comparison, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison.¹
3. Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.

Gain familiarity with factors and multiples.

4. Find all factor pairs for a whole number in the range 1-100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1-100 is a multiple of a given one-digit number. Determine whether a given whole number in the range 1-100 is prime or composite.

Generate and analyze patterns.

5. Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself. *For example, given the rule "Add 3" and the starting number 1, generate terms in the resulting sequence and observe that the terms appear to alternate between odd and even numbers. Explain informally why the numbers will continue to alternate in this way.*

Number and Operations in Base Ten²

4.NBT

Generalize place value understanding for multi-digit whole numbers.

1. Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right. *For example, recognize that $700 \div 70 = 10$ by applying concepts of place value and division.*
2. Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place, using $>$, $=$, and $<$ symbols to record the results of comparisons.
3. Use place value understanding to round multi-digit whole numbers to any place.

Use place value understanding and properties of operations to perform multi-digit arithmetic.

4. Fluently add and subtract multi-digit whole numbers using the standard algorithm.
5. Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.

¹See Glossary, Table 2.²Grade 4 expectations in this domain are limited to whole numbers less than or equal to 1,000,000.

6. Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.

Number and Operations—Fractions³
4.NF
Extend understanding of fraction equivalence and ordering.

1. Explain why a fraction a/b is equivalent to a fraction $(n \times a)/(n \times b)$ by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions.
2. Compare two fractions with different numerators and different denominators, e.g., by creating common denominators or numerators, or by comparing to a benchmark fraction such as $1/2$. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols $>$, $=$, or $<$, and justify the conclusions, e.g., by using a visual fraction model.

Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.

3. Understand a fraction a/b with $a > 1$ as a sum of fractions $1/b$.
 - a. Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.
 - b. Decompose a fraction into a sum of fractions with the same denominator in more than one way, recording each decomposition by an equation. Justify decompositions, e.g., by using a visual fraction model. *Examples:* $3/8 = 1/8 + 1/8 + 1/8$; $3/8 = 1/8 + 2/8$; $2\ 1/8 = 1 + 1 + 1/8 = 8/8 + 8/8 + 1/8$.
 - c. Add and subtract mixed numbers with like denominators, e.g., by replacing each mixed number with an equivalent fraction, and/or by using properties of operations and the relationship between addition and subtraction.
 - d. Solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators, e.g., by using visual fraction models and equations to represent the problem.
4. Apply and extend previous understandings of multiplication to multiply a fraction by a whole number.
 - a. Understand a fraction a/b as a multiple of $1/b$. *For example, use a visual fraction model to represent $5/4$ as the product $5 \times (1/4)$, recording the conclusion by the equation $5/4 = 5 \times (1/4)$.*
 - b. Understand a multiple of a/b as a multiple of $1/b$, and use this understanding to multiply a fraction by a whole number. *For example, use a visual fraction model to express $3 \times (2/5)$ as $6 \times (1/5)$, recognizing this product as $6/5$. (In general, $n \times (a/b) = (n \times a)/b$.)*
 - c. Solve word problems involving multiplication of a fraction by a whole number, e.g., by using visual fraction models and equations to represent the problem. *For example, if each person at a party will eat $3/8$ of a pound of roast beef, and there will be 5 people at the party, how many pounds of roast beef will be needed? Between what two whole numbers does your answer lie?*

³Grade 4 expectations in this domain are limited to fractions with denominators 2, 3, 4, 5, 6, 8, 10, 12, and 100.

Understand decimal notation for fractions, and compare decimal fractions.

5. Express a fraction with denominator 10 as an equivalent fraction with denominator 100, and use this technique to add two fractions with respective denominators 10 and 100.⁴ *For example, express $3/10$ as $30/100$, and add $3/10 + 4/100 = 34/100$.*
6. Use decimal notation for fractions with denominators 10 or 100. *For example, rewrite 0.62 as $62/100$; describe a length as 0.62 meters; locate 0.62 on a number line diagram.*
7. Compare two decimals to hundredths by reasoning about their size. Recognize that comparisons are valid only when the two decimals refer to the same whole. Record the results of comparisons with the symbols $>$, $=$, or $<$, and justify the conclusions, e.g., by using a visual model.

Measurement and Data

4.MD

Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.

1. Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz.; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table. *For example, know that 1 ft is 12 times as long as 1 in. Express the length of a 4 ft snake as 48 in. Generate a conversion table for feet and inches listing the number pairs (1, 12), (2, 24), (3, 36), ...*
2. Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.
3. Apply the area and perimeter formulas for rectangles in real world and mathematical problems. *For example, find the width of a rectangular room given the area of the flooring and the length, by viewing the area formula as a multiplication equation with an unknown factor.*

Represent and interpret data.

4. Make a line plot to display a data set of measurements in fractions of a unit ($1/2$, $1/4$, $1/8$). Solve problems involving addition and subtraction of fractions by using information presented in line plots. *For example, from a line plot find and interpret the difference in length between the longest and shortest specimens in an insect collection.*

Geometric measurement: understand concepts of angle and measure angles.

5. Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement:
 - a. An angle is measured with reference to a circle with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the circle. An angle that turns through $1/360$ of a circle is called a “one-degree angle,” and can be used to measure angles.
 - b. An angle that turns through n one-degree angles is said to have an angle measure of n degrees.

⁴Students who can generate equivalent fractions can develop strategies for adding fractions with unlike denominators in general. But addition and subtraction with unlike denominators in general is not a requirement at this grade.

6. Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.
7. Recognize angle measure as additive. When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts. Solve addition and subtraction problems to find unknown angles on a diagram in real world and mathematical problems, e.g., by using an equation with a symbol for the unknown angle measure.

Geometry**4.G****Draw and identify lines and angles, and classify shapes by properties of their lines and angles.**

1. Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.
2. Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize right triangles as a category, and identify right triangles.
3. Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry.

Mathematics | Grade 5

In Grade 5, instructional time should focus on three critical areas: (1) developing fluency with addition and subtraction of fractions, and developing understanding of the multiplication of fractions and of division of fractions in limited cases (unit fractions divided by whole numbers and whole numbers divided by unit fractions); (2) extending division to 2-digit divisors, integrating decimal fractions into the place value system and developing understanding of operations with decimals to hundredths, and developing fluency with whole number and decimal operations; and (3) developing understanding of volume.

(1) Students apply their understanding of fractions and fraction models to represent the addition and subtraction of fractions with unlike denominators as equivalent calculations with like denominators. They develop fluency in calculating sums and differences of fractions, and make reasonable estimates of them. Students also use the meaning of fractions, of multiplication and division, and the relationship between multiplication and division to understand and explain why the procedures for multiplying and dividing fractions make sense. (Note: this is limited to the case of dividing unit fractions by whole numbers and whole numbers by unit fractions.)

(2) Students develop understanding of why division procedures work based on the meaning of base-ten numerals and properties of operations. They finalize fluency with multi-digit addition, subtraction, multiplication, and division. They apply their understandings of models for decimals, decimal notation, and properties of operations to add and subtract decimals to hundredths. They develop fluency in these computations, and make reasonable estimates of their results. Students use the relationship between decimals and fractions, as well as the relationship between finite decimals and whole numbers (i.e., a finite decimal multiplied by an appropriate power of 10 is a whole number), to understand and explain why the procedures for multiplying and dividing finite decimals make sense. They compute products and quotients of decimals to hundredths efficiently and accurately.

(3) Students recognize volume as an attribute of three-dimensional space. They understand that volume can be measured by finding the total number of same-size units of volume required to fill the space without gaps or overlaps. They understand that a 1-unit by 1-unit by 1-unit cube is the standard unit for measuring volume. They select appropriate units, strategies, and tools for solving problems that involve estimating and measuring volume. They decompose three-dimensional shapes and find volumes of right rectangular prisms by viewing them as decomposed into layers of arrays of cubes. They measure necessary attributes of shapes in order to determine volumes to solve real world and mathematical problems.

Grade 5 Overview

Operations and Algebraic Thinking

- Write and interpret numerical expressions.
- Analyze patterns and relationships.

Number and Operations in Base Ten

- Understand the place value system.
- Perform operations with multi-digit whole numbers and with decimals to hundredths.

Number and Operations—Fractions

- Use equivalent fractions as a strategy to add and subtract fractions.
- Apply and extend previous understandings of multiplication and division to multiply and divide fractions.

Measurement and Data

- Convert like measurement units within a given measurement system.
- Represent and interpret data.
- Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.

Geometry

- Graph points on the coordinate plane to solve real-world and mathematical problems.
- Classify two-dimensional figures into categories based on their properties.

Mathematical Practices

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

Operations and Algebraic Thinking

5.OA

Write and interpret numerical expressions.

1. Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols.
2. Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them. *For example, express the calculation “add 8 and 7, then multiply by 2” as $2 \times (8 + 7)$. Recognize that $3 \times (18932 + 921)$ is three times as large as $18932 + 921$, without having to calculate the indicated sum or product.*

Analyze patterns and relationships.

3. Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns, and graph the ordered pairs on a coordinate plane. *For example, given the rule “Add 3” and the starting number 0, and given the rule “Add 6” and the starting number 0, generate terms in the resulting sequences, and observe that the terms in one sequence are twice the corresponding terms in the other sequence. Explain informally why this is so.*

Number and Operations in Base Ten

5.NBT

Understand the place value system.

1. Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and $1/10$ of what it represents in the place to its left.
2. Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10.
3. Read, write, and compare decimals to thousandths.
 - a. Read and write decimals to thousandths using base-ten numerals, number names, and expanded form, e.g., $347.392 = 3 \times 100 + 4 \times 10 + 7 \times 1 + 3 \times (1/10) + 9 \times (1/100) + 2 \times (1/1000)$.
 - b. Compare two decimals to thousandths based on meanings of the digits in each place, using $>$, $=$, and $<$ symbols to record the results of comparisons.
4. Use place value understanding to round decimals to any place.

Perform operations with multi-digit whole numbers and with decimals to hundredths.

5. Fluently multiply multi-digit whole numbers using the standard algorithm.
6. Find whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.
7. Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.

Number and Operations—Fractions

5.NF

Use equivalent fractions as a strategy to add and subtract fractions.

1. Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators. *For example, $2/3 + 5/4 = 8/12 + 15/12 = 23/12$. (In general, $a/b + c/d = (ad + bc)/bd$.)*
2. Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators, e.g., by using visual fraction models or equations to represent the problem. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers. *For example, recognize an incorrect result $2/5 + 1/2 = 3/7$, by observing that $3/7 < 1/2$.*

Apply and extend previous understandings of multiplication and division to multiply and divide fractions.

3. Interpret a fraction as division of the numerator by the denominator ($a/b = a \div b$). Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers, e.g., by using visual fraction models or equations to represent the problem. *For example, interpret $3/4$ as the result of dividing 3 by 4, noting that $3/4$ multiplied by 4 equals 3, and that when 3 wholes are shared equally among 4 people each person has a share of size $3/4$. If 9 people want to share a 50-pound sack of rice equally by weight, how many pounds of rice should each person get? Between what two whole numbers does your answer lie?*
4. Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction.
 - a. Interpret the product $(a/b) \times q$ as a parts of a partition of q into b equal parts; equivalently, as the result of a sequence of operations $a \times q \div b$. *For example, use a visual fraction model to show $(2/3) \times 4 = 8/3$, and create a story context for this equation. Do the same with $(2/3) \times (4/5) = 8/15$. (In general, $(a/b) \times (c/d) = ac/bd$.)*
 - b. Find the area of a rectangle with fractional side lengths by tiling it with unit squares of the appropriate unit fraction side lengths, and show that the area is the same as would be found by multiplying the side lengths. Multiply fractional side lengths to find areas of rectangles, and represent fraction products as rectangular areas.
5. Interpret multiplication as scaling (resizing), by:
 - a. Comparing the size of a product to the size of one factor on the basis of the size of the other factor, without performing the indicated multiplication.
 - b. Explaining why multiplying a given number by a fraction greater than 1 results in a product greater than the given number (recognizing multiplication by whole numbers greater than 1 as a familiar case); explaining why multiplying a given number by a fraction less than 1 results in a product smaller than the given number; and relating the principle of fraction equivalence $a/b = (n \times a)/(n \times b)$ to the effect of multiplying a/b by 1.
6. Solve real world problems involving multiplication of fractions and mixed numbers, e.g., by using visual fraction models or equations to represent the problem.
7. Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions.¹
 - a. Interpret division of a unit fraction by a non-zero whole number,

¹Students able to multiply fractions in general can develop strategies to divide fractions in general, by reasoning about the relationship between multiplication and division. But division of a fraction by a fraction is not a requirement at this grade.

and compute such quotients. *For example, create a story context for $(1/3) \div 4$, and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that $(1/3) \div 4 = 1/12$ because $(1/12) \times 4 = 1/3$.*

- b. Interpret division of a whole number by a unit fraction, and compute such quotients. *For example, create a story context for $4 \div (1/5)$, and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that $4 \div (1/5) = 20$ because $20 \times (1/5) = 4$.*
- c. Solve real world problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions, e.g., by using visual fraction models and equations to represent the problem. *For example, how much chocolate will each person get if 3 people share $1/2$ lb of chocolate equally? How many $1/3$ -cup servings are in 2 cups of raisins?*

Measurement and Data

5.MD

Convert like measurement units within a given measurement system.

1. Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m), and use these conversions in solving multi-step, real world problems.

Represent and interpret data.

2. Make a line plot to display a data set of measurements in fractions of a unit ($1/2, 1/4, 1/8$). Use operations on fractions for this grade to solve problems involving information presented in line plots. *For example, given different measurements of liquid in identical beakers, find the amount of liquid each beaker would contain if the total amount in all the beakers were redistributed equally.*

Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.

3. Recognize volume as an attribute of solid figures and understand concepts of volume measurement.
 - a. A cube with side length 1 unit, called a “unit cube,” is said to have “one cubic unit” of volume, and can be used to measure volume.
 - b. A solid figure which can be packed without gaps or overlaps using n unit cubes is said to have a volume of n cubic units.
4. Measure volumes by counting unit cubes, using cubic cm, cubic in, cubic ft, and improvised units.
5. Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume.
 - a. Find the volume of a right rectangular prism with whole-number side lengths by packing it with unit cubes, and show that the volume is the same as would be found by multiplying the edge lengths, equivalently by multiplying the height by the area of the base. Represent threefold whole-number products as volumes, e.g., to represent the associative property of multiplication.
 - b. Apply the formulas $V = l \times w \times h$ and $V = b \times h$ for rectangular prisms to find volumes of right rectangular prisms with whole-number edge lengths in the context of solving real world and mathematical problems.
 - c. Recognize volume as additive. Find volumes of solid figures composed of two non-overlapping right rectangular prisms by adding the volumes of the non-overlapping parts, applying this technique to solve real world problems.

Geometry

5.G

Graph points on the coordinate plane to solve real-world and mathematical problems.

1. Use a pair of perpendicular number lines, called axes, to define a coordinate system, with the intersection of the lines (the origin) arranged to coincide with the 0 on each line and a given point in the plane located by using an ordered pair of numbers, called its coordinates. Understand that the first number indicates how far to travel from the origin in the direction of one axis, and the second number indicates how far to travel in the direction of the second axis, with the convention that the names of the two axes and the coordinates correspond (e.g., x -axis and x -coordinate, y -axis and y -coordinate).
2. Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation.

Classify two-dimensional figures into categories based on their properties.

3. Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category. *For example, all rectangles have four right angles and squares are rectangles, so all squares have four right angles.*
4. Classify two-dimensional figures in a hierarchy based on properties.

Mathematics | Grade 6

In Grade 6, instructional time should focus on four critical areas: (1) connecting ratio and rate to whole number multiplication and division and using concepts of ratio and rate to solve problems; (2) completing understanding of division of fractions and extending the notion of number to the system of rational numbers, which includes negative numbers; (3) writing, interpreting, and using expressions and equations; and (4) developing understanding of statistical thinking.

(1) Students use reasoning about multiplication and division to solve ratio and rate problems about quantities. By viewing equivalent ratios and rates as deriving from, and extending, pairs of rows (or columns) in the multiplication table, and by analyzing simple drawings that indicate the relative size of quantities, students connect their understanding of multiplication and division with ratios and rates. Thus students expand the scope of problems for which they can use multiplication and division to solve problems, and they connect ratios and fractions. Students solve a wide variety of problems involving ratios and rates.

(2) Students use the meaning of fractions, the meanings of multiplication and division, and the relationship between multiplication and division to understand and explain why the procedures for dividing fractions make sense. Students use these operations to solve problems. Students extend their previous understandings of number and the ordering of numbers to the full system of rational numbers, which includes negative rational numbers, and in particular negative integers. They reason about the order and absolute value of rational numbers and about the location of points in all four quadrants of the coordinate plane.

(3) Students understand the use of variables in mathematical expressions. They write expressions and equations that correspond to given situations, evaluate expressions, and use expressions and formulas to solve problems. Students understand that expressions in different forms can be equivalent, and they use the properties of operations to rewrite expressions in equivalent forms. Students know that the solutions of an equation are the values of the variables that make the equation true. Students use properties of operations and the idea of maintaining the equality of both sides of an equation to solve simple one-step equations. Students construct and analyze tables, such as tables of quantities that are in equivalent ratios, and they use equations (such as $3x = y$) to describe relationships between quantities.

(4) Building on and reinforcing their understanding of number, students begin to develop their ability to think statistically. Students recognize that a data distribution may not have a definite center and that different ways to measure center yield different values. The median measures center in the sense that it is roughly the middle value. The mean measures center in the sense that it is the value that each data point would take on if the total of the data values were redistributed equally, and also in the sense that it is a balance point. Students recognize that a measure of variability (interquartile range or mean absolute deviation) can also be useful for summarizing data because two very different sets of data can have the same mean and

median yet be distinguished by their variability. Students learn to describe and summarize numerical data sets, identifying clusters, peaks, gaps, and symmetry, considering the context in which the data were collected.

Students in Grade 6 also build on their work with area in elementary school by reasoning about relationships among shapes to determine area, surface area, and volume. They find areas of right triangles, other triangles, and special quadrilaterals by decomposing these shapes, rearranging or removing pieces, and relating the shapes to rectangles. Using these methods, students discuss, develop, and justify formulas for areas of triangles and parallelograms. Students find areas of polygons and surface areas of prisms and pyramids by decomposing them into pieces whose area they can determine. They reason about right rectangular prisms with fractional side lengths to extend formulas for the volume of a right rectangular prism to fractional side lengths. They prepare for work on scale drawings and constructions in Grade 7 by drawing polygons in the coordinate plane.

Grade 6 Overview

Ratios and Proportional Relationships

- Understand ratio concepts and use ratio reasoning to solve problems.

The Number System

- Apply and extend previous understandings of multiplication and division to divide fractions by fractions.
- Compute fluently with multi-digit numbers and find common factors and multiples.
- Apply and extend previous understandings of numbers to the system of rational numbers.

Expressions and Equations

- Apply and extend previous understandings of arithmetic to algebraic expressions.
- Reason about and solve one-variable equations and inequalities.
- Represent and analyze quantitative relationships between dependent and independent variables.

Geometry

- Solve real-world and mathematical problems involving area, surface area, and volume.

Statistics and Probability

- Develop understanding of statistical variability.
- Summarize and describe distributions.

Mathematical Practices

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

Ratios and Proportional Relationships

6.RP

Understand ratio concepts and use ratio reasoning to solve problems.

1. Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities. *For example, “The ratio of wings to beaks in the bird house at the zoo was 2:1, because for every 2 wings there was 1 beak.” “For every vote candidate A received, candidate C received nearly three votes.”*
2. Understand the concept of a unit rate a/b associated with a ratio $a:b$ with $b \neq 0$, and use rate language in the context of a ratio relationship. *For example, “This recipe has a ratio of 3 cups of flour to 4 cups of sugar, so there is $3/4$ cup of flour for each cup of sugar.” “We paid \$75 for 15 hamburgers, which is a rate of \$5 per hamburger.”¹*
3. Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations.
 - a. Make tables of equivalent ratios relating quantities with whole-number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane. Use tables to compare ratios.
 - b. Solve unit rate problems including those involving unit pricing and constant speed. *For example, if it took 7 hours to mow 4 lawns, then at that rate, how many lawns could be mowed in 35 hours? At what rate were lawns being mowed?*
 - c. Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means $30/100$ times the quantity); solve problems involving finding the whole, given a part and the percent.
 - d. Use ratio reasoning to convert measurement units; manipulate and transform units appropriately when multiplying or dividing quantities.

The Number System

6.NS

Apply and extend previous understandings of multiplication and division to divide fractions by fractions.

1. Interpret and compute quotients of fractions, and solve word problems involving division of fractions by fractions, e.g., by using visual fraction models and equations to represent the problem. *For example, create a story context for $(2/3) \div (3/4)$ and use a visual fraction model to show the quotient; use the relationship between multiplication and division to explain that $(2/3) \div (3/4) = 8/9$ because $3/4$ of $8/9$ is $2/3$. (In general, $(a/b) \div (c/d) = ad/bc$.) How much chocolate will each person get if 3 people share $1/2$ lb of chocolate equally? How many $3/4$ -cup servings are in $2/3$ of a cup of yogurt? How wide is a rectangular strip of land with length $3/4$ mi and area $1/2$ square mi?*

Compute fluently with multi-digit numbers and find common factors and multiples.

2. Fluently divide multi-digit numbers using the standard algorithm.
3. Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.
4. Find the greatest common factor of two whole numbers less than or equal to 100 and the least common multiple of two whole numbers less than or equal to 12. Use the distributive property to express a sum of two whole numbers 1–100 with a common factor as a multiple of a sum of two whole numbers with no common factor. *For example, express $36 + 8$ as $4(9 + 2)$.*

¹Expectations for unit rates in this grade are limited to non-complex fractions.

Apply and extend previous understandings of numbers to the system of rational numbers.

5. Understand that positive and negative numbers are used together to describe quantities having opposite directions or values (e.g., temperature above/below zero, elevation above/below sea level, credits/debits, positive/negative electric charge); use positive and negative numbers to represent quantities in real-world contexts, explaining the meaning of 0 in each situation.
6. Understand a rational number as a point on the number line. Extend number line diagrams and coordinate axes familiar from previous grades to represent points on the line and in the plane with negative number coordinates.
 - a. Recognize opposite signs of numbers as indicating locations on opposite sides of 0 on the number line; recognize that the opposite of the opposite of a number is the number itself, e.g., $-(-3) = 3$, and that 0 is its own opposite.
 - b. Understand signs of numbers in ordered pairs as indicating locations in quadrants of the coordinate plane; recognize that when two ordered pairs differ only by signs, the locations of the points are related by reflections across one or both axes.
 - c. Find and position integers and other rational numbers on a horizontal or vertical number line diagram; find and position pairs of integers and other rational numbers on a coordinate plane.
7. Understand ordering and absolute value of rational numbers.
 - a. Interpret statements of inequality as statements about the relative position of two numbers on a number line diagram. *For example, interpret $-3 > -7$ as a statement that -3 is located to the right of -7 on a number line oriented from left to right.*
 - b. Write, interpret, and explain statements of order for rational numbers in real-world contexts. *For example, write $-3^{\circ}\text{C} > -7^{\circ}\text{C}$ to express the fact that -3°C is warmer than -7°C .*
 - c. Understand the absolute value of a rational number as its distance from 0 on the number line; interpret absolute value as magnitude for a positive or negative quantity in a real-world situation. *For example, for an account balance of -30 dollars, write $|-30| = 30$ to describe the size of the debt in dollars.*
 - d. Distinguish comparisons of absolute value from statements about order. *For example, recognize that an account balance less than -30 dollars represents a debt greater than 30 dollars.*
8. Solve real-world and mathematical problems by graphing points in all four quadrants of the coordinate plane. Include use of coordinates and absolute value to find distances between points with the same first coordinate or the same second coordinate.

Expressions and Equations

6.EE

Apply and extend previous understandings of arithmetic to algebraic expressions.

1. Write and evaluate numerical expressions involving whole-number exponents.
2. Write, read, and evaluate expressions in which letters stand for numbers.
 - a. Write expressions that record operations with numbers and with letters standing for numbers. *For example, express the calculation “Subtract y from 5” as $5 - y$.*

- b. Identify parts of an expression using mathematical terms (sum, term, product, factor, quotient, coefficient); view one or more parts of an expression as a single entity. *For example, describe the expression $2(8 + 7)$ as a product of two factors; view $(8 + 7)$ as both a single entity and a sum of two terms.*
 - c. Evaluate expressions at specific values of their variables. Include expressions that arise from formulas used in real-world problems. Perform arithmetic operations, including those involving whole-number exponents, in the conventional order when there are no parentheses to specify a particular order (Order of Operations). *For example, use the formulas $V = s^3$ and $A = 6s^2$ to find the volume and surface area of a cube with sides of length $s = \frac{1}{2}$.*
3. Apply the properties of operations to generate equivalent expressions. *For example, apply the distributive property to the expression $3(2 + x)$ to produce the equivalent expression $6 + 3x$; apply the distributive property to the expression $24x + 18y$ to produce the equivalent expression $6(4x + 3y)$; apply properties of operations to $y + y + y$ to produce the equivalent expression $3y$.*
 4. Identify when two expressions are equivalent (i.e., when the two expressions name the same number regardless of which value is substituted into them). *For example, the expressions $y + y + y$ and $3y$ are equivalent because they name the same number regardless of which number y stands for.*

Reason about and solve one-variable equations and inequalities.

5. Understand solving an equation or inequality as a process of answering a question: which values from a specified set, if any, make the equation or inequality true? Use substitution to determine whether a given number in a specified set makes an equation or inequality true.
6. Use variables to represent numbers and write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set.
7. Solve real-world and mathematical problems by writing and solving equations of the form $x + p = q$ and $px = q$ for cases in which p , q and x are all nonnegative rational numbers.
8. Write an inequality of the form $x > c$ or $x < c$ to represent a constraint or condition in a real-world or mathematical problem. Recognize that inequalities of the form $x > c$ or $x < c$ have infinitely many solutions; represent solutions of such inequalities on number line diagrams.

Represent and analyze quantitative relationships between dependent and independent variables.

9. Use variables to represent two quantities in a real-world problem that change in relationship to one another; write an equation to express one quantity, thought of as the dependent variable, in terms of the other quantity, thought of as the independent variable. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation. *For example, in a problem involving motion at constant speed, list and graph ordered pairs of distances and times, and write the equation $d = 65t$ to represent the relationship between distance and time.*

Geometry

6.G

Solve real-world and mathematical problems involving area, surface area, and volume.

1. Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes; apply these techniques in the context of solving real-world and mathematical problems.

2. Find the volume of a right rectangular prism with fractional edge lengths by packing it with unit cubes of the appropriate unit fraction edge lengths, and show that the volume is the same as would be found by multiplying the edge lengths of the prism. Apply the formulas $V = lwh$ and $V = bh$ to find volumes of right rectangular prisms with fractional edge lengths in the context of solving real-world and mathematical problems.
3. Draw polygons in the coordinate plane given coordinates for the vertices; use coordinates to find the length of a side joining points with the same first coordinate or the same second coordinate. Apply these techniques in the context of solving real-world and mathematical problems.
4. Represent three-dimensional figures using nets made up of rectangles and triangles, and use the nets to find the surface area of these figures. Apply these techniques in the context of solving real-world and mathematical problems.

Statistics and Probability
6.SP
Develop understanding of statistical variability.

1. Recognize a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answers. *For example, "How old am I?" is not a statistical question, but "How old are the students in my school?" is a statistical question because one anticipates variability in students' ages.*
2. Understand that a set of data collected to answer a statistical question has a distribution which can be described by its center, spread, and overall shape.
3. Recognize that a measure of center for a numerical data set summarizes all of its values with a single number, while a measure of variation describes how its values vary with a single number.

Summarize and describe distributions.

4. Display numerical data in plots on a number line, including dot plots, histograms, and box plots.
5. Summarize numerical data sets in relation to their context, such as by:
 - a. Reporting the number of observations.
 - b. Describing the nature of the attribute under investigation, including how it was measured and its units of measurement.
 - c. Giving quantitative measures of center (median and/or mean) and variability (interquartile range and/or mean absolute deviation), as well as describing any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data were gathered.
 - d. Relating the choice of measures of center and variability to the shape of the data distribution and the context in which the data were gathered.

Mathematics | Grade 7

In Grade 7, instructional time should focus on four critical areas: (1) developing understanding of and applying proportional relationships; (2) developing understanding of operations with rational numbers and working with expressions and linear equations; (3) solving problems involving scale drawings and informal geometric constructions, and working with two- and three-dimensional shapes to solve problems involving area, surface area, and volume; and (4) drawing inferences about populations based on samples.

(1) Students extend their understanding of ratios and develop understanding of proportionality to solve single- and multi-step problems. Students use their understanding of ratios and proportionality to solve a wide variety of percent problems, including those involving discounts, interest, taxes, tips, and percent increase or decrease. Students solve problems about scale drawings by relating corresponding lengths between the objects or by using the fact that relationships of lengths within an object are preserved in similar objects. Students graph proportional relationships and understand the unit rate informally as a measure of the steepness of the related line, called the slope. They distinguish proportional relationships from other relationships.

(2) Students develop a unified understanding of number, recognizing fractions, decimals (that have a finite or a repeating decimal representation), and percents as different representations of rational numbers. Students extend addition, subtraction, multiplication, and division to all rational numbers, maintaining the properties of operations and the relationships between addition and subtraction, and multiplication and division. By applying these properties, and by viewing negative numbers in terms of everyday contexts (e.g., amounts owed or temperatures below zero), students explain and interpret the rules for adding, subtracting, multiplying, and dividing with negative numbers. They use the arithmetic of rational numbers as they formulate expressions and equations in one variable and use these equations to solve problems.

(3) Students continue their work with area from Grade 6, solving problems involving the area and circumference of a circle and surface area of three-dimensional objects. In preparation for work on congruence and similarity in Grade 8 they reason about relationships among two-dimensional figures using scale drawings and informal geometric constructions, and they gain familiarity with the relationships between angles formed by intersecting lines. Students work with three-dimensional figures, relating them to two-dimensional figures by examining cross-sections. They solve real-world and mathematical problems involving area, surface area, and volume of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes and right prisms.

(4) Students build on their previous work with single data distributions to compare two data distributions and address questions about differences between populations. They begin informal work with random sampling to generate data sets and learn about the importance of representative samples for drawing inferences.

Grade 7 Overview

Ratios and Proportional Relationships

- Analyze proportional relationships and use them to solve real-world and mathematical problems.

The Number System

- Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.

Expressions and Equations

- Use properties of operations to generate equivalent expressions.
- Solve real-life and mathematical problems using numerical and algebraic expressions and equations.

Geometry

- Draw, construct and describe geometrical figures and describe the relationships between them.
- Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.

Statistics and Probability

- Use random sampling to draw inferences about a population.
- Draw informal comparative inferences about two populations.
- Investigate chance processes and develop, use, and evaluate probability models.

Mathematical Practices

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

Ratios and Proportional Relationships

7.RP

Analyze proportional relationships and use them to solve real-world and mathematical problems.

1. Compute unit rates associated with ratios of fractions, including ratios of lengths, areas and other quantities measured in like or different units. *For example, if a person walks $\frac{1}{2}$ mile in each $\frac{1}{4}$ hour, compute the unit rate as the complex fraction $\frac{1/2}{1/4}$ miles per hour, equivalently 2 miles per hour.*
2. Recognize and represent proportional relationships between quantities.
 - a. Decide whether two quantities are in a proportional relationship, e.g., by testing for equivalent ratios in a table or graphing on a coordinate plane and observing whether the graph is a straight line through the origin.
 - b. Identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships.
 - c. Represent proportional relationships by equations. *For example, if total cost t is proportional to the number n of items purchased at a constant price p , the relationship between the total cost and the number of items can be expressed as $t = pn$.*
 - d. Explain what a point (x, y) on the graph of a proportional relationship means in terms of the situation, with special attention to the points $(0, 0)$ and $(1, r)$ where r is the unit rate.
3. Use proportional relationships to solve multistep ratio and percent problems. *Examples: simple interest, tax, markups and markdowns, gratuities and commissions, fees, percent increase and decrease, percent error.*

The Number System

7.NS

Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.

1. Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram.
 - a. Describe situations in which opposite quantities combine to make 0. *For example, a hydrogen atom has 0 charge because its two constituents are oppositely charged.*
 - b. Understand $p + q$ as the number located a distance $|q|$ from p , in the positive or negative direction depending on whether q is positive or negative. Show that a number and its opposite have a sum of 0 (are additive inverses). Interpret sums of rational numbers by describing real-world contexts.
 - c. Understand subtraction of rational numbers as adding the additive inverse, $p - q = p + (-q)$. Show that the distance between two rational numbers on the number line is the absolute value of their difference, and apply this principle in real-world contexts.
 - d. Apply properties of operations as strategies to add and subtract rational numbers.
2. Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers.
 - a. Understand that multiplication is extended from fractions to rational numbers by requiring that operations continue to satisfy the properties of operations, particularly the distributive property, leading to products such as $(-1)(-1) = 1$ and the rules for multiplying signed numbers. Interpret products of rational numbers by describing real-world contexts.

- b. Understand that integers can be divided, provided that the divisor is not zero, and every quotient of integers (with non-zero divisor) is a rational number. If p and q are integers, then $-(p/q) = (-p)/q = p/(-q)$. Interpret quotients of rational numbers by describing real-world contexts.
 - c. Apply properties of operations as strategies to multiply and divide rational numbers.
 - d. Convert a rational number to a decimal using long division; know that the decimal form of a rational number terminates in 0s or eventually repeats.
3. Solve real-world and mathematical problems involving the four operations with rational numbers.¹

Expressions and Equations**7.EE****Use properties of operations to generate equivalent expressions.**

- 1. Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.
- 2. Understand that rewriting an expression in different forms in a problem context can shed light on the problem and how the quantities in it are related. *For example, $a + 0.05a = 1.05a$ means that “increase by 5%” is the same as “multiply by 1.05.”*

Solve real-life and mathematical problems using numerical and algebraic expressions and equations.

- 3. Solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals), using tools strategically. Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate; and assess the reasonableness of answers using mental computation and estimation strategies. *For example: If a woman making \$25 an hour gets a 10% raise, she will make an additional 1/10 of her salary an hour, or \$2.50, for a new salary of \$27.50. If you want to place a towel bar 9 3/4 inches long in the center of a door that is 27 1/2 inches wide, you will need to place the bar about 9 inches from each edge; this estimate can be used as a check on the exact computation.*
- 4. Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities.
 - a. Solve word problems leading to equations of the form $px + q = r$ and $p(x + q) = r$, where p , q , and r are specific rational numbers. Solve equations of these forms fluently. Compare an algebraic solution to an arithmetic solution, identifying the sequence of the operations used in each approach. *For example, the perimeter of a rectangle is 54 cm. Its length is 6 cm. What is its width?*
 - b. Solve word problems leading to inequalities of the form $px + q > r$ or $px + q < r$, where p , q , and r are specific rational numbers. Graph the solution set of the inequality and interpret it in the context of the problem. *For example: As a salesperson, you are paid \$50 per week plus \$3 per sale. This week you want your pay to be at least \$100. Write an inequality for the number of sales you need to make, and describe the solutions.*

Geometry**7.G****Draw, construct, and describe geometrical figures and describe the relationships between them.**

- 1. Solve problems involving scale drawings of geometric figures, including computing actual lengths and areas from a scale drawing and reproducing a scale drawing at a different scale.

¹Computations with rational numbers extend the rules for manipulating fractions to complex fractions.

2. Draw (freehand, with ruler and protractor, and with technology) geometric shapes with given conditions. Focus on constructing triangles from three measures of angles or sides, noticing when the conditions determine a unique triangle, more than one triangle, or no triangle.
3. Describe the two-dimensional figures that result from slicing three-dimensional figures, as in plane sections of right rectangular prisms and right rectangular pyramids.

Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.

4. Know the formulas for the area and circumference of a circle and use them to solve problems; give an informal derivation of the relationship between the circumference and area of a circle.
5. Use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write and solve simple equations for an unknown angle in a figure.
6. Solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.

Statistics and Probability

7.SP

Use random sampling to draw inferences about a population.

1. Understand that statistics can be used to gain information about a population by examining a sample of the population; generalizations about a population from a sample are valid only if the sample is representative of that population. Understand that random sampling tends to produce representative samples and support valid inferences.
2. Use data from a random sample to draw inferences about a population with an unknown characteristic of interest. Generate multiple samples (or simulated samples) of the same size to gauge the variation in estimates or predictions. *For example, estimate the mean word length in a book by randomly sampling words from the book; predict the winner of a school election based on randomly sampled survey data. Gauge how far off the estimate or prediction might be.*

Draw informal comparative inferences about two populations.

3. Informally assess the degree of visual overlap of two numerical data distributions with similar variabilities, measuring the difference between the centers by expressing it as a multiple of a measure of variability. *For example, the mean height of players on the basketball team is 10 cm greater than the mean height of players on the soccer team, about twice the variability (mean absolute deviation) on either team; on a dot plot, the separation between the two distributions of heights is noticeable.*
4. Use measures of center and measures of variability for numerical data from random samples to draw informal comparative inferences about two populations. *For example, decide whether the words in a chapter of a seventh-grade science book are generally longer than the words in a chapter of a fourth-grade science book.*

Investigate chance processes and develop, use, and evaluate probability models.

5. Understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring. Larger numbers indicate greater likelihood. A probability near 0 indicates an unlikely event, a probability around $\frac{1}{2}$ indicates an event that is neither unlikely nor likely, and a probability near 1 indicates a likely event.

6. Approximate the probability of a chance event by collecting data on the chance process that produces it and observing its long-run relative frequency, and predict the approximate relative frequency given the probability. *For example, when rolling a number cube 600 times, predict that a 3 or 6 would be rolled roughly 200 times, but probably not exactly 200 times.*
7. Develop a probability model and use it to find probabilities of events. Compare probabilities from a model to observed frequencies; if the agreement is not good, explain possible sources of the discrepancy.
 - a. Develop a uniform probability model by assigning equal probability to all outcomes, and use the model to determine probabilities of events. *For example, if a student is selected at random from a class, find the probability that Jane will be selected and the probability that a girl will be selected.*
 - b. Develop a probability model (which may not be uniform) by observing frequencies in data generated from a chance process. *For example, find the approximate probability that a spinning penny will land heads up or that a tossed paper cup will land open-end down. Do the outcomes for the spinning penny appear to be equally likely based on the observed frequencies?*
8. Find probabilities of compound events using organized lists, tables, tree diagrams, and simulation.
 - a. Understand that, just as with simple events, the probability of a compound event is the fraction of outcomes in the sample space for which the compound event occurs.
 - b. Represent sample spaces for compound events using methods such as organized lists, tables and tree diagrams. For an event described in everyday language (e.g., “rolling double sixes”), identify the outcomes in the sample space which compose the event.
 - c. Design and use a simulation to generate frequencies for compound events. *For example, use random digits as a simulation tool to approximate the answer to the question: If 40% of donors have type A blood, what is the probability that it will take at least 4 donors to find one with type A blood?*

Mathematics | Grade 8

In Grade 8, instructional time should focus on three critical areas: (1) formulating and reasoning about expressions and equations, including modeling an association in bivariate data with a linear equation, and solving linear equations and systems of linear equations; (2) grasping the concept of a function and using functions to describe quantitative relationships; (3) analyzing two- and three-dimensional space and figures using distance, angle, similarity, and congruence, and understanding and applying the Pythagorean Theorem.

(1) Students use linear equations and systems of linear equations to represent, analyze, and solve a variety of problems. Students recognize equations for proportions ($y/x = m$ or $y = mx$) as special linear equations ($y = mx + b$), understanding that the constant of proportionality (m) is the slope, and the graphs are lines through the origin. They understand that the slope (m) of a line is a constant rate of change, so that if the input or x -coordinate changes by an amount A , the output or y -coordinate changes by the amount $m \cdot A$. Students also use a linear equation to describe the association between two quantities in bivariate data (such as arm span vs. height for students in a classroom). At this grade, fitting the model, and assessing its fit to the data are done informally. Interpreting the model in the context of the data requires students to express a relationship between the two quantities in question and to interpret components of the relationship (such as slope and y -intercept) in terms of the situation.

Students strategically choose and efficiently implement procedures to solve linear equations in one variable, understanding that when they use the properties of equality and the concept of logical equivalence, they maintain the solutions of the original equation. Students solve systems of two linear equations in two variables and relate the systems to pairs of lines in the plane; these intersect, are parallel, or are the same line. Students use linear equations, systems of linear equations, linear functions, and their understanding of slope of a line to analyze situations and solve problems.

(2) Students grasp the concept of a function as a rule that assigns to each input exactly one output. They understand that functions describe situations where one quantity determines another. They can translate among representations and partial representations of functions (noting that tabular and graphical representations may be partial representations), and they describe how aspects of the function are reflected in the different representations.

(3) Students use ideas about distance and angles, how they behave under translations, rotations, reflections, and dilations, and ideas about congruence and similarity to describe and analyze two-dimensional figures and to solve problems. Students show that the sum of the angles in a triangle is the angle formed by a straight line, and that various configurations of lines give rise to similar triangles because of the angles created when a transversal cuts parallel lines. Students understand the statement of the Pythagorean Theorem and its converse, and can explain why the Pythagorean Theorem holds, for example, by decomposing a square in two different ways. They apply the Pythagorean Theorem to find distances between points on the coordinate plane, to find lengths, and to analyze polygons. Students complete their work on volume by solving problems involving cones, cylinders, and spheres.

Grade 8 Overview

The Number System

- Know that there are numbers that are not rational, and approximate them by rational numbers.

Expressions and Equations

- Work with radicals and integer exponents.
- Understand the connections between proportional relationships, lines, and linear equations.
- Analyze and solve linear equations and pairs of simultaneous linear equations.

Functions

- Define, evaluate, and compare functions.
- Use functions to model relationships between quantities.

Geometry

- Understand congruence and similarity using physical models, transparencies, or geometry software.
- Understand and apply the Pythagorean Theorem.
- Solve real-world and mathematical problems involving volume of cylinders, cones and spheres.

Statistics and Probability

- Investigate patterns of association in bivariate data.

Mathematical Practices

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

The Number System

8.NS

Know that there are numbers that are not rational, and approximate them by rational numbers.

1. Know that numbers that are not rational are called irrational. Understand informally that every number has a decimal expansion; for rational numbers show that the decimal expansion repeats eventually, and convert a decimal expansion which repeats eventually into a rational number.
2. Use rational approximations of irrational numbers to compare the size of irrational numbers, locate them approximately on a number line diagram, and estimate the value of expressions (e.g., π^2). *For example, by truncating the decimal expansion of $\sqrt{2}$, show that $\sqrt{2}$ is between 1 and 2, then between 1.4 and 1.5, and explain how to continue on to get better approximations.*

Expressions and Equations

8.EE

Work with radicals and integer exponents.

1. Know and apply the properties of integer exponents to generate equivalent numerical expressions. *For example, $3^2 \times 3^{-5} = 3^{-3} = 1/3^3 = 1/27$.*
2. Use square root and cube root symbols to represent solutions to equations of the form $x^2 = p$ and $x^3 = p$, where p is a positive rational number. Evaluate square roots of small perfect squares and cube roots of small perfect cubes. Know that $\sqrt{2}$ is irrational.
3. Use numbers expressed in the form of a single digit times an integer power of 10 to estimate very large or very small quantities, and to express how many times as much one is than the other. *For example, estimate the population of the United States as 3×10^8 and the population of the world as 7×10^9 , and determine that the world population is more than 20 times larger.*
4. Perform operations with numbers expressed in scientific notation, including problems where both decimal and scientific notation are used. Use scientific notation and choose units of appropriate size for measurements of very large or very small quantities (e.g., use millimeters per year for seafloor spreading). Interpret scientific notation that has been generated by technology.

Understand the connections between proportional relationships, lines, and linear equations.

5. Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways. *For example, compare a distance-time graph to a distance-time equation to determine which of two moving objects has greater speed.*
6. Use similar triangles to explain why the slope m is the same between any two distinct points on a non-vertical line in the coordinate plane; derive the equation $y = mx$ for a line through the origin and the equation $y = mx + b$ for a line intercepting the vertical axis at b .

Analyze and solve linear equations and pairs of simultaneous linear equations.

7. Solve linear equations in one variable.
 - a. Give examples of linear equations in one variable with one solution, infinitely many solutions, or no solutions. Show which of these possibilities is the case by successively transforming the given equation into simpler forms, until an equivalent equation of the form $x = a$, $a = a$, or $a = b$ results (where a and b are different numbers).
 - b. Solve linear equations with rational number coefficients, including equations whose solutions require expanding expressions using the distributive property and collecting like terms.

8. Analyze and solve pairs of simultaneous linear equations.
 - a. Understand that solutions to a system of two linear equations in two variables correspond to points of intersection of their graphs, because points of intersection satisfy both equations simultaneously.
 - b. Solve systems of two linear equations in two variables algebraically, and estimate solutions by graphing the equations. Solve simple cases by inspection. *For example, $3x + 2y = 5$ and $3x + 2y = 6$ have no solution because $3x + 2y$ cannot simultaneously be 5 and 6.*
 - c. Solve real-world and mathematical problems leading to two linear equations in two variables. *For example, given coordinates for two pairs of points, determine whether the line through the first pair of points intersects the line through the second pair.*

Functions**8.F****Define, evaluate, and compare functions.**

1. Understand that a function is a rule that assigns to each input exactly one output. The graph of a function is the set of ordered pairs consisting of an input and the corresponding output.¹
2. Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions). *For example, given a linear function represented by a table of values and a linear function represented by an algebraic expression, determine which function has the greater rate of change.*
3. Interpret the equation $y = mx + b$ as defining a linear function, whose graph is a straight line; give examples of functions that are not linear. *For example, the function $A = s^2$ giving the area of a square as a function of its side length is not linear because its graph contains the points $(1,1)$, $(2,4)$ and $(3,9)$, which are not on a straight line.*

Use functions to model relationships between quantities.

4. Construct a function to model a linear relationship between two quantities. Determine the rate of change and initial value of the function from a description of a relationship or from two (x, y) values, including reading these from a table or from a graph. Interpret the rate of change and initial value of a linear function in terms of the situation it models, and in terms of its graph or a table of values.
5. Describe qualitatively the functional relationship between two quantities by analyzing a graph (e.g., where the function is increasing or decreasing, linear or nonlinear). Sketch a graph that exhibits the qualitative features of a function that has been described verbally.

Geometry**8.G****Understand congruence and similarity using physical models, transparencies, or geometry software.**

1. Verify experimentally the properties of rotations, reflections, and translations:
 - a. Lines are taken to lines, and line segments to line segments of the same length.
 - b. Angles are taken to angles of the same measure.
 - c. Parallel lines are taken to parallel lines.
2. Understand that a two-dimensional figure is congruent to another if the second can be obtained from the first by a sequence of rotations, reflections, and translations; given two congruent figures, describe a sequence that exhibits the congruence between them.

¹Function notation is not required in Grade 8.

3. Describe the effect of dilations, translations, rotations, and reflections on two-dimensional figures using coordinates.
4. Understand that a two-dimensional figure is similar to another if the second can be obtained from the first by a sequence of rotations, reflections, translations, and dilations; given two similar two-dimensional figures, describe a sequence that exhibits the similarity between them.
5. Use informal arguments to establish facts about the angle sum and exterior angle of triangles, about the angles created when parallel lines are cut by a transversal, and the angle-angle criterion for similarity of triangles. *For example, arrange three copies of the same triangle so that the sum of the three angles appears to form a line, and give an argument in terms of transversals why this is so.*

Understand and apply the Pythagorean Theorem.

6. Explain a proof of the Pythagorean Theorem and its converse.
7. Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and mathematical problems in two and three dimensions.
8. Apply the Pythagorean Theorem to find the distance between two points in a coordinate system.

Solve real-world and mathematical problems involving volume of cylinders, cones, and spheres.

9. Know the formulas for the volumes of cones, cylinders, and spheres and use them to solve real-world and mathematical problems.

Statistics and Probability

8.SP

Investigate patterns of association in bivariate data.

1. Construct and interpret scatter plots for bivariate measurement data to investigate patterns of association between two quantities. Describe patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear association.
2. Know that straight lines are widely used to model relationships between two quantitative variables. For scatter plots that suggest a linear association, informally fit a straight line, and informally assess the model fit by judging the closeness of the data points to the line.
3. Use the equation of a linear model to solve problems in the context of bivariate measurement data, interpreting the slope and intercept. *For example, in a linear model for a biology experiment, interpret a slope of 1.5 cm/hr as meaning that an additional hour of sunlight each day is associated with an additional 1.5 cm in mature plant height.*
4. Understand that patterns of association can also be seen in bivariate categorical data by displaying frequencies and relative frequencies in a two-way table. Construct and interpret a two-way table summarizing data on two categorical variables collected from the same subjects. Use relative frequencies calculated for rows or columns to describe possible association between the two variables. *For example, collect data from students in your class on whether or not they have a curfew on school nights and whether or not they have assigned chores at home. Is there evidence that those who have a curfew also tend to have chores?*

Mathematics Standards for High School

The high school standards specify the mathematics that all students should study in order to be college and career ready. Additional mathematics that students should learn in order to take advanced courses such as calculus, advanced statistics, or discrete mathematics is indicated by (+), as in this example:

(+) Represent complex numbers on the complex plane in rectangular and polar form (including real and imaginary numbers).

All standards without a (+) symbol should be in the common mathematics curriculum for all college and career ready students. Standards with a (+) symbol may also appear in courses intended for all students.

The high school standards are listed in conceptual categories:

- Number and Quantity
- Algebra
- Functions
- Modeling
- Geometry
- Statistics and Probability

Conceptual categories portray a coherent view of high school mathematics; a student's work with functions, for example, crosses a number of traditional course boundaries, potentially up through and including calculus.

Modeling is best interpreted not as a collection of isolated topics but in relation to other standards. Making mathematical models is a Standard for Mathematical Practice, and specific modeling standards appear throughout the high school standards indicated by a star symbol (*). The star symbol sometimes appears on the heading for a group of standards; in that case, it should be understood to apply to all standards in that group.

Mathematics | High School—Number and Quantity

Numbers and Number Systems. During the years from kindergarten to eighth grade, students must repeatedly extend their conception of number. At first, “number” means “counting number”: 1, 2, 3... Soon after that, 0 is used to represent “none” and the whole numbers are formed by the counting numbers together with zero. The next extension is fractions. At first, fractions are barely numbers and tied strongly to pictorial representations. Yet by the time students understand division of fractions, they have a strong concept of fractions as numbers and have connected them, via their decimal representations, with the base-ten system used to represent the whole numbers. During middle school, fractions are augmented by negative fractions to form the rational numbers. In Grade 8, students extend this system once more, augmenting the rational numbers with the irrational numbers to form the real numbers. In high school, students will be exposed to yet another extension of number, when the real numbers are augmented by the imaginary numbers to form the complex numbers.

With each extension of number, the meanings of addition, subtraction, multiplication, and division are extended. In each new number system—integers, rational numbers, real numbers, and complex numbers—the four operations stay the same in two important ways: They have the commutative, associative, and distributive properties and their new meanings are consistent with their previous meanings.

Extending the properties of whole-number exponents leads to new and productive notation. For example, properties of whole-number exponents suggest that $(5^{1/3})^3$ should be $5^{(1/3)3} = 5^1 = 5$ and that $5^{1/3}$ should be the cube root of 5.

Calculators, spreadsheets, and computer algebra systems can provide ways for students to become better acquainted with these new number systems and their notation. They can be used to generate data for numerical experiments, to help understand the workings of matrix, vector, and complex number algebra, and to experiment with non-integer exponents.

Quantities. In real world problems, the answers are usually not numbers but quantities: numbers with units, which involves measurement. In their work in measurement up through Grade 8, students primarily measure commonly used attributes such as length, area, and volume. In high school, students encounter a wider variety of units in modeling, e.g., acceleration, currency conversions, derived quantities such as person-hours and heating degree days, social science rates such as per-capita income, and rates in everyday life such as points scored per game or batting averages. They also encounter novel situations in which they themselves must conceive the attributes of interest. For example, to find a good measure of overall highway safety, they might propose measures such as fatalities per year, fatalities per year per driver, or fatalities per vehicle-mile traveled. Such a conceptual process is sometimes called quantification. Quantification is important for science, as when surface area suddenly “stands out” as an important variable in evaporation. Quantification is also important for companies, which must conceptualize relevant attributes and create or choose suitable measures for them.

Number and Quantity Overview

The Real Number System

- Extend the properties of exponents to rational exponents
- Use properties of rational and irrational numbers.

Quantities

- Reason quantitatively and use units to solve problems

The Complex Number System

- Perform arithmetic operations with complex numbers
- Represent complex numbers and their operations on the complex plane
- Use complex numbers in polynomial identities and equations

Vector and Matrix Quantities

- Represent and model with vector quantities.
- Perform operations on vectors.
- Perform operations on matrices and use matrices in applications.

Mathematical Practices

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

The Real Number System**N-RN****Extend the properties of exponents to rational exponents.**

1. Explain how the definition of the meaning of rational exponents follows from extending the properties of integer exponents to those values, allowing for a notation for radicals in terms of rational exponents. *For example, we define $5^{1/3}$ to be the cube root of 5 because we want $(5^{1/3})^3 = 5^{(1/3)3}$ to hold, so $(5^{1/3})^3$ must equal 5.*
2. Rewrite expressions involving radicals and rational exponents using the properties of exponents.

Use properties of rational and irrational numbers.

3. Explain why the sum or product of two rational numbers is rational; that the sum of a rational number and an irrational number is irrational; and that the product of a nonzero rational number and an irrational number is irrational.

Quantities***N-Q****Reason quantitatively and use units to solve problems.**

1. Use units as a way to understand problems and to guide the solution of multi-step problems; choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays.
2. Define appropriate quantities for the purpose of descriptive modeling.
3. Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.

The Complex Number System**N-CN****Perform arithmetic operations with complex numbers.**

1. Know there is a complex number i such that $i^2 = -1$, and every complex number has the form $a + bi$ with a and b real.
2. Use the relation $i^2 = -1$ and the commutative, associative, and distributive properties to add, subtract, and multiply complex numbers.
3. (+) Find the conjugate of a complex number; use conjugates to find moduli and quotients of complex numbers.

Represent complex numbers and their operations on the complex plane.

4. (+) Represent complex numbers on the complex plane in rectangular and polar form (including real and imaginary numbers), and explain why the rectangular and polar forms of a given complex number represent the same number.
5. (+) Represent addition, subtraction, multiplication, and conjugation of complex numbers geometrically on the complex plane; use properties of this representation for computation. *For example, $(-1 + \sqrt{3}i)^3 = 8$ because $(-1 + \sqrt{3}i)$ has modulus 2 and argument 120° .*
6. (+) Calculate the distance between numbers in the complex plane as the modulus of the difference, and the midpoint of a segment as the average of the numbers at its endpoints.

Use complex numbers in polynomial identities and equations.

7. Solve quadratic equations with real coefficients that have complex solutions.
8. (+) Extend polynomial identities to the complex numbers. *For example, rewrite $x^2 + 4$ as $(x + 2i)(x - 2i)$.*
9. (+) Know the Fundamental Theorem of Algebra; show that it is true for quadratic polynomials.

Vector and Matrix Quantities

N-VM

Represent and model with vector quantities.

1. (+) Recognize vector quantities as having both magnitude and direction. Represent vector quantities by directed line segments, and use appropriate symbols for vectors and their magnitudes (e.g., \mathbf{v} , $|\mathbf{v}|$, $\|\mathbf{v}\|$, v).
2. (+) Find the components of a vector by subtracting the coordinates of an initial point from the coordinates of a terminal point.
3. (+) Solve problems involving velocity and other quantities that can be represented by vectors.

Perform operations on vectors.

4. (+) Add and subtract vectors.
 - a. Add vectors end-to-end, component-wise, and by the parallelogram rule. Understand that the magnitude of a sum of two vectors is typically not the sum of the magnitudes.
 - b. Given two vectors in magnitude and direction form, determine the magnitude and direction of their sum.
 - c. Understand vector subtraction $\mathbf{v} - \mathbf{w}$ as $\mathbf{v} + (-\mathbf{w})$, where $-\mathbf{w}$ is the additive inverse of \mathbf{w} , with the same magnitude as \mathbf{w} and pointing in the opposite direction. Represent vector subtraction graphically by connecting the tips in the appropriate order, and perform vector subtraction component-wise.
5. (+) Multiply a vector by a scalar.
 - a. Represent scalar multiplication graphically by scaling vectors and possibly reversing their direction; perform scalar multiplication component-wise, e.g., as $c(v_x, v_y) = (cv_x, cv_y)$.
 - b. Compute the magnitude of a scalar multiple $c\mathbf{v}$ using $\|c\mathbf{v}\| = |c|v$. Compute the direction of $c\mathbf{v}$ knowing that when $|c|v \neq 0$, the direction of $c\mathbf{v}$ is either along \mathbf{v} (for $c > 0$) or against \mathbf{v} (for $c < 0$).

Perform operations on matrices and use matrices in applications.

6. (+) Use matrices to represent and manipulate data, e.g., to represent payoffs or incidence relationships in a network.
7. (+) Multiply matrices by scalars to produce new matrices, e.g., as when all of the payoffs in a game are doubled.
8. (+) Add, subtract, and multiply matrices of appropriate dimensions.
9. (+) Understand that, unlike multiplication of numbers, matrix multiplication for square matrices is not a commutative operation, but still satisfies the associative and distributive properties.
10. (+) Understand that the zero and identity matrices play a role in matrix addition and multiplication similar to the role of 0 and 1 in the real numbers. The determinant of a square matrix is nonzero if and only if the matrix has a multiplicative inverse.
11. (+) Multiply a vector (regarded as a matrix with one column) by a matrix of suitable dimensions to produce another vector. Work with matrices as transformations of vectors.
12. (+) Work with 2×2 matrices as transformations of the plane, and interpret the absolute value of the determinant in terms of area.

Mathematics | High School—Algebra

Expressions. An expression is a record of a computation with numbers, symbols that represent numbers, arithmetic operations, exponentiation, and, at more advanced levels, the operation of evaluating a function. Conventions about the use of parentheses and the order of operations assure that each expression is unambiguous. Creating an expression that describes a computation involving a general quantity requires the ability to express the computation in general terms, abstracting from specific instances.

Reading an expression with comprehension involves analysis of its underlying structure. This may suggest a different but equivalent way of writing the expression that exhibits some different aspect of its meaning. For example, $p + 0.05p$ can be interpreted as the addition of a 5% tax to a price p . Rewriting $p + 0.05p$ as $1.05p$ shows that adding a tax is the same as multiplying the price by a constant factor.

Algebraic manipulations are governed by the properties of operations and exponents, and the conventions of algebraic notation. At times, an expression is the result of applying operations to simpler expressions. For example, $p + 0.05p$ is the sum of the simpler expressions p and $0.05p$. Viewing an expression as the result of operation on simpler expressions can sometimes clarify its underlying structure.

A spreadsheet or a computer algebra system (CAS) can be used to experiment with algebraic expressions, perform complicated algebraic manipulations, and understand how algebraic manipulations behave.

Equations and inequalities. An equation is a statement of equality between two expressions, often viewed as a question asking for which values of the variables the expressions on either side are in fact equal. These values are the solutions to the equation. An identity, in contrast, is true for all values of the variables; identities are often developed by rewriting an expression in an equivalent form.

The solutions of an equation in one variable form a set of numbers; the solutions of an equation in two variables form a set of ordered pairs of numbers, which can be plotted in the coordinate plane. Two or more equations and/or inequalities form a system. A solution for such a system must satisfy every equation and inequality in the system.

An equation can often be solved by successively deducing from it one or more simpler equations. For example, one can add the same constant to both sides without changing the solutions, but squaring both sides might lead to extraneous solutions. Strategic competence in solving includes looking ahead for productive manipulations and anticipating the nature and number of solutions.

Some equations have no solutions in a given number system, but have a solution in a larger system. For example, the solution of $x + 1 = 0$ is an integer, not a whole number; the solution of $2x + 1 = 0$ is a rational number, not an integer; the solutions of $x^2 - 2 = 0$ are real numbers, not rational numbers; and the solutions of $x^2 + 2 = 0$ are complex numbers, not real numbers.

The same solution techniques used to solve equations can be used to rearrange formulas. For example, the formula for the area of a trapezoid, $A = ((b_1 + b_2)/2)h$, can be solved for h using the same deductive process.

Inequalities can be solved by reasoning about the properties of inequality. Many, but not all, of the properties of equality continue to hold for inequalities and can be useful in solving them.

Connections to Functions and Modeling. Expressions can define functions, and equivalent expressions define the same function. Asking when two functions have the same value for the same input leads to an equation; graphing the two functions allows for finding approximate solutions of the equation. Converting a verbal description to an equation, inequality, or system of these is an essential skill in modeling.

Algebra Overview

Seeing Structure in Expressions

- Interpret the structure of expressions
- Write expressions in equivalent forms to solve problems

Arithmetic with Polynomials and Rational Expressions

- Perform arithmetic operations on polynomials
- Understand the relationship between zeros and factors of polynomials
- Use polynomial identities to solve problems
- Rewrite rational expressions

Creating Equations

- Create equations that describe numbers or relationships

Reasoning with Equations and Inequalities

- Understand solving equations as a process of reasoning and explain the reasoning
- Solve equations and inequalities in one variable
- Solve systems of equations
- Represent and solve equations and inequalities graphically

Mathematical Practices

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

Seeing Structure in Expressions

A-SSE

Interpret the structure of expressions

1. Interpret expressions that represent a quantity in terms of its context.*
 - a. Interpret parts of an expression, such as terms, factors, and coefficients.
 - b. Interpret complicated expressions by viewing one or more of their parts as a single entity. *For example, interpret $P(1+r)^n$ as the product of P and a factor not depending on P .*
2. Use the structure of an expression to identify ways to rewrite it. *For example, see $x^4 - y^4$ as $(x^2)^2 - (y^2)^2$, thus recognizing it as a difference of squares that can be factored as $(x^2 - y^2)(x^2 + y^2)$.*

Write expressions in equivalent forms to solve problems

3. Choose and produce an equivalent form of an expression to reveal and explain properties of the quantity represented by the expression.*
 - a. Factor a quadratic expression to reveal the zeros of the function it defines.
 - b. Complete the square in a quadratic expression to reveal the maximum or minimum value of the function it defines.
 - c. Use the properties of exponents to transform expressions for exponential functions. *For example the expression 1.15^t can be rewritten as $(1.15^{1/12})^{12t} \approx 1.012^{12t}$ to reveal the approximate equivalent monthly interest rate if the annual rate is 15%.*
4. Derive the formula for the sum of a finite geometric series (when the common ratio is not 1), and use the formula to solve problems. *For example, calculate mortgage payments.**

Arithmetic with Polynomials and Rational Expressions

A-APR

Perform arithmetic operations on polynomials

1. Understand that polynomials form a system analogous to the integers, namely, they are closed under the operations of addition, subtraction, and multiplication; add, subtract, and multiply polynomials.

Understand the relationship between zeros and factors of polynomials

2. Know and apply the Remainder Theorem: For a polynomial $p(x)$ and a number a , the remainder on division by $x - a$ is $p(a)$, so $p(a) = 0$ if and only if $(x - a)$ is a factor of $p(x)$.
3. Identify zeros of polynomials when suitable factorizations are available, and use the zeros to construct a rough graph of the function defined by the polynomial.

Use polynomial identities to solve problems

4. Prove polynomial identities and use them to describe numerical relationships. *For example, the polynomial identity $(x^2 + y^2)^2 = (x^2 - y^2)^2 + (2xy)^2$ can be used to generate Pythagorean triples.*
5. (+) Know and apply the Binomial Theorem for the expansion of $(x + y)^n$ in powers of x and y for a positive integer n , where x and y are any numbers, with coefficients determined for example by Pascal's Triangle.¹

¹The Binomial Theorem can be proved by mathematical induction or by a combinatorial argument.

Rewrite rational expressions

- Rewrite simple rational expressions in different forms; write $a(x)/b(x)$ in the form $q(x) + r(x)/b(x)$, where $a(x)$, $b(x)$, $q(x)$, and $r(x)$ are polynomials with the degree of $r(x)$ less than the degree of $b(x)$, using inspection, long division, or, for the more complicated examples, a computer algebra system.
- (+) Understand that rational expressions form a system analogous to the rational numbers, closed under addition, subtraction, multiplication, and division by a nonzero rational expression; add, subtract, multiply, and divide rational expressions.

Creating Equations*

A-CED

Create equations that describe numbers or relationships

- Create equations and inequalities in one variable and use them to solve problems. *Include equations arising from linear and quadratic functions, and simple rational and exponential functions.*
- Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.
- Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or non-viable options in a modeling context. *For example, represent inequalities describing nutritional and cost constraints on combinations of different foods.*
- Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations. *For example, rearrange Ohm's law $V = IR$ to highlight resistance R .*

Reasoning with Equations and Inequalities

A-REI

Understand solving equations as a process of reasoning and explain the reasoning

- Explain each step in solving a simple equation as following from the equality of numbers asserted at the previous step, starting from the assumption that the original equation has a solution. Construct a viable argument to justify a solution method.
- Solve simple rational and radical equations in one variable, and give examples showing how extraneous solutions may arise.

Solve equations and inequalities in one variable

- Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters.
- Solve quadratic equations in one variable.
 - Use the method of completing the square to transform any quadratic equation in x into an equation of the form $(x - p)^2 = q$ that has the same solutions. Derive the quadratic formula from this form.
 - Solve quadratic equations by inspection (e.g., for $x^2 = 49$), taking square roots, completing the square, the quadratic formula and factoring, as appropriate to the initial form of the equation. Recognize when the quadratic formula gives complex solutions and write them as $a \pm bi$ for real numbers a and b .

Solve systems of equations

- Prove that, given a system of two equations in two variables, replacing one equation by the sum of that equation and a multiple of the other produces a system with the same solutions.

6. Solve systems of linear equations exactly and approximately (e.g., with graphs), focusing on pairs of linear equations in two variables.
7. Solve a simple system consisting of a linear equation and a quadratic equation in two variables algebraically and graphically. *For example, find the points of intersection between the line $y = -3x$ and the circle $x^2 + y^2 = 3$.*
8. (+) Represent a system of linear equations as a single matrix equation in a vector variable.
9. (+) Find the inverse of a matrix if it exists and use it to solve systems of linear equations (using technology for matrices of dimension 3×3 or greater).

Represent and solve equations and inequalities graphically

10. Understand that the graph of an equation in two variables is the set of all its solutions plotted in the coordinate plane, often forming a curve (which could be a line).
11. Explain why the x -coordinates of the points where the graphs of the equations $y = f(x)$ and $y = g(x)$ intersect are the solutions of the equation $f(x) = g(x)$; find the solutions approximately, e.g., using technology to graph the functions, make tables of values, or find successive approximations. Include cases where $f(x)$ and/or $g(x)$ are linear, polynomial, rational, absolute value, exponential, and logarithmic functions.*
12. Graph the solutions to a linear inequality in two variables as a half-plane (excluding the boundary in the case of a strict inequality), and graph the solution set to a system of linear inequalities in two variables as the intersection of the corresponding half-planes.

Mathematics | High School—Functions

Functions describe situations where one quantity determines another. For example, the return on \$10,000 invested at an annualized percentage rate of 4.25% is a function of the length of time the money is invested. Because we continually make theories about dependencies between quantities in nature and society, functions are important tools in the construction of mathematical models.

In school mathematics, functions usually have numerical inputs and outputs and are often defined by an algebraic expression. For example, the time in hours it takes for a car to drive 100 miles is a function of the car's speed in miles per hour, v ; the rule $T(v) = 100/v$ expresses this relationship algebraically and defines a function whose name is T .

The set of inputs to a function is called its domain. We often infer the domain to be all inputs for which the expression defining a function has a value, or for which the function makes sense in a given context.

A function can be described in various ways, such as by a graph (e.g., the trace of a seismograph); by a verbal rule, as in, "I'll give you a state, you give me the capital city;" by an algebraic expression like $f(x) = a + bx$; or by a recursive rule. The graph of a function is often a useful way of visualizing the relationship of the function models, and manipulating a mathematical expression for a function can throw light on the function's properties.

Functions presented as expressions can model many important phenomena. Two important families of functions characterized by laws of growth are linear functions, which grow at a constant rate, and exponential functions, which grow at a constant percent rate. Linear functions with a constant term of zero describe proportional relationships.

A graphing utility or a computer algebra system can be used to experiment with properties of these functions and their graphs and to build computational models of functions, including recursively defined functions.

Connections to Expressions, Equations, Modeling, and Coordinates.

Determining an output value for a particular input involves evaluating an expression; finding inputs that yield a given output involves solving an equation. Questions about when two functions have the same value for the same input lead to equations, whose solutions can be visualized from the intersection of their graphs. Because functions describe relationships between quantities, they are frequently used in modeling. Sometimes functions are defined by a recursive process, which can be displayed effectively using a spreadsheet or other technology.

Functions Overview

Interpreting Functions

- Understand the concept of a function and use function notation
- Interpret functions that arise in applications in terms of the context
- Analyze functions using different representations

Building Functions

- Build a function that models a relationship between two quantities
- Build new functions from existing functions

Linear, Quadratic, and Exponential Models

- Construct and compare linear, quadratic, and exponential models and solve problems
- Interpret expressions for functions in terms of the situation they model

Trigonometric Functions

- Extend the domain of trigonometric functions using the unit circle
- Model periodic phenomena with trigonometric functions
- Prove and apply trigonometric identities

Mathematical Practices

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

Interpreting Functions

F-IF

Understand the concept of a function and use function notation

1. Understand that a function from one set (called the domain) to another set (called the range) assigns to each element of the domain exactly one element of the range. If f is a function and x is an element of its domain, then $f(x)$ denotes the output of f corresponding to the input x . The graph of f is the graph of the equation $y = f(x)$.
2. Use function notation, evaluate functions for inputs in their domains, and interpret statements that use function notation in terms of a context.
3. Recognize that sequences are functions, sometimes defined recursively, whose domain is a subset of the integers. *For example, the Fibonacci sequence is defined recursively by $f(0) = f(1) = 1$, $f(n+1) = f(n) + f(n-1)$ for $n \geq 1$.*

Interpret functions that arise in applications in terms of the context

4. For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal description of the relationship. *Key features include: intercepts; intervals where the function is increasing, decreasing, positive, or negative; relative maximums and minimums; symmetries; end behavior; and periodicity.**
5. Relate the domain of a function to its graph and, where applicable, to the quantitative relationship it describes. *For example, if the function $h(n)$ gives the number of person-hours it takes to assemble n engines in a factory, then the positive integers would be an appropriate domain for the function.**
6. Calculate and interpret the average rate of change of a function (presented symbolically or as a table) over a specified interval. Estimate the rate of change from a graph.*

Analyze functions using different representations

7. Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases.*
 - a. Graph linear and quadratic functions and show intercepts, maxima, and minima.
 - b. Graph square root, cube root, and piecewise-defined functions, including step functions and absolute value functions.
 - c. Graph polynomial functions, identifying zeros when suitable factorizations are available, and showing end behavior.
 - d. (+) Graph rational functions, identifying zeros and asymptotes when suitable factorizations are available, and showing end behavior.
 - e. Graph exponential and logarithmic functions, showing intercepts and end behavior, and trigonometric functions, showing period, midline, and amplitude.
8. Write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function.
 - a. Use the process of factoring and completing the square in a quadratic function to show zeros, extreme values, and symmetry of the graph, and interpret these in terms of a context.
 - b. Use the properties of exponents to interpret expressions for exponential functions. *For example, identify percent rate of change in functions such as $y = (1.02)^t$, $y = (0.97)^t$, $y = (1.01)^{12t}$, $y = (1.2)^{t/10}$, and classify them as representing exponential growth or decay.*

9. Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions). *For example, given a graph of one quadratic function and an algebraic expression for another, say which has the larger maximum.*

Building Functions**F-BF****Build a function that models a relationship between two quantities**

1. Write a function that describes a relationship between two quantities.*
 - a. Determine an explicit expression, a recursive process, or steps for calculation from a context.
 - b. Combine standard function types using arithmetic operations. *For example, build a function that models the temperature of a cooling body by adding a constant function to a decaying exponential, and relate these functions to the model.*
 - c. (+) Compose functions. *For example, if $T(y)$ is the temperature in the atmosphere as a function of height, and $h(t)$ is the height of a weather balloon as a function of time, then $T(h(t))$ is the temperature at the location of the weather balloon as a function of time.*
2. Write arithmetic and geometric sequences both recursively and with an explicit formula, use them to model situations, and translate between the two forms.*

Build new functions from existing functions

3. Identify the effect on the graph of replacing $f(x)$ by $f(x) + k$, $k f(x)$, $f(kx)$, and $f(x + k)$ for specific values of k (both positive and negative); find the value of k given the graphs. Experiment with cases and illustrate an explanation of the effects on the graph using technology. *Include recognizing even and odd functions from their graphs and algebraic expressions for them.*
4. Find inverse functions.
 - a. Solve an equation of the form $f(x) = c$ for a simple function f that has an inverse and write an expression for the inverse. *For example, $f(x) = 2x^3$ or $f(x) = (x+1)/(x-1)$ for $x \neq 1$.*
 - b. (+) Verify by composition that one function is the inverse of another.
 - c. (+) Read values of an inverse function from a graph or a table, given that the function has an inverse.
 - d. (+) Produce an invertible function from a non-invertible function by restricting the domain.
5. (+) Understand the inverse relationship between exponents and logarithms and use this relationship to solve problems involving logarithms and exponents.

Linear, Quadratic, and Exponential Models***F-LE****Construct and compare linear, quadratic, and exponential models and solve problems**

1. Distinguish between situations that can be modeled with linear functions and with exponential functions.
 - a. Prove that linear functions grow by equal differences over equal intervals, and that exponential functions grow by equal factors over equal intervals.
 - b. Recognize situations in which one quantity changes at a constant rate per unit interval relative to another.
 - c. Recognize situations in which a quantity grows or decays by a constant percent rate per unit interval relative to another.

2. Construct linear and exponential functions, including arithmetic and geometric sequences, given a graph, a description of a relationship, or two input-output pairs (include reading these from a table).
3. Observe using graphs and tables that a quantity increasing exponentially eventually exceeds a quantity increasing linearly, quadratically, or (more generally) as a polynomial function.
4. For exponential models, express as a logarithm the solution to $ab^{ct} = d$ where a , c , and d are numbers and the base b is 2, 10, or e ; evaluate the logarithm using technology.

Interpret expressions for functions in terms of the situation they model

5. Interpret the parameters in a linear or exponential function in terms of a context.

Trigonometric Functions

F-TF

Extend the domain of trigonometric functions using the unit circle

1. Understand radian measure of an angle as the length of the arc on the unit circle subtended by the angle.
2. Explain how the unit circle in the coordinate plane enables the extension of trigonometric functions to all real numbers, interpreted as radian measures of angles traversed counterclockwise around the unit circle.
3. (+) Use special triangles to determine geometrically the values of sine, cosine, tangent for $\pi/3$, $\pi/4$ and $\pi/6$, and use the unit circle to express the values of sine, cosine, and tangent for $\pi-x$, $\pi+x$, and $2\pi-x$ in terms of their values for x , where x is any real number.
4. (+) Use the unit circle to explain symmetry (odd and even) and periodicity of trigonometric functions.

Model periodic phenomena with trigonometric functions

5. Choose trigonometric functions to model periodic phenomena with specified amplitude, frequency, and midline.*
6. (+) Understand that restricting a trigonometric function to a domain on which it is always increasing or always decreasing allows its inverse to be constructed.
7. (+) Use inverse functions to solve trigonometric equations that arise in modeling contexts; evaluate the solutions using technology, and interpret them in terms of the context.*

Prove and apply trigonometric identities

8. Prove the Pythagorean identity $\sin^2(\theta) + \cos^2(\theta) = 1$ and use it to find $\sin(\theta)$, $\cos(\theta)$, or $\tan(\theta)$ given $\sin(\theta)$, $\cos(\theta)$, or $\tan(\theta)$ and the quadrant of the angle.
9. (+) Prove the addition and subtraction formulas for sine, cosine, and tangent and use them to solve problems.

Mathematics | High School—Modeling

Modeling links classroom mathematics and statistics to everyday life, work, and decision-making. Modeling is the process of choosing and using appropriate mathematics and statistics to analyze empirical situations, to understand them better, and to improve decisions. Quantities and their relationships in physical, economic, public policy, social, and everyday situations can be modeled using mathematical and statistical methods. When making mathematical models, technology is valuable for varying assumptions, exploring consequences, and comparing predictions with data.

A model can be very simple, such as writing total cost as a product of unit price and number bought, or using a geometric shape to describe a physical object like a coin. Even such simple models involve making choices. It is up to us whether to model a coin as a three-dimensional cylinder, or whether a two-dimensional disk works well enough for our purposes. Other situations—modeling a delivery route, a production schedule, or a comparison of loan amortizations—need more elaborate models that use other tools from the mathematical sciences. Real-world situations are not organized and labeled for analysis; formulating tractable models, representing such models, and analyzing them is appropriately a creative process. Like every such process, this depends on acquired expertise as well as creativity.

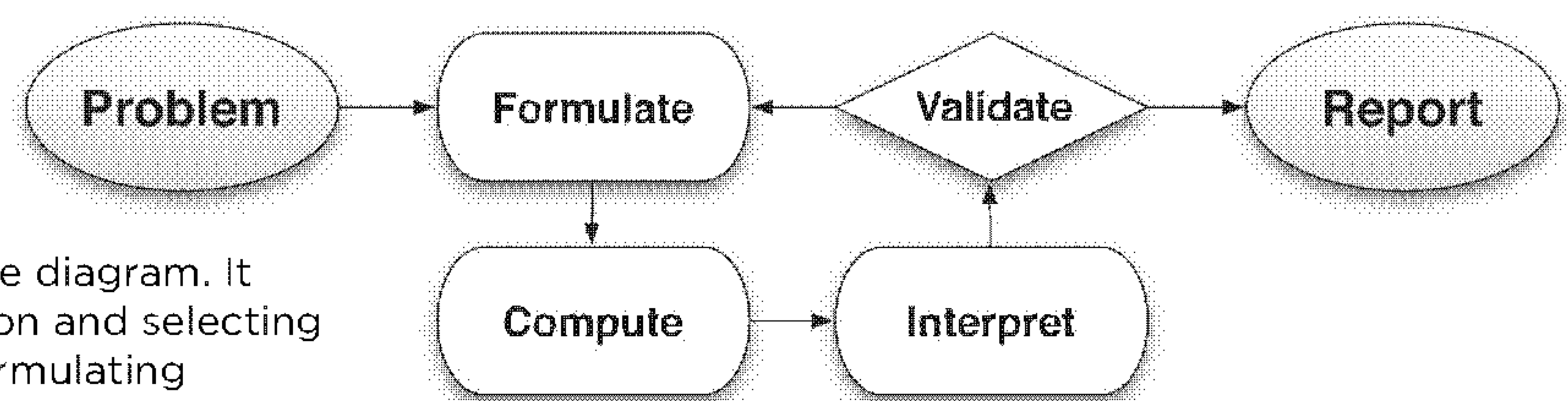
Some examples of such situations might include:

- Estimating how much water and food is needed for emergency relief in a devastated city of 3 million people, and how it might be distributed.
- Planning a table tennis tournament for 7 players at a club with 4 tables, where each player plays against each other player.
- Designing the layout of the stalls in a school fair so as to raise as much money as possible.
- Analyzing stopping distance for a car.
- Modeling savings account balance, bacterial colony growth, or investment growth.
- Engaging in critical path analysis, e.g., applied to turnaround of an aircraft at an airport.
- Analyzing risk in situations such as extreme sports, pandemics, and terrorism.
- Relating population statistics to individual predictions.

In situations like these, the models devised depend on a number of factors: How precise an answer do we want or need? What aspects of the situation do we most need to understand, control, or optimize? What resources of time and tools do we have? The range of models that we can create and analyze is also constrained by the limitations of our mathematical, statistical, and technical skills, and our ability to recognize significant variables and relationships among them. Diagrams of various kinds, spreadsheets and other technology, and algebra are powerful tools for understanding and solving problems drawn from different types of real-world situations.

One of the insights provided by mathematical modeling is that essentially the same mathematical or statistical structure can sometimes model seemingly different situations. Models can also shed light on the mathematical structures themselves, for example, as when a model of bacterial growth makes more vivid the explosive growth of the exponential function.

The basic modeling cycle is summarized in the diagram. It involves (1) identifying variables in the situation and selecting those that represent essential features, (2) formulating a model by creating and selecting geometric, graphical, tabular, algebraic, or statistical representations that describe relationships between the variables, (3) analyzing and performing operations on these relationships to draw conclusions, (4) interpreting the results of the mathematics in terms of the original situation, (5) validating the conclusions by comparing them with the situation, and then either improving the model or, if it



is acceptable, (6) reporting on the conclusions and the reasoning behind them. Choices, assumptions, and approximations are present throughout this cycle.

In descriptive modeling, a model simply describes the phenomena or summarizes them in a compact form. Graphs of observations are a familiar descriptive model—for example, graphs of global temperature and atmospheric CO₂ over time.

Analytic modeling seeks to explain data on the basis of deeper theoretical ideas, albeit with parameters that are empirically based; for example, exponential growth of bacterial colonies (until cut-off mechanisms such as pollution or starvation intervene) follows from a constant reproduction rate. Functions are an important tool for analyzing such problems.

Graphing utilities, spreadsheets, computer algebra systems, and dynamic geometry software are powerful tools that can be used to model purely mathematical phenomena (e.g., the behavior of polynomials) as well as physical phenomena.

Modeling Standards *Modeling is best interpreted not as a collection of isolated topics but rather in relation to other standards. Making mathematical models is a Standard for Mathematical Practice, and specific modeling standards appear throughout the high school standards indicated by a star symbol (*).*

Mathematics | High School—Geometry

An understanding of the attributes and relationships of geometric objects can be applied in diverse contexts—interpreting a schematic drawing, estimating the amount of wood needed to frame a sloping roof, rendering computer graphics, or designing a sewing pattern for the most efficient use of material.

Although there are many types of geometry, school mathematics is devoted primarily to plane Euclidean geometry, studied both synthetically (without coordinates) and analytically (with coordinates). Euclidean geometry is characterized most importantly by the Parallel Postulate, that through a point not on a given line there is exactly one parallel line. (Spherical geometry, in contrast, has no parallel lines.)

During high school, students begin to formalize their geometry experiences from elementary and middle school, using more precise definitions and developing careful proofs. Later in college some students develop Euclidean and other geometries carefully from a small set of axioms.

The concepts of congruence, similarity, and symmetry can be understood from the perspective of geometric transformation. Fundamental are the rigid motions: translations, rotations, reflections, and combinations of these, all of which are here assumed to preserve distance and angles (and therefore shapes generally). Reflections and rotations each explain a particular type of symmetry, and the symmetries of an object offer insight into its attributes—as when the reflective symmetry of an isosceles triangle assures that its base angles are congruent.

In the approach taken here, two geometric figures are defined to be congruent if there is a sequence of rigid motions that carries one onto the other. This is the principle of superposition. For triangles, congruence means the equality of all corresponding pairs of sides and all corresponding pairs of angles. During the middle grades, through experiences drawing triangles from given conditions, students notice ways to specify enough measures in a triangle to ensure that all triangles drawn with those measures are congruent. Once these triangle congruence criteria (ASA, SAS, and SSS) are established using rigid motions, they can be used to prove theorems about triangles, quadrilaterals, and other geometric figures.

Similarity transformations (rigid motions followed by dilations) define similarity in the same way that rigid motions define congruence, thereby formalizing the similarity ideas of “same shape” and “scale factor” developed in the middle grades. These transformations lead to the criterion for triangle similarity that two pairs of corresponding angles are congruent.

The definitions of sine, cosine, and tangent for acute angles are founded on right triangles and similarity, and, with the Pythagorean Theorem, are fundamental in many real-world and theoretical situations. The Pythagorean Theorem is generalized to non-right triangles by the Law of Cosines. Together, the Laws of Sines and Cosines embody the triangle congruence criteria for the cases where three pieces of information suffice to completely solve a triangle. Furthermore, these laws yield two possible solutions in the ambiguous case, illustrating that Side-Side-Angle is not a congruence criterion.

Analytic geometry connects algebra and geometry, resulting in powerful methods of analysis and problem solving. Just as the number line associates numbers with locations in one dimension, a pair of perpendicular axes associates pairs of numbers with locations in two dimensions. This correspondence between numerical coordinates and geometric points allows methods from algebra to be applied to geometry and vice versa. The solution set of an equation becomes a geometric curve, making visualization a tool for doing and understanding algebra. Geometric shapes can be described by equations, making algebraic manipulation into a tool for geometric understanding, modeling, and proof. Geometric transformations of the graphs of equations correspond to algebraic changes in their equations.

Dynamic geometry environments provide students with experimental and modeling tools that allow them to investigate geometric phenomena in much the same way as computer algebra systems allow them to experiment with algebraic phenomena.

Connections to Equations. The correspondence between numerical coordinates and geometric points allows methods from algebra to be applied to geometry and vice versa. The solution set of an equation becomes a geometric curve, making visualization a tool for doing and understanding algebra. Geometric shapes can be described by equations, making algebraic manipulation into a tool for geometric understanding, modeling, and proof.

Geometry Overview

Congruence

- Experiment with transformations in the plane
- Understand congruence in terms of rigid motions
- Prove geometric theorems
- Make geometric constructions

Similarity, Right Triangles, and Trigonometry

- Understand similarity in terms of similarity transformations
- Prove theorems involving similarity
- Define trigonometric ratios and solve problems involving right triangles
- Apply trigonometry to general triangles

Circles

- Understand and apply theorems about circles
- Find arc lengths and areas of sectors of circles

Expressing Geometric Properties with Equations

- Translate between the geometric description and the equation for a conic section
- Use coordinates to prove simple geometric theorems algebraically

Geometric Measurement and Dimension

- Explain volume formulas and use them to solve problems
- Visualize relationships between two-dimensional and three-dimensional objects

Modeling with Geometry

- Apply geometric concepts in modeling situations

Mathematical Practices

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

Congruence

G-CO

Experiment with transformations in the plane

1. Know precise definitions of angle, circle, perpendicular line, parallel line, and line segment, based on the undefined notions of point, line, distance along a line, and distance around a circular arc.
2. Represent transformations in the plane using, e.g., transparencies and geometry software; describe transformations as functions that take points in the plane as inputs and give other points as outputs. Compare transformations that preserve distance and angle to those that do not (e.g., translation versus horizontal stretch).
3. Given a rectangle, parallelogram, trapezoid, or regular polygon, describe the rotations and reflections that carry it onto itself.
4. Develop definitions of rotations, reflections, and translations in terms of angles, circles, perpendicular lines, parallel lines, and line segments.
5. Given a geometric figure and a rotation, reflection, or translation, draw the transformed figure using, e.g., graph paper, tracing paper, or geometry software. Specify a sequence of transformations that will carry a given figure onto another.

Understand congruence in terms of rigid motions

6. Use geometric descriptions of rigid motions to transform figures and to predict the effect of a given rigid motion on a given figure; given two figures, use the definition of congruence in terms of rigid motions to decide if they are congruent.
7. Use the definition of congruence in terms of rigid motions to show that two triangles are congruent if and only if corresponding pairs of sides and corresponding pairs of angles are congruent.
8. Explain how the criteria for triangle congruence (ASA, SAS, and SSS) follow from the definition of congruence in terms of rigid motions.

Prove geometric theorems

9. Prove theorems about lines and angles. *Theorems include: vertical angles are congruent; when a transversal crosses parallel lines, alternate interior angles are congruent and corresponding angles are congruent; points on a perpendicular bisector of a line segment are exactly those equidistant from the segment's endpoints.*
10. Prove theorems about triangles. *Theorems include: measures of interior angles of a triangle sum to 180° ; base angles of isosceles triangles are congruent; the segment joining midpoints of two sides of a triangle is parallel to the third side and half the length; the medians of a triangle meet at a point.*
11. Prove theorems about parallelograms. *Theorems include: opposite sides are congruent, opposite angles are congruent, the diagonals of a parallelogram bisect each other, and conversely, rectangles are parallelograms with congruent diagonals.*

Make geometric constructions

12. Make formal geometric constructions with a variety of tools and methods (compass and straightedge, string, reflective devices, paper folding, dynamic geometric software, etc.). *Copying a segment; copying an angle; bisecting a segment; bisecting an angle; constructing perpendicular lines, including the perpendicular bisector of a line segment; and constructing a line parallel to a given line through a point not on the line.*
13. Construct an equilateral triangle, a square, and a regular hexagon inscribed in a circle.

Similarity, Right Triangles, and Trigonometry

G-SRT

Understand similarity in terms of similarity transformations

1. Verify experimentally the properties of dilations given by a center and a scale factor:
 - a. A dilation takes a line not passing through the center of the dilation to a parallel line, and leaves a line passing through the center unchanged.
 - b. The dilation of a line segment is longer or shorter in the ratio given by the scale factor.
2. Given two figures, use the definition of similarity in terms of similarity transformations to decide if they are similar; explain using similarity transformations the meaning of similarity for triangles as the equality of all corresponding pairs of angles and the proportionality of all corresponding pairs of sides.
3. Use the properties of similarity transformations to establish the AA criterion for two triangles to be similar.

Prove theorems involving similarity

4. Prove theorems about triangles. *Theorems include: a line parallel to one side of a triangle divides the other two proportionally, and conversely; the Pythagorean Theorem proved using triangle similarity.*
5. Use congruence and similarity criteria for triangles to solve problems and to prove relationships in geometric figures.

Define trigonometric ratios and solve problems involving right triangles

6. Understand that by similarity, side ratios in right triangles are properties of the angles in the triangle, leading to definitions of trigonometric ratios for acute angles.
7. Explain and use the relationship between the sine and cosine of complementary angles.
8. Use trigonometric ratios and the Pythagorean Theorem to solve right triangles in applied problems.*

Apply trigonometry to general triangles

9. (+) Derive the formula $A = \frac{1}{2} ab \sin(C)$ for the area of a triangle by drawing an auxiliary line from a vertex perpendicular to the opposite side.
10. (+) Prove the Laws of Sines and Cosines and use them to solve problems.
11. (+) Understand and apply the Law of Sines and the Law of Cosines to find unknown measurements in right and non-right triangles (e.g., surveying problems, resultant forces).

Circles

G-C

Understand and apply theorems about circles

1. Prove that all circles are similar.
2. Identify and describe relationships among inscribed angles, radii, and chords. *Include the relationship between central, inscribed, and circumscribed angles; inscribed angles on a diameter are right angles; the radius of a circle is perpendicular to the tangent where the radius intersects the circle.*
3. Construct the inscribed and circumscribed circles of a triangle, and prove properties of angles for a quadrilateral inscribed in a circle.
4. (+) Construct a tangent line from a point outside a given circle to the circle.

Find arc lengths and areas of sectors of circles

- Derive using similarity the fact that the length of the arc intercepted by an angle is proportional to the radius, and define the radian measure of the angle as the constant of proportionality; derive the formula for the area of a sector.

Expressing Geometric Properties with Equations**G-GPE****Translate between the geometric description and the equation for a conic section**

- Derive the equation of a circle of given center and radius using the Pythagorean Theorem; complete the square to find the center and radius of a circle given by an equation.
- Derive the equation of a parabola given a focus and directrix.
- (+) Derive the equations of ellipses and hyperbolas given the foci, using the fact that the sum or difference of distances from the foci is constant.

Use coordinates to prove simple geometric theorems algebraically

- Use coordinates to prove simple geometric theorems algebraically. *For example, prove or disprove that a figure defined by four given points in the coordinate plane is a rectangle; prove or disprove that the point $(1, \sqrt{3})$ lies on the circle centered at the origin and containing the point $(0, 2)$.*
- Prove the slope criteria for parallel and perpendicular lines and use them to solve geometric problems (e.g., find the equation of a line parallel or perpendicular to a given line that passes through a given point).
- Find the point on a directed line segment between two given points that partitions the segment in a given ratio.
- Use coordinates to compute perimeters of polygons and areas of triangles and rectangles, e.g., using the distance formula.*

Geometric Measurement and Dimension**G-GMD****Explain volume formulas and use them to solve problems**

- Give an informal argument for the formulas for the circumference of a circle, area of a circle, volume of a cylinder, pyramid, and cone. *Use dissection arguments, Cavalieri's principle, and informal limit arguments.*
- (+) Give an informal argument using Cavalieri's principle for the formulas for the volume of a sphere and other solid figures.
- Use volume formulas for cylinders, pyramids, cones, and spheres to solve problems.*

Visualize relationships between two-dimensional and three-dimensional objects

- Identify the shapes of two-dimensional cross-sections of three-dimensional objects, and identify three-dimensional objects generated by rotations of two-dimensional objects.

Modeling with Geometry**G-MG****Apply geometric concepts in modeling situations**

- Use geometric shapes, their measures, and their properties to describe objects (e.g., modeling a tree trunk or a human torso as a cylinder).*
- Apply concepts of density based on area and volume in modeling situations (e.g., persons per square mile, BTUs per cubic foot).*
- Apply geometric methods to solve design problems (e.g., designing an object or structure to satisfy physical constraints or minimize cost; working with typographic grid systems based on ratios).*

Mathematics | High School—Statistics and Probability★

Decisions or predictions are often based on data—numbers in context. These decisions or predictions would be easy if the data always sent a clear message, but the message is often obscured by variability. Statistics provides tools for describing variability in data and for making informed decisions that take it into account.

Data are gathered, displayed, summarized, examined, and interpreted to discover patterns and deviations from patterns. Quantitative data can be described in terms of key characteristics: measures of shape, center, and spread. The shape of a data distribution might be described as symmetric, skewed, flat, or bell shaped, and it might be summarized by a statistic measuring center (such as mean or median) and a statistic measuring spread (such as standard deviation or interquartile range). Different distributions can be compared numerically using these statistics or compared visually using plots. Knowledge of center and spread are not enough to describe a distribution. Which statistics to compare, which plots to use, and what the results of a comparison might mean, depend on the question to be investigated and the real-life actions to be taken.

Randomization has two important uses in drawing statistical conclusions. First, collecting data from a random sample of a population makes it possible to draw valid conclusions about the whole population, taking variability into account. Second, randomly assigning individuals to different treatments allows a fair comparison of the effectiveness of those treatments. A statistically significant outcome is one that is unlikely to be due to chance alone, and this can be evaluated only under the condition of randomness. The conditions under which data are collected are important in drawing conclusions from the data; in critically reviewing uses of statistics in public media and other reports, it is important to consider the study design, how the data were gathered, and the analyses employed as well as the data summaries and the conclusions drawn.

Random processes can be described mathematically by using a probability model: a list or description of the possible outcomes (the sample space), each of which is assigned a probability. In situations such as flipping a coin, rolling a number cube, or drawing a card, it might be reasonable to assume various outcomes are equally likely. In a probability model, sample points represent outcomes and combine to make up events; probabilities of events can be computed by applying the Addition and Multiplication Rules. Interpreting these probabilities relies on an understanding of independence and conditional probability, which can be approached through the analysis of two-way tables.

Technology plays an important role in statistics and probability by making it possible to generate plots, regression functions, and correlation coefficients, and to simulate many possible outcomes in a short amount of time.

Connections to Functions and Modeling. Functions may be used to describe data; if the data suggest a linear relationship, the relationship can be modeled with a regression line, and its strength and direction can be expressed through a correlation coefficient.

Statistics and Probability Overview

Interpreting Categorical and Quantitative Data

- Summarize, represent, and interpret data on a single count or measurement variable
- Summarize, represent, and interpret data on two categorical and quantitative variables
- Interpret linear models

Making Inferences and Justifying Conclusions

- Understand and evaluate random processes underlying statistical experiments
- Make inferences and justify conclusions from sample surveys, experiments and observational studies

Conditional Probability and the Rules of Probability

- Understand independence and conditional probability and use them to interpret data
- Use the rules of probability to compute probabilities of compound events in a uniform probability model

Using Probability to Make Decisions

- Calculate expected values and use them to solve problems
- Use probability to evaluate outcomes of decisions

Mathematical Practices

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

Interpreting Categorical and Quantitative Data**S-ID****Summarize, represent, and interpret data on a single count or measurement variable**

1. Represent data with plots on the real number line (dot plots, histograms, and box plots).
2. Use statistics appropriate to the shape of the data distribution to compare center (median, mean) and spread (interquartile range, standard deviation) of two or more different data sets.
3. Interpret differences in shape, center, and spread in the context of the data sets, accounting for possible effects of extreme data points (outliers).
4. Use the mean and standard deviation of a data set to fit it to a normal distribution and to estimate population percentages. Recognize that there are data sets for which such a procedure is not appropriate. Use calculators, spreadsheets, and tables to estimate areas under the normal curve.

Summarize, represent, and interpret data on two categorical and quantitative variables

5. Summarize categorical data for two categories in two-way frequency tables. Interpret relative frequencies in the context of the data (including joint, marginal, and conditional relative frequencies). Recognize possible associations and trends in the data.
6. Represent data on two quantitative variables on a scatter plot, and describe how the variables are related.
 - a. Fit a function to the data; use functions fitted to data to solve problems in the context of the data. *Use given functions or choose a function suggested by the context. Emphasize linear, quadratic, and exponential models.*
 - b. Informally assess the fit of a function by plotting and analyzing residuals.
 - c. Fit a linear function for a scatter plot that suggests a linear association.

Interpret linear models

7. Interpret the slope (rate of change) and the intercept (constant term) of a linear model in the context of the data.
8. Compute (using technology) and interpret the correlation coefficient of a linear fit.
9. Distinguish between correlation and causation.

Making Inferences and Justifying Conclusions**S-IC****Understand and evaluate random processes underlying statistical experiments**

1. Understand statistics as a process for making inferences about population parameters based on a random sample from that population.
2. Decide if a specified model is consistent with results from a given data-generating process, e.g., using simulation. *For example, a model says a spinning coin falls heads up with probability 0.5. Would a result of 5 tails in a row cause you to question the model?*

Make inferences and justify conclusions from sample surveys, experiments, and observational studies

3. Recognize the purposes of and differences among sample surveys, experiments, and observational studies; explain how randomization relates to each.

4. Use data from a sample survey to estimate a population mean or proportion; develop a margin of error through the use of simulation models for random sampling.
5. Use data from a randomized experiment to compare two treatments; use simulations to decide if differences between parameters are significant.
6. Evaluate reports based on data.

Conditional Probability and the Rules of Probability

S-CP

Understand independence and conditional probability and use them to interpret data

1. Describe events as subsets of a sample space (the set of outcomes) using characteristics (or categories) of the outcomes, or as unions, intersections, or complements of other events (“or,” “and,” “not”).
2. Understand that two events A and B are independent if the probability of A and B occurring together is the product of their probabilities, and use this characterization to determine if they are independent.
3. Understand the conditional probability of A given B as $P(A \text{ and } B)/P(B)$, and interpret independence of A and B as saying that the conditional probability of A given B is the same as the probability of A , and the conditional probability of B given A is the same as the probability of B .
4. Construct and interpret two-way frequency tables of data when two categories are associated with each object being classified. Use the two-way table as a sample space to decide if events are independent and to approximate conditional probabilities. *For example, collect data from a random sample of students in your school on their favorite subject among math, science, and English. Estimate the probability that a randomly selected student from your school will favor science given that the student is in tenth grade. Do the same for other subjects and compare the results.*
5. Recognize and explain the concepts of conditional probability and independence in everyday language and everyday situations. *For example, compare the chance of having lung cancer if you are a smoker with the chance of being a smoker if you have lung cancer.*

Use the rules of probability to compute probabilities of compound events in a uniform probability model

6. Find the conditional probability of A given B as the fraction of B 's outcomes that also belong to A , and interpret the answer in terms of the model.
7. Apply the Addition Rule, $P(A \text{ or } B) = P(A) + P(B) - P(A \text{ and } B)$, and interpret the answer in terms of the model.
8. (+) Apply the general Multiplication Rule in a uniform probability model, $P(A \text{ and } B) = P(A)P(B|A) = P(B)P(A|B)$, and interpret the answer in terms of the model.
9. (+) Use permutations and combinations to compute probabilities of compound events and solve problems.

Using Probability to Make Decisions

S-MD

Calculate expected values and use them to solve problems

1. (+) Define a random variable for a quantity of interest by assigning a numerical value to each event in a sample space; graph the corresponding probability distribution using the same graphical displays as for data distributions.
2. (+) Calculate the expected value of a random variable; interpret it as the mean of the probability distribution.

3. (+) Develop a probability distribution for a random variable defined for a sample space in which theoretical probabilities can be calculated; find the expected value. *For example, find the theoretical probability distribution for the number of correct answers obtained by guessing on all five questions of a multiple-choice test where each question has four choices, and find the expected grade under various grading schemes.*
4. (+) Develop a probability distribution for a random variable defined for a sample space in which probabilities are assigned empirically; find the expected value. *For example, find a current data distribution on the number of TV sets per household in the United States, and calculate the expected number of sets per household. How many TV sets would you expect to find in 100 randomly selected households?*

Use probability to evaluate outcomes of decisions

5. (+) Weigh the possible outcomes of a decision by assigning probabilities to payoff values and finding expected values.
 - a. Find the expected payoff for a game of chance. *For example, find the expected winnings from a state lottery ticket or a game at a fast-food restaurant.*
 - b. Evaluate and compare strategies on the basis of expected values. *For example, compare a high-deductible versus a low-deductible automobile insurance policy using various, but reasonable, chances of having a minor or a major accident.*
6. (+) Use probabilities to make fair decisions (e.g., drawing by lots, using a random number generator).
7. (+) Analyze decisions and strategies using probability concepts (e.g., product testing, medical testing, pulling a hockey goalie at the end of a game).

Note on courses and transitions

The high school portion of the Standards for Mathematical Content specifies the mathematics all students should study for college and career readiness. These standards do not mandate the sequence of high school courses. However, the organization of high school courses is a critical component to implementation of the standards. To that end, sample high school pathways for mathematics – in both a traditional course sequence (Algebra I, Geometry, and Algebra II) as well as an integrated course sequence (Mathematics 1, Mathematics 2, Mathematics 3) – will be made available shortly after the release of the final Common Core State Standards. It is expected that additional model pathways based on these standards will become available as well.

The standards themselves do not dictate curriculum, pedagogy, or delivery of content. In particular, states may handle the transition to high school in different ways. For example, many students in the U.S. today take Algebra I in the 8th grade, and in some states this is a requirement. The K-7 standards contain the prerequisites to prepare students for Algebra I by 8th grade, and the standards are designed to permit states to continue existing policies concerning Algebra I in 8th grade.

A second major transition is the transition from high school to post-secondary education for college and careers. The evidence concerning college and career readiness shows clearly that the knowledge, skills, and practices important for readiness include a great deal of mathematics prior to the boundary defined by (+) symbols in these standards. Indeed, some of the highest priority content for college and career readiness comes from Grades 6-8. This body of material includes powerfully useful proficiencies such as applying ratio reasoning in real-world and mathematical problems, computing fluently with positive and negative fractions and decimals, and solving real-world and mathematical problems involving angle measure, area, surface area, and volume. Because important standards for college and career readiness are distributed across grades and courses, systems for evaluating college and career readiness should reach as far back in the standards as Grades 6-8. It is important to note as well that cut scores or other information generated by assessment systems for college and career readiness should be developed in collaboration with representatives from higher education and workforce development programs, and should be validated by subsequent performance of students in college and the workforce.

Glossary

Addition and subtraction within 5, 10, 20, 100, or 1000. Addition or subtraction of two whole numbers with whole number answers, and with sum or minuend in the range 0-5, 0-10, 0-20, or 0-100, respectively. Example: $8 + 2 = 10$ is an addition within 10, $14 - 5 = 9$ is a subtraction within 20, and $55 - 18 = 37$ is a subtraction within 100.

Additive inverses. Two numbers whose sum is 0 are additive inverses of one another. Example: $\frac{3}{4}$ and $-\frac{3}{4}$ are additive inverses of one another because $\frac{3}{4} + (-\frac{3}{4}) = (-\frac{3}{4}) + \frac{3}{4} = 0$.

Associative property of addition. See Table 3 in this Glossary.

Associative property of multiplication. See Table 3 in this Glossary.

Bivariate data. Pairs of linked numerical observations. Example: a list of heights and weights for each player on a football team.

Box plot. A method of visually displaying a distribution of data values by using the median, quartiles, and extremes of the data set. A box shows the middle 50% of the data.¹

Commutative property. See Table 3 in this Glossary.

Complex fraction. A fraction A/B where A and/or B are fractions (B nonzero).

Computation algorithm. A set of predefined steps applicable to a class of problems that gives the correct result in every case when the steps are carried out correctly. *See also:* computation strategy.

Computation strategy. Purposeful manipulations that may be chosen for specific problems, may not have a fixed order, and may be aimed at converting one problem into another. *See also:* computation algorithm.

Congruent. Two plane or solid figures are congruent if one can be obtained from the other by rigid motion (a sequence of rotations, reflections, and translations).

Counting on. A strategy for finding the number of objects in a group without having to count every member of the group. For example, if a stack of books is known to have 8 books and 3 more books are added to the top, it is not necessary to count the stack all over again. One can find the total by *counting on*—pointing to the top book and saying “eight,” following this with “nine, ten, eleven. There are eleven books now.”

Dot plot. *See:* line plot.

Dilation. A transformation that moves each point along the ray through the point emanating from a fixed center, and multiplies distances from the center by a common scale factor.

Expanded form. A multi-digit number is expressed in expanded form when it is written as a sum of single-digit multiples of powers of ten. For example, $643 = 600 + 40 + 3$.

Expected value. For a random variable, the weighted average of its possible values, with weights given by their respective probabilities.

First quartile. For a data set with median M , the first quartile is the median of the data values less than M . Example: For the data set $\{1, 3, 6, 7, 10, 12, 14, 15, 22, 120\}$, the first quartile is 6.² *See also:* median, third quartile, interquartile range.

Fraction. A number expressible in the form a/b where a is a whole number and b is a positive whole number. (The word *fraction* in these standards always refers to a non-negative number.) *See also:* rational number.

Identity property of 0. See Table 3 in this Glossary.

Independently combined probability models. Two probability models are said to be combined independently if the probability of each ordered pair in the combined model equals the product of the original probabilities of the two individual outcomes in the ordered pair.

¹Adapted from Wisconsin Department of Public Instruction, <http://dpi.wi.gov/standards/mathglos.html>, accessed March 2, 2010.

²Many different methods for computing quartiles are in use. The method defined here is sometimes called the Moore and McCabe method. See Langford, E., “Quartiles in Elementary Statistics,” *Journal of Statistics Education* Volume 14, Number 3 (2006).

Integer. A number expressible in the form a or $-a$ for some whole number a .

Interquartile Range. A measure of variation in a set of numerical data, the interquartile range is the distance between the first and third quartiles of the data set. Example: For the data set $\{1, 3, 6, 7, 10, 12, 14, 15, 22, 120\}$, the interquartile range is $15 - 6 = 9$. See *also*: first quartile, third quartile.

Line plot. A method of visually displaying a distribution of data values where each data value is shown as a dot or mark above a number line. Also known as a dot plot.³

Mean. A measure of center in a set of numerical data, computed by adding the values in a list and then dividing by the number of values in the list.⁴ Example: For the data set $\{1, 3, 6, 7, 10, 12, 14, 15, 22, 120\}$, the mean is 21.

Mean absolute deviation. A measure of variation in a set of numerical data, computed by adding the distances between each data value and the mean, then dividing by the number of data values. Example: For the data set $\{2, 3, 6, 7, 10, 12, 14, 15, 22, 120\}$, the mean absolute deviation is 20.

Median. A measure of center in a set of numerical data. The median of a list of values is the value appearing at the center of a sorted version of the list—or the mean of the two central values, if the list contains an even number of values. Example: For the data set $\{2, 3, 6, 7, 10, 12, 14, 15, 22, 90\}$, the median is 11.

Midline. In the graph of a trigonometric function, the horizontal line halfway between its maximum and minimum values.

Multiplication and division within 100. Multiplication or division of two whole numbers with whole number answers, and with product or dividend in the range 0-100. Example: $72 \div 8 = 9$.

Multiplicative inverses. Two numbers whose product is 1 are multiplicative inverses of one another. Example: $\frac{3}{4}$ and $\frac{4}{3}$ are multiplicative inverses of one another because $\frac{3}{4} \times \frac{4}{3} = \frac{4}{3} \times \frac{3}{4} = 1$.

Number line diagram. A diagram of the number line used to represent numbers and support reasoning about them. In a number line diagram for measurement quantities, the interval from 0 to 1 on the diagram represents the unit of measure for the quantity.

Percent rate of change. A rate of change expressed as a percent. Example: if a population grows from 50 to 55 in a year, it grows by $\frac{5}{50} = 10\%$ per year.

Probability distribution. The set of possible values of a random variable with a probability assigned to each.

Properties of operations. See Table 3 in this Glossary.

Properties of equality. See Table 4 in this Glossary.

Properties of inequality. See Table 5 in this Glossary.

Properties of operations. See Table 3 in this Glossary.

Probability. A number between 0 and 1 used to quantify likelihood for processes that have uncertain outcomes (such as tossing a coin, selecting a person at random from a group of people, tossing a ball at a target, or testing for a medical condition).

Probability model. A probability model is used to assign probabilities to outcomes of a chance process by examining the nature of the process. The set of all outcomes is called the sample space, and their probabilities sum to 1. See *also*: uniform probability model.

Random variable. An assignment of a numerical value to each outcome in a sample space.

Rational expression. A quotient of two polynomials with a non-zero denominator.

Rational number. A number expressible in the form $\frac{a}{b}$ or $-\frac{a}{b}$ for some fraction $\frac{a}{b}$. The rational numbers include the integers.

Rectilinear figure. A polygon all angles of which are right angles.

Rigid motion. A transformation of points in space consisting of a sequence of

³Adapted from Wisconsin Department of Public Instruction, *op. cit.*

⁴To be more precise, this defines the *arithmetic mean*.

one or more translations, reflections, and/or rotations. Rigid motions are here assumed to preserve distances and angle measures.

Repeating decimal. The decimal form of a rational number. *See also:* terminating decimal.

Sample space. In a probability model for a random process, a list of the individual outcomes that are to be considered.

Scatter plot. A graph in the coordinate plane representing a set of bivariate data. For example, the heights and weights of a group of people could be displayed on a scatter plot.⁵

Similarity transformation. A rigid motion followed by a dilation.

Tape diagram. A drawing that looks like a segment of tape, used to illustrate number relationships. Also known as a strip diagram, bar model, fraction strip, or length model.

Terminating decimal. A decimal is called terminating if its repeating digit is 0.

Third quartile. For a data set with median M , the third quartile is the median of the data values greater than M . Example: For the data set {2, 3, 6, 7, 10, 12, 14, 15, 22, 120}, the third quartile is 15. *See also:* median, first quartile, interquartile range.

Transitivity principle for indirect measurement. If the length of object A is greater than the length of object B, and the length of object B is greater than the length of object C, then the length of object A is greater than the length of object C. This principle applies to measurement of other quantities as well.

Uniform probability model. A probability model which assigns equal probability to all outcomes. *See also:* probability model.

Vector. A quantity with magnitude and direction in the plane or in space, defined by an ordered pair or triple of real numbers.

Visual fraction model. A tape diagram, number line diagram, or area model.

Whole numbers. The numbers 0, 1, 2, 3,

⁵Adapted from Wisconsin Department of Public Instruction, *op. cit.*

TABLE 1. Common addition and subtraction situations.⁶

| | Result Unknown | Change Unknown | Start Unknown |
|---|---|---|---|
| Add to | Two bunnies sat on the grass. Three more bunnies hopped there. How many bunnies are on the grass now? $2 + 3 = ?$ | Two bunnies were sitting on the grass. Some more bunnies hopped there. Then there were five bunnies. How many bunnies hopped over to the first two? $2 + ? = 5$ | Some bunnies were sitting on the grass. Three more bunnies hopped there. Then there were five bunnies. How many bunnies were on the grass before? $? + 3 = 5$ |
| Take from | Five apples were on the table. I ate two apples. How many apples are on the table now? $5 - 2 = ?$ | Five apples were on the table. I ate some apples. Then there were three apples. How many apples did I eat? $5 - ? = 3$ | Some apples were on the table. I ate two apples. Then there were three apples. How many apples were on the table before? $? - 2 = 3$ |
| | Total Unknown | Addend Unknown | Both Addends Unknown ¹ |
| Put Together/ Take Apart² | Three red apples and two green apples are on the table. How many apples are on the table? $3 + 2 = ?$ | Five apples are on the table. Three are red and the rest are green. How many apples are green? $3 + ? = 5, 5 - 3 = ?$ | Grandma has five flowers. How many can she put in her red vase and how many in her blue vase? $5 = 0 + 5, 5 = 5 + 0$ $5 = 1 + 4, 5 = 4 + 1$ $5 = 2 + 3, 5 = 3 + 2$ |
| | Difference Unknown | Bigger Unknown | Smaller Unknown |
| Compare³ | <p>("How many more?" version): Lucy has two apples. Julie has five apples. How many more apples does Julie have than Lucy?</p> <p>("How many fewer?" version): Lucy has two apples. Julie has five apples. How many fewer apples does Lucy have than Julie? $2 + ? = 5, 5 - 2 = ?$</p> | <p>(Version with "more"): Julie has three more apples than Lucy. Lucy has two apples. How many apples does Julie have?</p> <p>(Version with "fewer"): Lucy has 3 fewer apples than Julie. Lucy has two apples. How many apples does Julie have? $2 + 3 = ?, 3 + 2 = ?$</p> | <p>(Version with "more"): Julie has three more apples than Lucy. Julie has five apples. How many apples does Lucy have?</p> <p>(Version with "fewer"): Lucy has 3 fewer apples than Julie. Julie has five apples. How many apples does Lucy have? $5 - 3 = ?, ? + 3 = 5$</p> |

¹These take apart situations can be used to show all the decompositions of a given number. The associated equations, which have the total on the left of the equal sign, help children understand that the = sign does not always mean makes or results in but always does mean is the same number as.

²Either addend can be unknown, so there are three variations of these problem situations. Both Addends Unknown is a productive extension of this basic situation, especially for small numbers less than or equal to 10.

³For the Bigger Unknown or Smaller Unknown situations, one version directs the correct operation (the version using more for the bigger unknown and using less for the smaller unknown). The other versions are more difficult.

⁶Adapted from Box 2-4 of Mathematics Learning in Early Childhood, National Research Council (2009, pp. 32, 33).

TABLE 2. Common multiplication and division situations.⁷

| | Unknown Product $3 \times 6 = ?$ | Group Size Unknown ("How many in each group?" Division) $3 \times ? = 18$, and $18 \div 3 = ?$ | Number of Groups Unknown ("How many groups?" Division) $? \times 6 = 18$, and $18 \div 6 = ?$ |
|---|--|--|---|
| Equal Groups | There are 3 bags with 6 plums in each bag. How many plums are there in all? <i>Measurement example.</i> You need 3 lengths of string, each 6 inches long. How much string will you need altogether? | If 18 plums are shared equally into 3 bags, then how many plums will be in each bag? <i>Measurement example.</i> You have 18 inches of string, which you will cut into 3 equal pieces. How long will each piece of string be? | If 18 plums are to be packed 6 to a bag, then how many bags are needed? <i>Measurement example.</i> You have 18 inches of string, which you will cut into pieces that are 6 inches long. How many pieces of string will you have? |
| Arrays,⁴ Area⁵ | There are 3 rows of apples with 6 apples in each row. How many apples are there? <i>Area example.</i> What is the area of a 3 cm by 6 cm rectangle? | If 18 apples are arranged into 3 equal rows, how many apples will be in each row? <i>Area example.</i> A rectangle has area 18 square centimeters. If one side is 3 cm long, how long is a side next to it? | If 18 apples are arranged into equal rows of 6 apples, how many rows will there be? <i>Area example.</i> A rectangle has area 18 square centimeters. If one side is 6 cm long, how long is a side next to it? |
| Compare | A blue hat costs \$6. A red hat costs 3 times as much as the blue hat. How much does the red hat cost? <i>Measurement example.</i> A rubber band is 6 cm long. How long will the rubber band be when it is stretched to be 3 times as long? | A red hat costs \$18 and that is 3 times as much as a blue hat costs. How much does a blue hat cost? <i>Measurement example.</i> A rubber band is stretched to be 18 cm long and that is 3 times as long as it was at first. How long was the rubber band at first? | A red hat costs \$18 and a blue hat costs \$6. How many times as much does the red hat cost as the blue hat? <i>Measurement example.</i> A rubber band was 6 cm long at first. Now it is stretched to be 18 cm long. How many times as long is the rubber band now as it was at first? |
| General | $a \times b = ?$ | $a \times ? = p$, and $p \div a = ?$ | $? \times b = p$, and $p \div b = ?$ |

⁴The language in the array examples shows the easiest form of array problems. A harder form is to use the terms rows and columns: The apples in the grocery window are in 3 rows and 6 columns. How many apples are in there? Both forms are valuable.

⁵Area involves arrays of squares that have been pushed together so that there are no gaps or overlaps, so array problems include these especially important measurement situations.

⁷The first examples in each cell are examples of discrete things. These are easier for students and should be given before the measurement examples.

TABLE 3. The properties of operations. Here a , b and c stand for arbitrary numbers in a given number system. The properties of operations apply to the rational number system, the real number system, and the complex number system.

| | |
|--|---|
| <i>Associative property of addition</i> | $(a + b) + c = a + (b + c)$ |
| <i>Commutative property of addition</i> | $a + b = b + a$ |
| <i>Additive identity property of 0</i> | $a + 0 = 0 + a = a$ |
| <i>Existence of additive inverses</i> | For every a there exists $-a$ so that $a + (-a) = (-a) + a = 0$. |
| <i>Associative property of multiplication</i> | $(a \times b) \times c = a \times (b \times c)$ |
| <i>Commutative property of multiplication</i> | $a \times b = b \times a$ |
| <i>Multiplicative identity property of 1</i> | $a \times 1 = 1 \times a = a$ |
| <i>Existence of multiplicative inverses</i> | For every $a \neq 0$ there exists $1/a$ so that $a \times 1/a = 1/a \times a = 1$. |
| <i>Distributive property of multiplication over addition</i> | $a \times (b + c) = a \times b + a \times c$ |

TABLE 4. The properties of equality. Here a , b and c stand for arbitrary numbers in the rational, real, or complex number systems.

| | |
|--|---|
| <i>Reflexive property of equality</i> | $a = a$ |
| <i>Symmetric property of equality</i> | If $a = b$, then $b = a$. |
| <i>Transitive property of equality</i> | If $a = b$ and $b = c$, then $a = c$. |
| <i>Addition property of equality</i> | If $a = b$, then $a + c = b + c$. |
| <i>Subtraction property of equality</i> | If $a = b$, then $a - c = b - c$. |
| <i>Multiplication property of equality</i> | If $a = b$, then $a \times c = b \times c$. |
| <i>Division property of equality</i> | If $a = b$ and $c \neq 0$, then $a \div c = b \div c$. |
| <i>Substitution property of equality</i> | If $a = b$, then b may be substituted for a in any expression containing a . |

TABLE 5. The properties of inequality. Here a , b and c stand for arbitrary numbers in the rational or real number systems.

| |
|---|
| Exactly one of the following is true: $a < b$, $a = b$, $a > b$. |
| If $a > b$ and $b > c$ then $a > c$. |
| If $a > b$, then $b < a$. |
| If $a > b$, then $-a < -b$. |
| If $a > b$, then $a \pm c > b \pm c$. |
| If $a > b$ and $c > 0$, then $a \times c > b \times c$. |
| If $a > b$ and $c < 0$, then $a \times c < b \times c$. |
| If $a > b$ and $c > 0$, then $a + c > b + c$. |
| If $a > b$ and $c < 0$, then $a + c < b + c$. |

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School Readiness in North Carolina

**Strategies for Defining, Measuring, and
Promoting Success FOR ALL CHILDREN**

**Report of the
Ready for School Goal Team**
Full Report



Submitted to the
North Carolina School Improvement Panel
North Carolina State Board of Education
June 2000



Public Schools of North Carolina
State Board of Education
Department of Public Instruction

SERVE
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**North Carolina School Improvement Panel
Ready For School Goal Team
Final Report**

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SUMMARY OF RECOMMENDATIONS

The North Carolina School Improvement Panel Ready for School Goal Team recommends the following actions by the State Board of Education. Please note that these recommendations are directed toward the State Board of Education because they convened and sponsored the Goal Team. We recognize the critical role of many other organizations in the adoption, endorsement, support, and implementation of these recommendations.

1. Approve the Goal Team's principles and definition of school readiness.

School readiness is defined by

- ✎ The condition of children as they enter school, based on the following five domains of development:
 - Health and physical development
 - Social and emotional development
 - Approaches toward learning
 - Language development and communication
 - Cognition and general knowledge
- ✎ The capacity of schools to serve all kindergartners effectively (e.g., personnel, policies, practices, and physical resources).

2. Collaborate in a school readiness system to assess the conditions of children entering school.

- ✎ Use a modified version of the Family and Child Experiences Survey (FACES) battery as its assessment tool.
- ✎ Use a random sample of children that would provide information at the state and county levels.
- ✎ Be adopted and directed by the North Carolina Partnership for Children.
- ✎ Rely on the North Carolina Department of Public Instruction and State Board of Education to be collaborative partners in conducting this assessment in schools.
- ✎ Be piloted for three years, beginning in the fall of 2000.

3. Adopt a school readiness system to assess schools' readiness for children.

- ✎ Schools' readiness for all children would include the following:
 - Ready teachers
 - Ready curriculum and instructional strategies
 - Ready school environments
 - Ready administrators
 - Ready families and communities

- ✎ Use a random sample of schools that would provide information at the state and county level.
- ✎ Be directed by the North Carolina Department of Public Instruction.
- ✎ Be piloted for three years, beginning in the fall of 2000.

4. Adopt the Ready Schools Best Practice Guidelines and develop a plan for implementing these best practices.

Recommendations to the State Board of Education include the following:

- ✎ Disseminate the Best Practice Guidelines to all schools with kindergarten programs.
- ✎ Examine state and local policies regarding personnel and resources to promote optimal instructional conditions for children (e.g., B-K licensure, training, planning time, class size, physical features of classrooms, curricula, and materials).
- ✎ Encourage schools to assess their own readiness to teach all children who enter kindergarten.
- ✎ Encourage schools to work with families and the early childhood community to develop transition plans for children entering kindergarten.
- ✎ Encourage state and local collaboration among the early childhood community, families, community organizations, and schools to support each piece of the school readiness puzzle.
- ✎ Develop and distribute to schools a list of recommended screening measures to identify children who might have disabilities and need further evaluation.

5. Modify the Kindergarten–Second Grade (K2) Assessment to align with the North Carolina definition of school readiness, provide training, and establish a timeline.

More specific recommendations include the following:

- ✎ Expand the domains covered by the K-2 Assessment (e.g., adding items about children's social and emotional development).
- ✎ Expand the range of items included in the K-2 Assessment to ensure that the items represent competencies of children who are just entering school.
- ✎ Consider other modifications to improve the effectiveness and efficiency of the tool.

6. Use the new public school student information system, NC WISE (North Carolina Window of Information for Student Education) to collect and summarize critical data relevant to school readiness and collect data on trajectories of change across cohorts or groups of school children.

READY FOR SCHOOL GOAL TEAM

Introduction

Are children ready for school?

As thousands of children enter school for the first time at the end of the summer, parents, early childhood teachers, and policymakers wonder: “Are they ready? Have we given them the experiences and skills they need to be successful?” At the same time, school teachers, principals and school boards ask, “What attributes do these children bring with them to school, and how can we best meet their needs so that they are successful throughout their school experience?”

These questions have no easy answers. Researchers, educators, policymakers, and parents have long searched for a magic formula to determine when children are ready for school: there is none. Each child is a unique individual. Development occurs unevenly across groups of children and within individual children, experiences before children enter school vary greatly, and schools vary in their readiness to receive children. All of these factors impact children’s readiness for school.

The North Carolina School Improvement Panel’s Ready for School Goal Team was established to recommend what “ready” children and “ready” schools should look like in the Tar Heel State and how we know when children and schools are ready.

North Carolina’s Interest in School Readiness

The interest is keen in making sure that all children in North Carolina are ‘ready for school’ when they enter kindergarten. Every parent and early childhood teacher wants this for each child, as do the education leaders in this state.

Governor James B. Hunt, Jr., State Superintendent Michael Ward, the State Board of Education, and the North Carolina School Improvement Panel are focusing major attention on this issue. “Ready for School” is a key priority in the Governor’s First in America challenge and in the State Board of Education’s strategic plan, ABCs Plus. Smart Start, a model early childhood program for the nation, illustrates the state’s commitment to ensuring that children are ready for school.

Need for a Ready for School Goal Team

North Carolina established the Ready for School Goal Team for the following reasons:

- ✎ There is no widely accepted definition of school readiness.
- ✎ There is no national system for assessing school readiness.
- ✎ There is an increased need to understand the characteristics of children as they enter school.

- ✎ There is an increased recognition of the need for schools to be ready for children.

Because readiness is a shared responsibility of families, early childhood programs, schools, and other community organizations, the Ready for School Goal Team was created to bring together the broad early childhood and public school communities to develop a common definition of school readiness and a system for assessing school readiness statewide.

This report outlines the process undertaken by the Ready for School Goal Team to develop a readiness profile and Goal Team recommendations for actions to ensure the following:

- ✎ All children in the state of North Carolina are ready to succeed in school.
- ✎ All schools are ready to support children and families in the learning process.
- ✎ North Carolina is “First in America” by 2010.

Charge

The Ready for School Goal Team was charged with the following three important responsibilities:

1. Develop a definition of school readiness that will help families, teachers, and communities support children’s optimal development and provide rich experiences to enhance the likelihood that each child will begin school ready and eager to succeed.
2. Identify assessment tools and processes that can be used to assess how well North Carolina is doing in preparing children for entering school. This information will be used for system-accountability purposes. As part of this, the Goal Team was charged to use the public school information management system (NC WISE) as a method of collecting school readiness data.
3. Develop a definition of schools’ readiness for each child. North Carolina should ensure that our public kindergartens are prepared to teach every child who enters, regardless of where the child might be in his/her own readiness for school.

Membership

The Goal Team has approximately 40 members representing many organizations that assist parents with the preschool to kindergarten years. These groups include private and public child care and education programs, Head Start, Smart Start, and the public school system as well as national experts in early childhood development (see membership list in Appendix A).

Overview of Work

Convened in August, the Goal Team has met nine times in large committee, including a two-day retreat. Subcommittees have met numerous times between Goal Team meetings, with individuals committing hours of preparation aside from subcommittee meetings.

Subcommittees were formed to accomplish the following:

- ✎ Develop a definition of school readiness.
- ✎ Conduct a national scan of assessment tools and methods currently used.
- ✎ Develop recommendations for assessment measures and procedures that can be used to document the status of children when they enter kindergarten.
- ✎ Develop guidelines and recommendations to ensure that North Carolina schools are ready to receive all children.
- ✎ Work with NC WISE to ensure data needed to track readiness performance will be captured in the new information system.

SCHOOL READINESS FRAMEWORK

The National Context

“All children in America should start school ready to learn.” This is the first of the National Education Goals adopted in 1990 by President George Bush and the nation’s governors to serve as a catalyst for improvements in America’s schools. Over the years this goal has become known as the “readiness goal” and has received considerable attention. Governor Hunt has been instrumental in the work of the National Education Goals panel, and North Carolina has been a model for school readiness initiatives. Despite widespread agreement on the importance of school readiness, the nation has struggled to define what being “ready” for school means.

The National Education Goals Panel brought together a group of early childhood experts to provide a conceptual framework for readiness and recommend how readiness should be assessed. Based upon this group’s work, the Goals Panel adopted the following five domains of children’s early development and learning that must be considered when defining school readiness:

- ✎ Health and physical development
- ✎ Emotional well being and social competence
- ✎ Approaches to learning
- ✎ Communicative skills
- ✎ Cognition and general knowledge

While significant in their own right, these readiness domains left the most critical question unanswered: How do we know when children are ready?

This critical question of how we know when children are ready is at the epicenter of a clash between two sets of accountability: early childhood education/intervention and school performance.

Early childhood programs have utilized significant federal, state, and local resources to serve children before they enter school. How do we know if these programs are working? One way to answer this question is to assess children’s skills when they enter school.

Schools could use a measure of children’s readiness to help them understand the needs of individual children and provide individualized instruction to improve children’s performance.

While the importance of documenting children’s readiness is clear, the means for doing so is not.

The early childhood years are unique. Development during this stage is rapid and uneven. Standardized tests or assessments to measure development during the early years of a child’s life are extremely limited, and many in the early childhood community argue that standardized measures are inappropriate for children of this age.

The National Goals Panel Resource and Technical Planning Group of national experts in early childhood education and assessment outlined general principles for early childhood assessments in their 1998 *Principles and Recommendations for Early Childhood Assessments* report but stopped short of recommending precisely how states or programs should assess young children. The report outlines four purposes for which assessments could be used and provides a number of warnings/cautions for designing and using assessments during the early years.

Summary

The National Goals Panel has established five dimensions of development that contribute to children’s success in school but has not established a means for measuring readiness.

The Foundation for the Goal Team’s Work

The intent of North Carolina’s Readiness Profile and the work of the Goal Team is to benefit children and the adults who work with them. To fulfill this intent, the following set of beliefs was developed as the foundation for the readiness profile and assessment:

- ✎ All children are ready for school and can succeed at some level.
- ✎ Readiness should be defined broadly to include community, school, family, and children’s developmental levels.
- ✎ Readiness definitions and measurements should be holistic, including multiple domains of a child’s development and taking individual and cultural differences into account.
- ✎ Data on children’s readiness should be used to design individualized curriculum activities but not to determine a child’s placement in school.
- ✎ Schools have the responsibility to be “ready” to serve all children.

These beliefs are further articulated in the preamble found in Appendix B. Based on these beliefs, the Ready for School Goal Team has worked to fulfill its charges: define readiness, recommend how to measure school readiness, and delineate how schools can be ready for all children. The following pages detail the committee's work and recommendations for these three charges.

CHARGE 1: DEFINING SCHOOL READINESS

The Goal Team developed a definition of school readiness on the basis of the following three major activities:

- ✎ Researching national and state definitions of readiness.
- ✎ Gathering input from educators, service providers, and parents in North Carolina.
- ✎ Seeking advice from nationally known experts in the field of early childhood education.

The following is a summary of our process of developing a definition.

National Definitions

School readiness is a broad concept that encompasses schools, communities, and children, and their early experiences. The National Association of State Boards of Education described these four aspects of school readiness in their 1991 report on school readiness, *Caring Communities: Supporting Young Children and Families*.

Additionally, the National Education Goals Panel Goal One Task Force on School Readiness described five domains of children's development and learning that should be included in any definition of school readiness: physical health and motor development, social and emotional development, approaches toward learning (e.g., curiosity, persistence), language development, and cognition and general knowledge.

These national definitions emphasize the following key points about school readiness:

- ✎ All children are ready to benefit from school.
- ✎ School readiness is much more than knowing ABCs and numbers.
- ✎ The conditions of children as they enter school—and their school success—will vary depending on their innate abilities, previous experiences, access to services, and schools' expectations. It is not appropriate to expect all children to have a standard set of skills when they enter school.

This national work on defining school readiness greatly influenced the team's development of North Carolina's definition. Information from other states also helped us develop the definition.

Readiness Definitions Across the 50 States

The National Center for Early Development and Learning and SERVE, as charged by the North Carolina Ready for School Goal Team, surveyed the early childhood specialists/coordinators from each State Department of Public Instruction to determine each state's efforts to define and assess school readiness. Summary findings are listed below. (A more detailed description of the study and its findings are in Appendix C.)

Results from the survey indicated the following:

- ✎ Age is the only criteria used to determine when children can enter school, and the particular cut-off date varies widely across states. No state bases school entry decisions on children's skills.
- ✎ A few states have developed profiles or benchmarks of school readiness. Arkansas, Connecticut, Maryland, Mississippi, and West Virginia have frameworks or descriptions of "ready" children.

The state scan highlighted for us the fact that there is no definition of school readiness that is used consistently across the country. The Goal Team needed to develop its own definition.

Definition Development Process

The Ready for School Goal Team used a multi-step process to develop its definition of school readiness.

- ✎ The Goal Team discussed and agreed upon the five domains of children's development delineated by the National Education Goals Panel, with slight modifications in terminology.
- ✎ Within each domain, the Goal Team listed key characteristics and skills.
- ✎ Key constituents within North Carolina reviewed the draft domain descriptions. The Goal Team organized five focus groups across the state to solicit feedback. Some task force members also met with other groups separately to discuss the draft. A list of North Carolina reviewers is included in Appendix D.
- ✎ National experts reviewed the draft domain descriptions. The Goal Team identified the following areas of expertise and received reviews from at least one person within each area: health, social and emotional development, approaches toward learning, language and literacy, cognition, language and cultural diversity, and young children with disabilities. A list of the national experts and their area(s) of expertise is included in Appendix E.
- ✎ The Goal Team revised the domain descriptions and developed a definition based on feedback from national experts and in-state constituents.

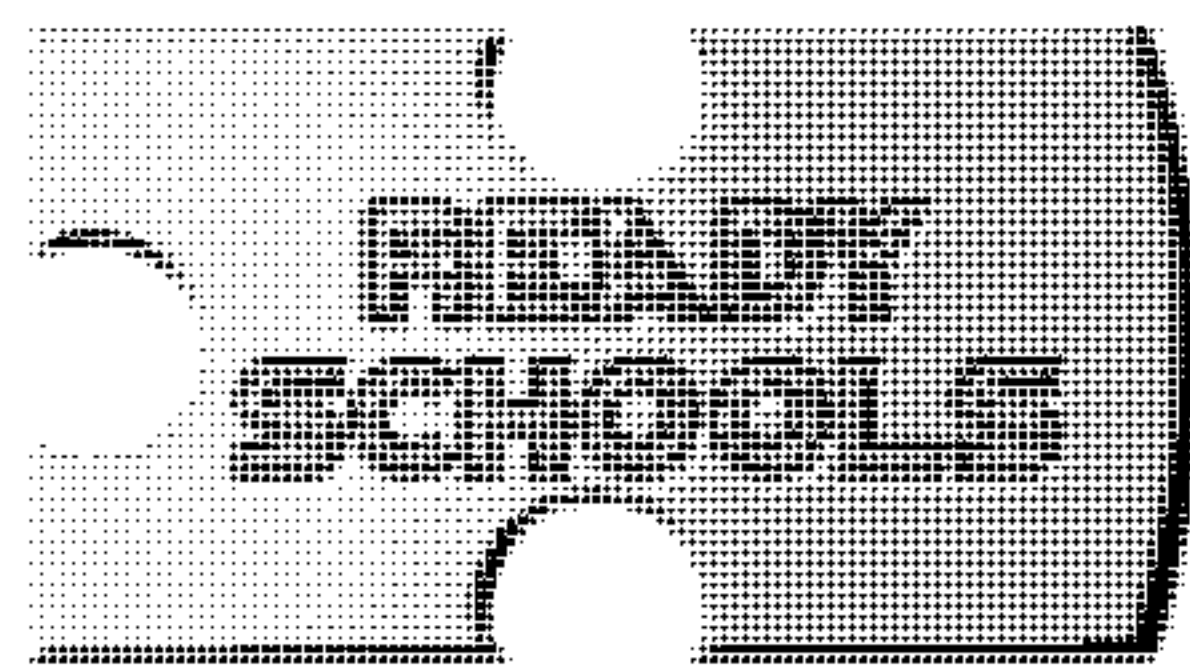
Defining School Readiness in North Carolina: The School Readiness Puzzle

School readiness is a puzzle with two pieces:

1. The condition of children when they enter school.



2. The capacity of schools to educate all children, whatever each child's condition may be.



The readiness puzzle can only be “solved” if the two pieces fit together. We can improve the fit by enhancing both the condition of children as they enter school and the capacity of schools to educate the full range of children who attend them. Each piece of the puzzle is important in the Ready for School Goal Team definition of school readiness. The condition of children as they enter schools, schools’ capacity to educate all children, and the supports to improve both pieces of the readiness puzzle are described in this definition.

School readiness as described here should not be confused with eligibility for school. All children who meet the legal age requirement are eligible—indeed, they are legally entitled—to enter kindergarten.

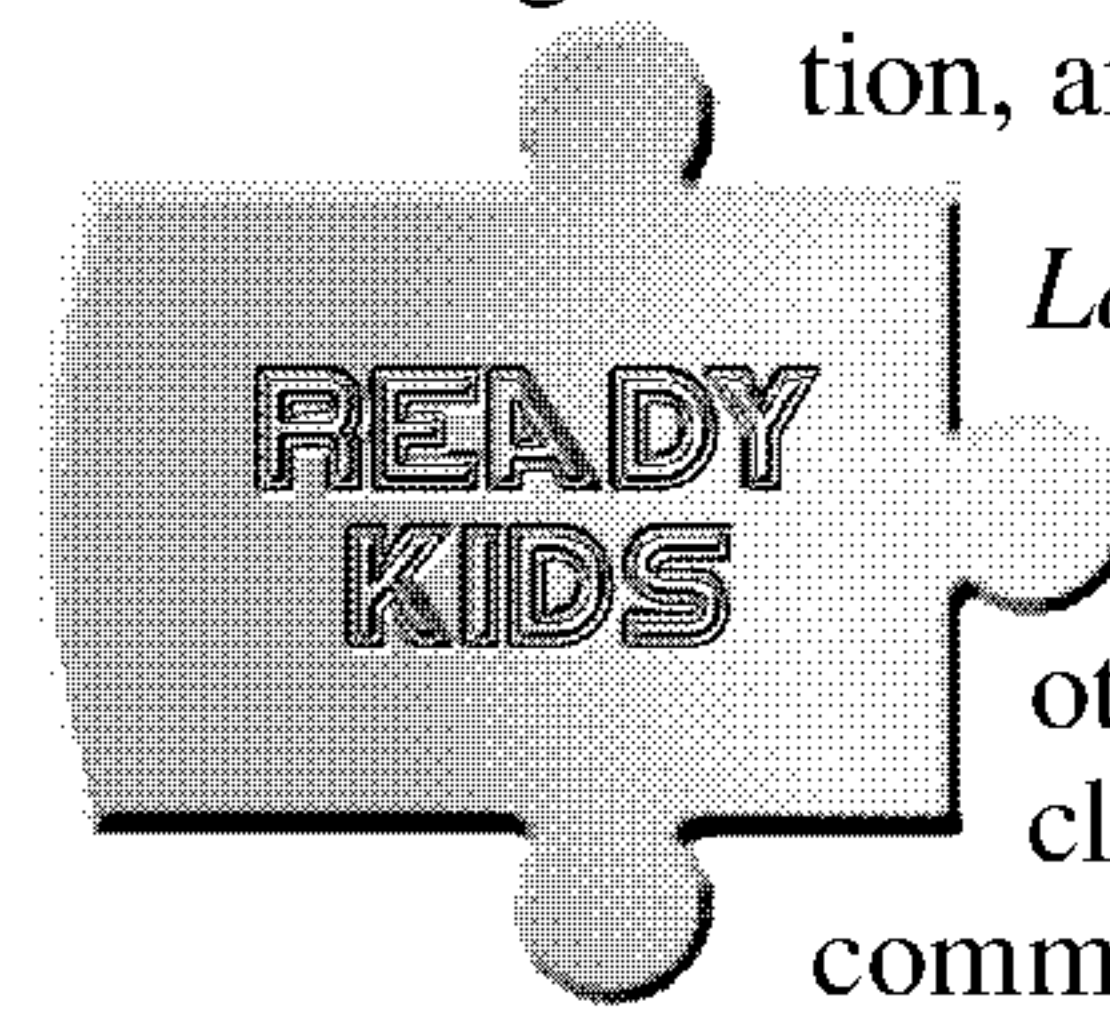
Condition of Children

When we think of the condition of children as they enter school, we must consider children’s development and learning in the following five areas:

Health and physical development includes children’s physical development (for example, rate of growth), health status (for example, ability to see and hear), and physical abilities (for example, ability to move around the environment, assisted or unassisted).

Social and emotional development includes children’s feelings about themselves and others, ability to form relationships, interest in and skills needed to maintain positive relationships with adults and children, ability to understand the perspective and feelings of others, and skills needed to get along well in a group setting (for example, conflict resolution skills).

Approaches toward learning includes curiosity, enjoyment of learning, confidence, creativity, attention to task, reflection, and interests.



Language development and communication includes verbal and nonverbal skills to convey and understand others’ meaning (for example, speaks clearly or uses a nonverbal system of communication) as well as early literacy skills (for example, awareness of print, understanding that writing has meaning). These skills and competencies apply to all languages; we should expect children who do not speak English in the home to demonstrate these skills in their primary language before they do so in English.

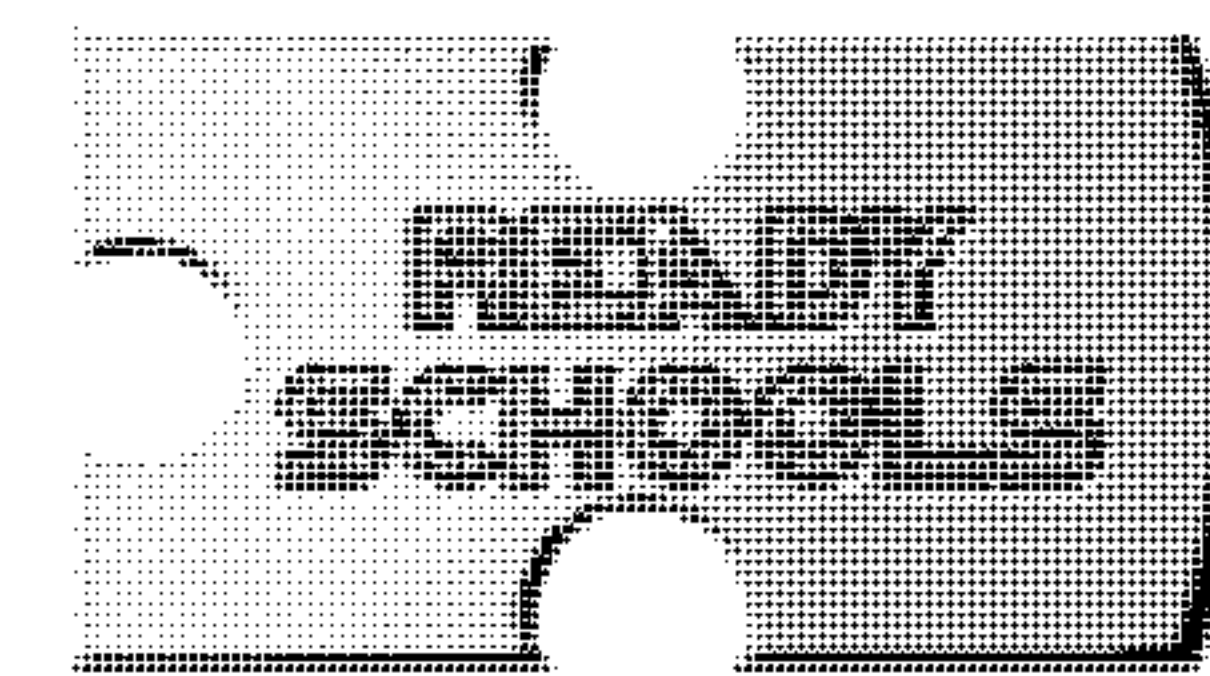
Cognition and general knowledge includes basic knowledge about the world (for example, knows own name, knows basic science concepts) and other cognitive competencies like early mathematical skills (for example, knowledge of numbers, shapes, and simple patterns), and basic problem-solving skills (for example, understanding of similarities and differences).

These five areas are linked together. Often, development in one area affects development in another. Thus, no single area adequately represents a child’s condition of readiness as he or she enters school.

Children’s development varies widely at age five. Thus, we should not expect all children to reach a common “standard” of readiness. Children from various cultures and with various experiences will express their competencies differently and should be expected to show different patterns of development. The same is true for children with disabilities.

Capacity of Schools

All children will have an opportunity to enhance their skills, knowledge, and abilities by participating in classrooms that are sensitive to community values, recognize individual differences, reinforce and extend children’s strengths, and assist them in overcoming their difficulties.



Schools are responsible for accepting and addressing the learning needs of all children who are old enough to enter kindergarten. Teachers and administrators must have the knowledge, resources, and supports to ensure that they are ready to teach children who come to school with a broad range of skills.

The Goal Team identified the following four cornerstones of Ready Schools:

- ✎ Knowledge of growth and development of typically and atypically developing children.
- ✎ Knowledge of the strengths, interests, and needs of each child.

- ✎ Knowledge of the social and cultural contexts in which each child and family lives.
- ✎ Ability to translate developmental knowledge into developmentally appropriate practices.

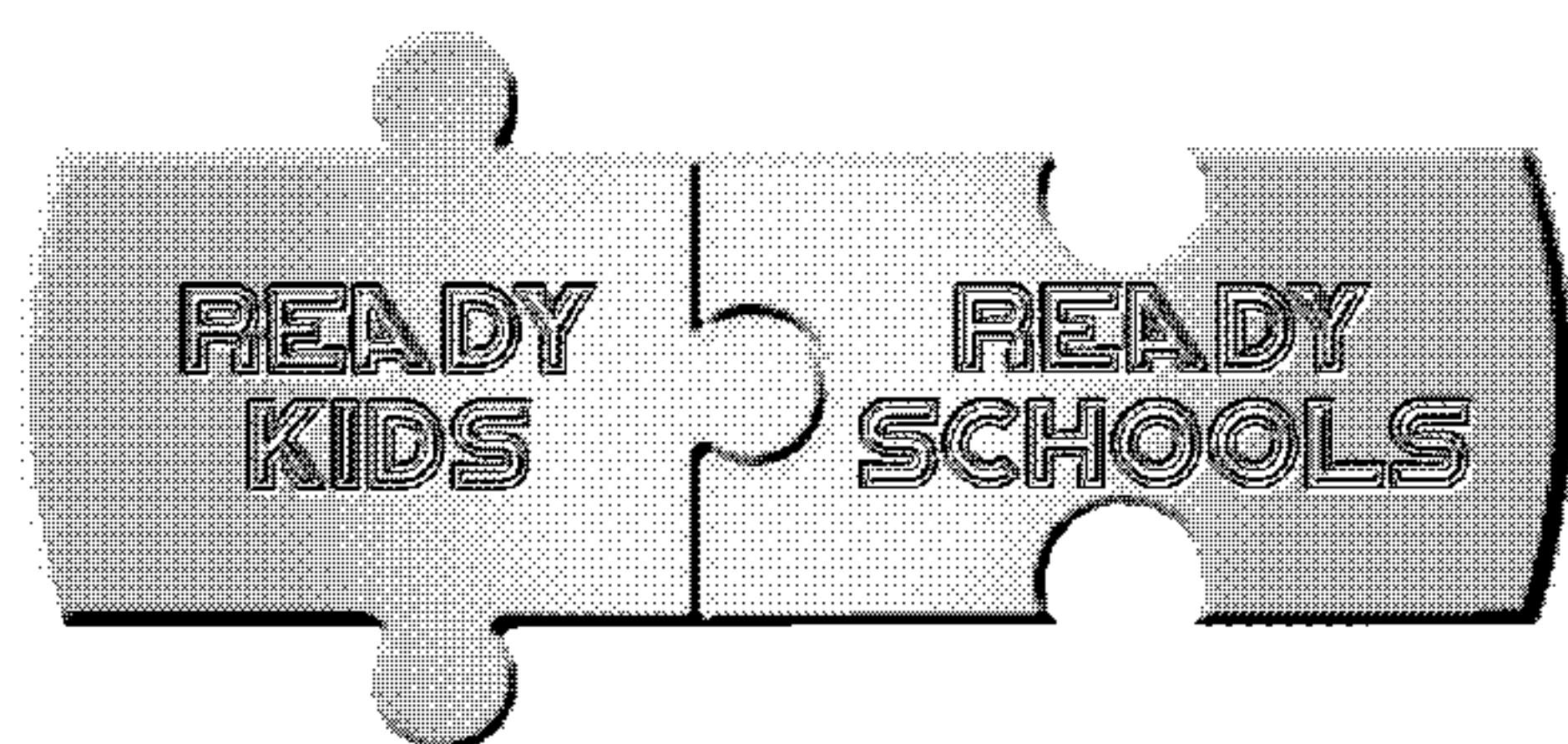
Additionally, teachers and administrators in ready schools establish a nurturing atmosphere, use a curriculum that provides meaningful contexts for learning and addresses the five areas of development described above, and support practices that address the unique ways in which young children learn. Schools also build strong, positive relationships with families and partner with preschool teachers, community programs, and higher education to ensure that they are able to educate all children.

Supports for School Readiness

Each of the two pieces of the readiness puzzle—children and schools—is supported by families and communities. The condition of children at school entry depends upon their early experiences. The people and environments in children’s lives shape their readiness for school. Parents are children’s first and most important teachers. The child’s relationship with his/her parents forms the critical foundation for life-long learning. Parents should have access to information and support in their role. With so many working parents, many children participate in some type of out-of-home early care and education before entering kindergarten. All children should have access to high quality early care and education programs that help prepare them for school. Communities are responsible for providing the health care, early care and education, training, and other support services young children and their families need.

The capacity of schools to educate all children also depends on their collaboration with families and communities to obtain supports such as professional development, physical facilities, materials, and equipment.

The school readiness puzzle is depicted in the figure below. Children and schools are the two pieces of the puzzle, and they are supported by communities and families.



North Carolina’s Brief Definition of School Readiness

School readiness is defined by

- ✎ The condition of children when they enter school, based on the following five domains of development:
 - Health and physical development
 - Social and emotional development

- Approaches toward learning
- Language development and communication
- Cognition and general knowledge
- ✎ The capacity of schools to serve all children effectively (e.g., personnel, policies, practices, facilities, materials).

Description of the Ideal Condition of Children as They Enter School

A more detailed description of the ideal condition of children as they enter school is included in Appendix F of this report. This document describes in more detail each of the five areas of development and learning that are listed in our definition.

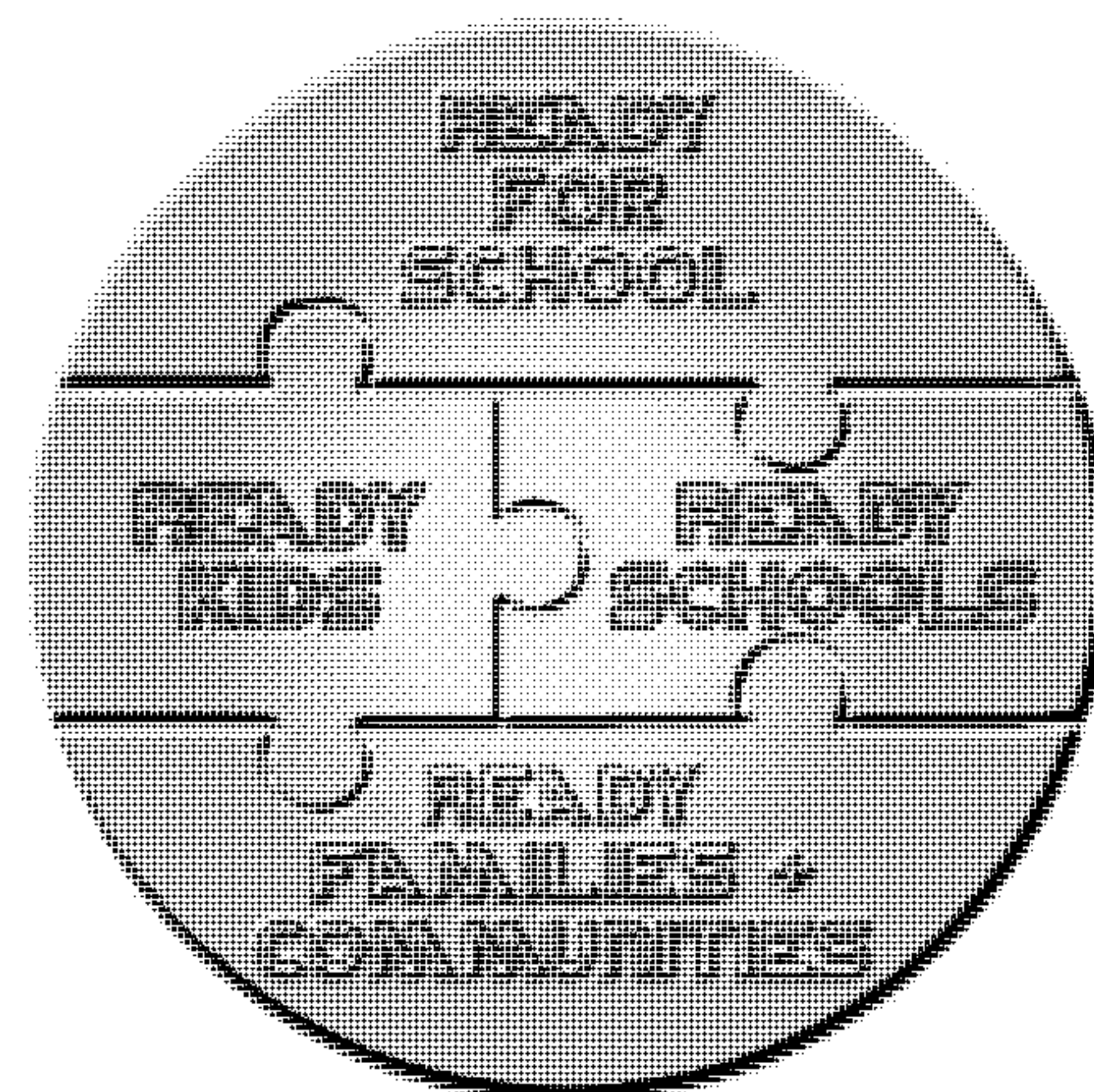
Recommendations

The Goal Team recommends that this school readiness definition be officially approved as North Carolina’s definition of school readiness.

CHARGE 2: ASSESSING SCHOOL READINESS IN NORTH CAROLINA

Section Overview

This section of the report covers two areas related to assessing school readiness. First, we describe the Goal Team’s school readiness assessment proposal for collecting data on the condition of children and the readiness of schools. Second, we describe the data management system needed to summarize and aggregate the state school readiness data.

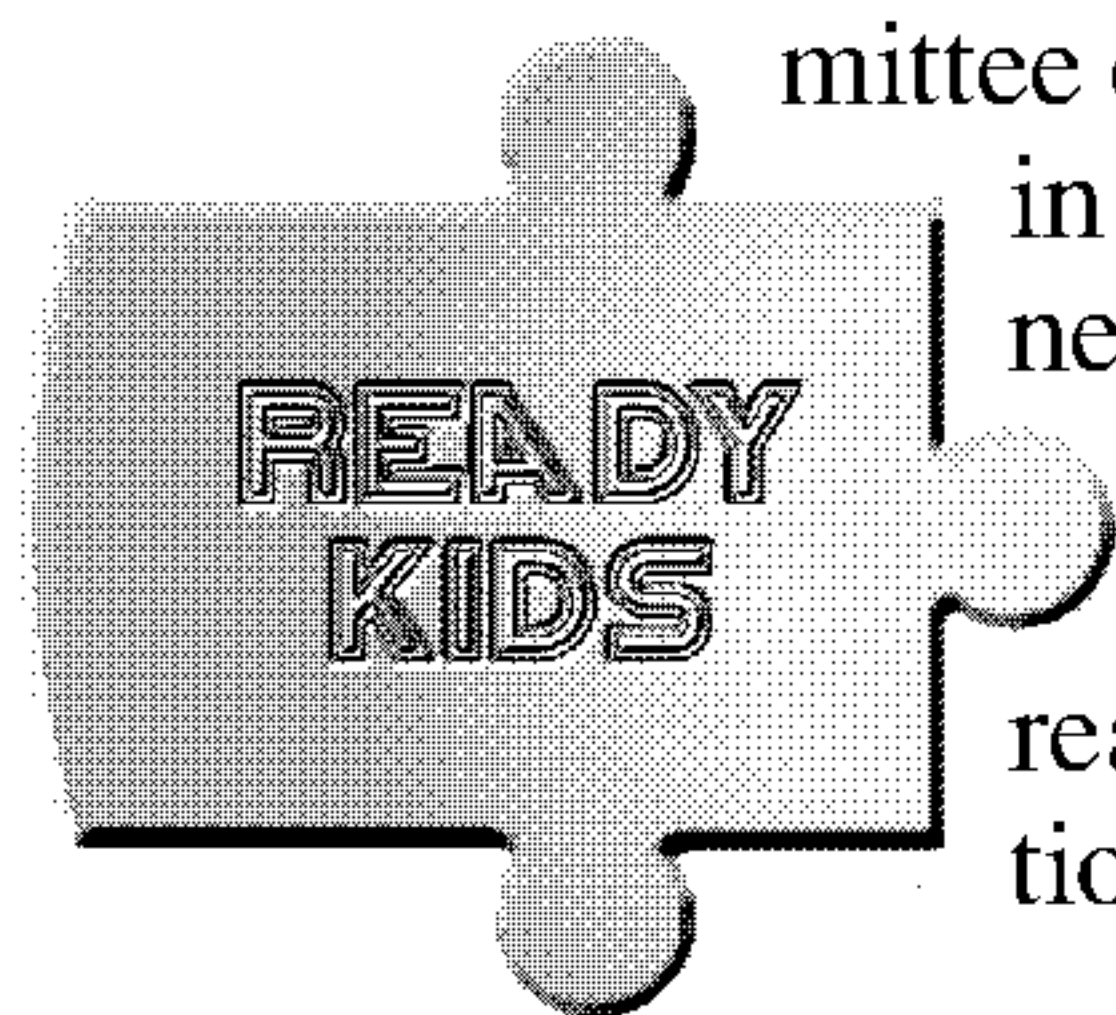


School Readiness Assessment Proposal

The Goal Team recommends implementing a statewide school readiness assessment system to obtain information about each piece of the readiness puzzle: the condition of children as they enter school and the capacity of schools to educate all children. This system should provide state and county-level data on school readiness. The assessment for each piece (children and schools) will be discussed separately in the following sections.

Assessing Children's School Readiness

Tasks and Teachings: The committee's recommendations regarding assessing children's school readiness are based on the knowledge gained from numerous activities. The committee examined what other states are doing



in defining and assessing school readiness, reviewed national studies of entering kindergartners, reviewed instruments available for assessing readiness, and met with state and national experts in readiness assessment.

Specifically, the Goal Team did the following:

- ✎ Working with the National Center for Early Development and Learning (NCEDL) and SERVE, we surveyed early childhood specialists/coordinators in Departments of Education in all 50 states to learn about current school readiness definitions and assessments.
- ✎ Working with SERVE, we reviewed the major instruments available nationally and a variety of locally developed instruments used in assessing children as they enter school.
- ✎ We met with representatives from three states (Georgia, Maryland, and Ohio) actively engaged in statewide readiness assessment activities.
- ✎ With support from UNC General Administration, we met with a selected group of national experts on readiness assessment.

These activities taught us several important lessons:

School readiness should not be confused with eligibility for school. All children who meet the legal age requirement are eligible to attend public kindergarten. Assessing the conditions of children as they enter school can provide important descriptive information, but that information should *not* be used to make (or help make) school entry decisions.

Most states report that schools assess children as they enter school, primarily for the purpose of guiding kindergarten instruction and/or screening for potential disabilities. In most states, local schools select their own assessment tools.

No state currently conducts a statewide assessment of the conditions of children as they enter school, although at least 13 states are currently studying the issue or piloting assessment strategies.

We should be clear about our primary purposes (i.e., interests) in assessing children as they enter school because we will need different assessment strategies for each purpose.

We need to include safeguards in our assessment system to ensure that children benefit from, and are not harmed by, the assessment system.

Different Assessment Purposes

There are two major purposes for assessing children as they come to school:

1. **Accountability:** Assessment of children as they enter kindergarten provides the best source of data for examining the impact of early experiences provided by families, early child care and education programs (e.g., child care, Head Start and prekindergarten), and communities on children's preparedness for school.
2. **Instruction:** Assessment of children early in kindergarten provides an important source of information to help teachers effectively instruct each child in their class.

Recommended principles for early childhood assessments strongly discourage using one assessment for multiple purposes unless it is designed to do so. Because no current assessment of five-year-olds is designed to serve both accountability and instructional purposes, the committee had to design a separate assessment strategy for each purpose. This approach was confirmed in our discussions with the group of national experts that included developers of nationally recognized assessments. In this section of the report, we make recommendations about the accountability function of assessing children as they enter school. Recommendations regarding assessing children for instructional purposes are in the Ready Schools section of this report.

When the committee began working on a strategy to assess the condition of children, we knew we could not rely on the paper and pencil tests that are often used for accountability testing programs in grades three and above. (Five-year-old children may not be able to hold a pencil correctly, let alone take a paper and pencil test.) Parent and teacher ratings can be a valid source of information about some abilities and behaviors of young children (e.g., social skills) and must be an integral part of any assessment system. Thus, the committee wanted to select an assessment strategy that included parent and teacher ratings as well as information from the children themselves that was not gathered through paper and pencil means.

None of the states we examined are using assessments for the same purpose that the North Carolina Task Force was asked to investigate, specifically, statewide and community accountability for the well-being of children birth to age five. Many states are adopting systems for assessing kindergarten readiness for instructional purposes. Because no state provided a good model, we looked for national assessment efforts that had accountability goals similar to ours. Two national studies were designed to provide such accountability

information: the National Early Childhood Longitudinal Survey-Kindergarten Cohort (ECLS-K) and the Family and Child Experiences Survey (FACES). We examined these studies carefully and met with key people working on both projects. After this review, we decided that the ECLS-K assessment battery was less relevant to North Carolina's interests because the measures were chosen to assess growth in children's abilities from kindergarten through third grade—not to assess cohorts of kindergartners across time. The FACES battery, however, was developed for the specific purpose of assessing the skills of children entering kindergarten.

Battery for Assessing the Condition of Children as They Enter School

We recommend that the FACES battery be adopted as part of North Carolina's prototype school readiness assessment, with modifications and additions to meet the specific needs of North Carolina.

FACES is being used by Westat, Inc. in its national assessment of Head Start. The FACES battery was developed for the purpose of program accountability to determine if Head Start is meeting its objectives. The FACES battery consists of individual assessments and observations of children, interviews with parents and teachers, and observations of classrooms. It has been used with over 4,000 randomly selected parents and children from a randomly selected national sample of 40 programs. It has been used successfully with children who speak Spanish as their primary language and children with disabilities. The child assessment can be completed in approximately 30 minutes.

The FACES battery was developed with extensive input from a number of early childhood experts. The Principal Investigator of FACES, Dr. Nick Zill, is also a lead investigator on the ECLS-K, another study of a large nationally representative sample of kindergartners. A substantial amount of work has gone into the planning, development, and implementation of the FACES battery. The battery provides a comprehensive description of five-year-old children and their families that can be used for accountability monitoring.

A summary table of the FACES battery and proposed North Carolina adaptations is included in Appendix G.

Data Collection Procedures

Who?

Parents, children, and kindergarten teachers will provide information for the North Carolina School Readiness Assessment.

- ✎ **Parents** of all entering kindergartners will complete a brief information sheet about their child's health, early care and education experiences, interests, etc. This sheet will be developed with input from local schools to minimize overlap between this new form and existing kindergarten registration forms. The information will be entered into the NC-WISE database.

- ✎ A sample of **kindergarten children** will complete the FACES measures in a one-on-one setting with a trained, independent assessor. Children will be sampled from the total population of entering kindergartners, using procedures to ensure that children with disabilities and children who do not speak English as their primary language are included in the sample. Collecting information from a sample of children, rather than from all children, will minimize the likelihood that the information will be used inappropriately to harm children, will ensure objective and accurate results, and will be a more cost-efficient method of gathering data on the population of entering kindergartners. We are currently consulting with a sampling expert to estimate the size of the sample needed to make statewide and county-level statements.

- ✎ The **kindergarten teachers** of children in the sample will complete rating scales about children's social skills and approaches toward learning. The data collection burden for teachers will be minimized by asking them to complete measures on only some domains of interest and only for the children included in the sample.

When?

Parents will complete the information sheet at kindergarten registration.

All child assessments and teacher ratings will be gathered during the first few months of school. To ensure that the sample is non-biased and representative of the population of entering kindergartners, children must be selected once they are in school rather than before they enter school. If the sample of children is selected before school begins, many children likely will be excluded (e.g., children who are not participating in an early care and education program, children from low-income families, children whose families are on vacation). This exclusion of children would make the sample less representative of the population. The sample must be representative of the population of kindergartners to yield useful information to the public and policy makers.

Where?

All information will be collected at the schools that house kindergarten programs.

Data Collectors?

Trained, independent assessors will conduct the one-on-one FACES child assessments. Training will ensure that measures are administered similarly across children and counties and that the results will be valid. The public needs to be confident in the data when monitoring their own county year-to-year or when comparing their county's data to state data. Using independent assessors instead of kindergarten teachers will also minimize the data collection burden among teachers. Accountability assessment is high-stakes assessment that could affect

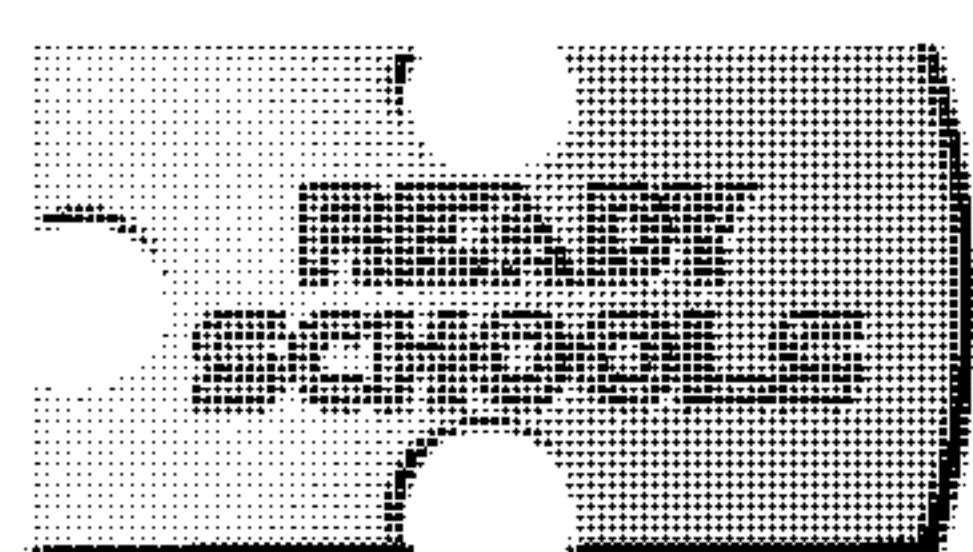
teachers. To the extent that kindergarten teachers might be biased (positively or negatively) in their views of children's skills and abilities, an independent assessor who is less invested in the outcome of the assessment will yield more valid information. It might be possible to recruit college students to conduct these child assessments as part of their education. It will be necessary for these trained independent assessors to spend time in the kindergarten classrooms where children are being assessed so the children are somewhat familiar with the tester before the assessment is administered.

Special Considerations When Assessing Children

A school readiness assessment system should represent all children, including those who do not speak English as their primary language and those with disabilities. The school readiness assessment battery and data collection procedures should be adapted to adequately assess the competencies of these children who are included in the sample.

Assessing Schools' Readiness for Children

To assess school readiness in North Carolina, it is just as important to assess schools' readiness for children as it is to assess children's readiness for school. The statewide school readiness assessment system will include data about the capacity of schools to educate all children who enter kindergarten.



This assessment will gather from school administrators information such as average kindergarten class size and percentage of kindergarten teachers with a B-K license. Kindergarten teachers will provide information such as professional development opportunities and availability and variety of classroom materials. Goal Team members, local school administrators, kindergarten teachers and others will work together to develop tools for the assessment of schools' readiness.

Recommendations

The Goal Team recommends that

- State financial and personnel resources be allocated to implement a state school readiness assessment system that describes the conditions of children as they enter school and the capacity of schools to educate all children.
- The North Carolina Partnership for Children be responsible for conducting the assessment of the conditions of children as they enter school, with the cooperation from local schools and the support of the State Board of Education and Department of Public Instruction. We are recommending the North Carolina Partnership for Children because they have been designated as the lead organization for ensuring that all children are ready for school.

- The North Carolina Department of Public Instruction be responsible for conducting the assessment of schools' readiness for children.
- The FACES battery be approved as the basis for the child component of the school readiness assessment system, and that it be completed near the beginning of kindergarten. Adaptations to the FACES will most likely need to be made to address North Carolina's five domains of children's development and learning.
- Persons with expertise in the areas of special education and assessment of children from varying cultural/linguistic backgrounds help adapt the FACES assessment battery to ensure that the battery accommodates the needs of special populations (e.g., children with disabilities and children who speak English as a second language).
- A sample of children, not all children, is included in the assessment for conditions of children as they enter school.
- The sample of children be large enough to allow us to describe adequately children across the state and to compare children across the 100 counties. We also recommend that the sample not be large enough to compare individual schools or programs at the county level. However, the system could be designed to collect data from a larger sample to provide additional county-level information. This accommodation would require county-level funding.
- The state sample of children be large enough and selected purposefully to allow reporting on a program-by-program basis (e.g., Head Start, public preschool, community childcare programs).
- A pilot study of the school readiness assessment system be conducted in the Fall of 2000.
- The tools for assessing schools' readiness be developed as part of the pilot study.
- Data be collected for a trial period of at least three years.
- The information management system of the public schools (NC WISE) currently being developed be used to collect and summarize critical data relevant to school readiness and collect data on trajectories of change across cohorts or groups of school children.
- The Ready for Schools Goal Team be continued as an advisory group for implementation of the readiness assessment system.

Use of NC WISE to Manage Assessment Data

Data Management Needs

When we begin collecting information for the Ready for School assessment, it will need to be systematically entered into a central place in order to summarize it within and across counties. The ideal information management system would

handle child-level, family-level, school-level, and even community-level data and allow linkages between information on preschool children and data collected about those children from K-12. When aggregate scores are viewed over years, the data could help a community gauge whether their early childhood quality initiatives are having an effect, or perhaps whether some efforts are more effective for specific sub-groups of children. The new student information system being implemented by the public schools of North Carolina, NC WISE is, in theory, ideally suited to handle the type and amount of new information that will be collected as part of the recommended Ready for School measurement.

NC WISE Description

Through discussion with experts in the Office of Student Information and Accountability, the office responsible for overseeing the NC WISE system, the Goal Team learned that the NC WISE database will be able to include almost any counted, scored, or coded information on entering kindergartners or preschool children and their families. For example, in compliance with federal law concerning documentation about preschool children with special needs, a component of NC WISE allows entry of data concerning these children's development and the types of services they are receiving. A school system should thus be able to include similar information on other, non-special-needs preschool children in their community. The NC WISE database could also include data on teachers and schools or be linked to other databases that include such data (i.e., DPI teacher licensing database).

Data Management Issues to Consider

Optimism about documenting different components of kindergarten readiness through NC WISE should be tempered, however, by three points of realism.

- ✎ NC WISE is new and school systems will just begin using it in the years 2000-2002. Three school systems (with 18 sites) and DPI are piloting NC WISE in the 1999-2000 school year and a state data warehouse is being developed where all data will ultimately be stored. About one-third of North Carolina's school systems will convert to NC WISE in each of the next three years, with every system on board by 2003. An advantage of the system's being new is that modifications to accommodate preschool and kindergarten entry data might be more readily made during this time while the system is being developed and as system modifications are made each year in response to problems that are discovered during the roll-out phase. Communication should be frequent between the Ready for School Goal Team and the NC WISE development team.

- ✎ Second, we must be realistic about the data we expect the NC WISE system to handle and cognizant of the data entry ability of the variety of people who enter data into NC WISE. Data entry must be a simple, straightforward process that requires minimal training.
- ✎ Third, the following concerns related to security and confidentiality will need to be resolved: Who has access to the data? Do we need parental permission to enter preschoolers' data? How long will the data remain in the system? Will preschool data become part of the child's permanent record? Existing rules and procedures address, in theory, these types of security concerns, but maintaining the integrity of the day-to-day operations of such an ambitious new endeavor will clearly be challenging. Because the NC WISE system is new and open to changes, however, now is the perfect time for those interested in having relevant preschool data included in NC WISE to be a part of the decision-making group(s).

Recommendations

The Goal Team recommends that the NC WISE system be used to collect and store data related to school readiness indicators and that this effort be coordinated with the school readiness assessment system described in this report.

We recommend that the readiness assessment system pilot study be coordinated with the NC WISE system pilot study. This will allow us to determine any adaptations needed to include the school readiness assessment information in the NC WISE system.

We also recommend a trial period of at least three years before any school readiness data are officially reported from the NC WISE system. Expectations of data reports on child, family, and school readiness assessments will be high. Analysts producing such reports will be dealing with complex issues, both substantive and logistical. North Carolina leaders should not expect reportable data within a year or two. We think it worth noting that Ohio, the state with one of the most sophisticated, computerized readiness assessment systems, allowed three years before the first report on readiness was expected. Data on 10,000 children were collected in the first year, 20,000 in the second year, and 40,000 in 1999—after three years of implementation, they are 40% of the way to their goal of 100,000 children per year. (Ohio's population is similar to North Carolina's.)

CHARGE 3: SCHOOLS' READINESS FOR ALL CHILDREN: BEST PRACTICE GUIDELINES FOR NORTH CAROLINA

Are All Schools Ready for All Children?

This is a question of equal importance for the Goal Team. Children come to schools with a wide variety of experiences, skills and attitudes. The overarching question is whether schools are prepared to provide a learning environment that meets the needs of each child so that children can be successful in school.

The Goal Team formed a subcommittee with the charge of developing a profile of schools that are ready to receive all children. The "Schools' Readiness For All Children" subcommittee gleaned from many sources what is deemed philosophically sound and reflective of the national early childhood research knowledge-base to develop strategies and standards for parents, schools and community leaders to consider to better prepare our schools to receive our children. A full report from this committee is included in Appendix H. This attached report describes best practices that all North Carolina schools can strive to achieve as they prepare to teach all children entering kindergarten.

Cornerstones of Ready Schools

"It is the responsibility of schools to meet the needs of children as they enter and to provide whatever services are needed in the least restrictive environment to help each child reach his or her potential" (NAEYC, Position Statement on School Readiness, revised, 1995).

The Ready Schools subcommittee identified four cornerstones that ready schools should take into account as they prepare to receive children:

1. Knowledge of growth and development of typically and atypically developing children.
2. Knowledge of the strengths, interests, and needs of each individual child.
3. Knowledge of the social and cultural contexts in which each child and family lives.
4. The ability to translate developmental knowledge into developmentally appropriate practices.

Features of Ready Schools

Building upon these four cornerstones, the subcommittee identified the following additional key features of ready schools:

- ✎ **Ready Teachers** who are knowledgeable of basic child development principles, "tuned in" to individual children's interests and abilities, able to provide a

classroom environment where children are actively involved in learning activities, and working in partnership with families and other adults in the child's world.

- ✎ **Ready School Environments** where children are nurtured through on going relationships with caring adults, have opportunities to learn through play and "hands-on" experiences with a variety of materials, and experience predictable routines and schedules.
- ✎ **Ready Curriculum and Instruction Strategies** that provide meaningful learning experiences to build upon children's individual abilities and interests and that are grounded in developmentally appropriate practices.
- ✎ **Ready Administrators** who are knowledgeable of child development and developmentally appropriate practices, support teachers in their role, nurture family involvement, and put the needs of children first.

Transitions to Ready Schools

Special attention must be paid to the period of transition when children first enter school. As children and families move from home, preschool, or other types of early childhood programs, the child's first experiences in kindergarten set the stage for his or her success in school. A smooth transition that provides as much continuity for children as possible is the goal.

The Ready Schools subcommittee developed a description of the following elements of successful transitions:*

- ✎ Community-wide planning that involves families, child care and other early childhood providers, school teachers and administrators, and a variety of community service agencies.
- ✎ Transition activities, such as visits to the school, planned cooperatively for children by their families, care providers, teachers, and community service providers.
- ✎ Transition policies, programs, and practices that reflect the diversity and uniqueness of children, their families, and the community.
- ✎ Developmentally appropriate practices in all programs of care and education from birth to age eight to ensure continuity in assessment, curriculum, and instruction.
- ✎ Coordinated staff development to bring early childhood providers and kindergarten teachers together.
- ✎ Shared decision making that involves families as active partners in their children's care and education.
- ✎ Written community transition agreements that are created jointly between schools and service providers and are reviewed and revised as ongoing transition efforts are expanded.

- ✍ Ongoing leadership and advocacy for effective transition practices by designating Transition Coordinators and representatives of each participating program/group with specific responsibilities for the community's transition plan.

Adapted from *It's a Big Step* (1995), Bridging Early Services Transition Taskforce, Coordinating Council on Early Childhood Developmental Services, Kansas State Board of Education

Screening and Assessment for Instructional Purposes

Screenings for potential disabilities and assessments for instructional purposes are another feature of schools that are ready to meet the needs of all children.

Screenings

It is essential that schools have reliable and valid screening instruments to identify children with disabilities early in their school careers. These screenings identify children who need further evaluation. This early detection is essential to increasing the likelihood that children with disabilities will receive special services quickly.

Currently the state Department of Public Instruction requires that all schools screen children for potential disabilities. However, school districts use a myriad of screening tools, ranging from locally designed instruments with no documented reliability or validity to commercially available tools that vary widely in quality.

Assessment for Instructional Purposes

Understanding children's skills and abilities is important for teachers as they plan curriculum activities to meet the needs of children. This assessment for instructional purposes should not be limited to reading and math, but should provide a broad picture of the child's development and learning (i.e., should include information about each of the five domains). The teacher can then use this information to plan activities that will help children develop skills they may not have when they enter school.

North Carolina Department of Public Instruction has developed two instructional assessment tools for kindergarten through second grade, known as the K-2 Assessment. The first tool assesses children's literacy skills and the second tool assesses mathematics skills. The instrument provides information for teachers as they plan curriculum activities and documents children's progress in these areas over time. However, the K-2 Assessment addresses only two of the five domains and includes few items to assess children's readiness at the time they enter kindergarten. Kindergarten teachers need an instructional assessment tool that documents children's levels of readiness across all five domains at the time they enter school. The K-2 Assessment could be modified to fit these purposes.

Assessing Schools' Readiness for Children

Schools can conduct self-assessments of their readiness for children. The Ready Schools subcommittee developed the Ready School Inventory as a self-assessment tool for schools to use. This inventory is included in Appendix I.

Ready Schools Summary

It takes families, teachers, schools, and communities working together to help children experience success in school. Teachers need accurate information about their children to plan curricular activities to meet children's individual needs. No one piece of the puzzle is sufficient to ensure success.

Recommendations

In order for schools to be ready to receive all children, the Ready for School Goal Team recommends the following:

1. Data on schools' readiness to educate all kindergartners be collected as part of the state school readiness assessment system.
2. The Department of Public Instruction be responsible for conducting the assessment of schools' readiness for children.
3. The Department of Public Instruction encourage schools to self-assess their readiness to educate all children. The Ready School Inventory should be disseminated to all elementary schools to ensure that every school in North Carolina is aware of the best practices for schools to successfully serve all children entering kindergarten. Staff development activities will also be needed.
4. The Department of Public Instruction encourage schools to work with the early childhood community, families, and community agencies to develop transition plans to ensure a coordinated effort to support children moving into kindergarten.
5. The State Board of Education and local boards of education examine policies regarding personnel and other resources to promote optimum instructional conditions of children entering kindergarten, including the following:
 - Qualifications of teachers working in kindergarten classrooms, including requirements for Birth to Kindergarten (B-K) licensure for kindergarten teachers.
 - Ongoing staff development opportunities for teachers.
 - Improved class sizes and student-to-teacher ratios.
 - Time allocated for teachers to plan, conduct home visits, etc.
 - Improved physical features of classrooms such as size, availability of in-class sinks and toilets for children, and developmentally appropriate outdoor playground/ learning areas.
 - Developmentally appropriate and individualized curricula and classroom activities.
6. State Board of Education, North Carolina Department of Public Instruction, and local boards of education work with other strategic partners, such as private school systems, Head Start, and preschool programs, to implement policies and procedures that support best practices for all kindergarten children.

7. The Department of Public Instruction encourage schools to use screening measures that are appropriate for the intended purpose and have demonstrated reliability and validity. They can do this by providing a list of recommended screening measures to all school districts.
8. The Department of Public Instruction modify the K-2 Assessment tool, a tool to help teachers improve their instruction, to cover additional domains of children's early development and learning. These modifications can best be described as
 - **Vertical Extension** of the measure downward to include items that will assess the competencies of children who enter kindergarten below age-level on various domains.
 - **Horizontal Extension** of the measure to provide a more holistic assessment of children across the domains identified by the Ready For School Goal Team. The K-2 Assessment should be modified to include, at minimum, assessment of the social/emotional domain.

Consideration for the feasibility of administering the modified K-2 Assessment should be paramount in planning for these future modifications. The modifications should be completed during the three-year pilot phase of the school readiness assessment system.

9. The Department of Public Instruction provide professional development opportunities to ensure appropriate administration of the modified K-2 Assessment.
10. The State Board of Education continue the Ready For School Goal Team as an advisory group for implementation of these Ready Schools recommendations.

FUNDING STRATEGIES FOR IMPLEMENTING RECOMMENDATIONS

Short-term and long-term funding will be required to implement the Goal Team recommendations. For the Ready for School Assessment, funding for the pilot phase could be secured from early childhood funding sources. Full implementation of the recommendations will require allocations from the General Assembly or significant support from private sources such as foundations.

Funding for the pilot, or short-term start-up phase, of the Ready Schools recommendations could be secured from Goals 2000, other education funds, or private sources. Significant funding from the Public School Fund will be required to ensure that all schools implement best practices for kindergarten over the long-term. Funds for modifying the K-2 Assessment could be provided by the Department of Public Instruction. Incorporating school readiness data into the NC WISE system can be accomplished for minimal cost if completed in the design phase.

CONCLUSIONS

School readiness includes two key pieces: the condition of children as they enter school and the capacity of schools to educate all kindergartners. Each of these pieces requires strong support from families, the early childhood community, public schools, and other community agencies. In this report, the Goal Team has articulated the ideal characteristics of children and schools, as pieces of the readiness puzzle, and proposed a comprehensive school readiness assessment system to provide information about school readiness at the state as well as county level. We have delineated several short-term and long-term recommendations for assessing school readiness, supporting the optimal development of children, and enhancing the capacity of schools to receive and educate kindergartners. Appendix J pulls each of these ideas and recommendations together into a framework, depicting the major components of the Goal Team's work and the recommendations for future activities.

Implementing these recommendations will require substantial resources. However, we must make these investments to ensure that we provide the best education possible during both the early childhood and public school years. Families, early childhood providers, and schools working together can help ensure children in North Carolina are ready for school and schools are ready for children.

APPENDIX A

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APPENDIX B

Ready for School Goal Team Preamble

North Carolina has accepted the challenge of increasing the readiness of all children for school and to improve the readiness of schools for all children. The fundamental foundation for all of our efforts toward these goals is set forth below.

WE BELIEVE

1. Each child can succeed in school and reach his/her potential.
2. The needs of the children come first.
3. Parent(s)/guardian(s) are the child's first and most important teachers and are valued partners with teachers and caregivers throughout the child's education.
4. Schools should be prepared to respond to each child's strengths and needs.
5. The readiness of a child should be viewed from a holistic perspective.
6. Individual and cultural differences are to be valued and supported.
7. A variety of developmentally appropriate assessment tools/approaches that encompass a range of readiness domains/elements is needed.
8. Communication, training, resources, and support are critical areas for successful achievement of "ready kids" and "ready schools."
9. The community should be a partner in helping parents and schools meet these needs.
10. There should be a systemic approach to ensuring that all children are ready to benefit from school.

READINESS PROFILE AND TOOLS WILL

1. Better inform teachers and caregivers, including parents, of the strengths/needs of children.
2. Assist all children in reaching high expectations.
3. Assist teachers and caregivers in identifying and building on children's strengths.
4. Allow caregivers in the early childhood years to provide children with the appropriate foundation for emerging language/literacy, numeracy, and other important skills.
5. Help kindergarten teachers move children toward educational accomplishment in the K-12 system.
6. Better equip private and public early childhood delivery systems to serve children and families.
7. Enhance instruction as well as establish system accountability for children's readiness.
8. Inform early childhood and school systems about adjustments that are needed to improve services.
9. Prepare early childhood and school systems to address the needs of children at all levels of development and readiness.
10. Create a positive transition to kindergarten for all children.

READINESS PROFILE AND TOOLS WILL NOT BE USED TO

1. Exclude children in any way.
2. Establish a pass/fail standard.
3. Label children.
4. Blame any part of the early childhood or education system.
5. Leave any child behind.
6. Create a deficit model that implies failure or shortcomings.
7. Push the curriculum down to a developmentally inappropriate level.

APPENDIX C

State Scan Survey Results

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Purpose

Although there has been some effort to study school readiness at the national level, little is known about what is happening in individual states with regard to children's readiness for kindergarten. To help fill this gap, SERVE and the National Center for Early Development & Learning (NCEDL), with assistance from several other Regional Educational Laboratories, conducted a national survey to document how states are defining and assessing school readiness. They conducted interviews with at least one early childhood specialist or other representative in all 50 states. The information below represents the information gathered through this effort. For more detailed information on the results of this survey, including information on specific states' responses, please visit the following NCEDL website: http://www.fpg.unc.edu/~ncedl/school_readiness/.

Note: The information below is meant to paint a general picture of states' policies on school readiness. Because of the nature of this survey and the fact that some respondents shared more information about their state than others, it is likely that some information is not included in our results.

When states were asked if they had a statewide definition of school readiness (for kindergarten), they reported the following:

- ✎ Forty-nine states responded that they had no formal, statewide definition.

Georgia responded as follows: Since the establishment of the lottery funded pre-k program in 1993, the state of Georgia has defined school readiness in two ways: (1) through the implementation of the school readiness goals of the lottery funded pre-k program, which are to provide appropriate preschool experiences emphasizing growth in language and literacy, math concepts, science, arts, physical development and personal and social competence, and (2) through the support of Goal One of National Education Goals, which states that "all children will enter school ready to learn" and then define school readiness to include family support, health care and nutrition.

- ✎ Twenty-eight states responded that they use age to determine eligibility for kindergarten. They all stated that children were eligible for kindergarten based on the date of their fifth birthday. These dates ranged from June 1st to January 1st of their kindergarten year. See Table 1.

- ✎ Five states (Illinois, Colorado, Oklahoma, Pennsylvania, South Dakota) indicated that local districts may have formal definitions for school readiness.
- ✎ Five states (California, Indiana, Kansas, Ohio, Wisconsin) indicated they believe that states should place emphasis on schools being ready for all children.

When states were asked how they assess readiness for school, they answered with the following:

- ✎ Thirteen have a statewide screening or assessment that is conducted on children entering kindergarten (See Table 2). However, the majority of these states did not refer to this as "readiness testing."
- ✎ Thirty do not mandate any readiness assessments, but their local districts may choose to assess children previous to, or as they enter, kindergarten.
- ✎ Seven states (Connecticut, Delaware, Hawaii, Kansas, Oklahoma, Nebraska, and Virginia) indicated that they do not assess school readiness. Nebraska prohibits districts from assessing readiness.
- ✎ Several states expressed concerns about readiness assessments being misused to keep children out of school.
- ✎ No states indicated that they used school readiness data to delay children from school entry.

Conclusion

School readiness assessment has received considerable attention across the nation. By far, the most common approach to defining and measuring school readiness is to define a child as "ready" when he or she reaches a certain age criterion and to leave measurement of readiness to local districts. Several states are, however, in the process of studying the issue, piloting measures, and/or have developed a framework for addressing readiness issues.

**Table 1:
Cut-off Dates for Eligibility for
Kindergarten, by State**

| Date | States |
|----------------|------------------|
| June 1st | Indiana |
| August 1st | Missouri |
| August 15th | Alaska |
| August 31st | Delaware |
| | Kansas |
| | North Dakota |
| | Washington |
| | Washington, D.C. |
| September 1st | Alabama |
| | Arizona |
| | Florida |
| | Georgia |
| | Idaho |
| | Illinois |
| | Minnesota |
| | Mississippi |
| | New Mexico |
| | Oklahoma |
| | Oregon |
| | South Carolina |
| | South Dakota |
| | Texas |
| | West Virginia |
| | Wisconsin |
| September 2nd | Utah |
| September 10th | Montana |
| September 15th | Arkansas |
| | Iowa |
| | Wyoming |
| September 30th | Nevada |
| | Ohio |
| | Tennessee |
| | Virginia |
| | Louisiana |
| October 1st | Kentucky |
| October 15th | Nebraska |
| | Maine |
| October 16th | North Carolina |
| December 1st | Michigan |
| | New York |
| December 2nd | California |
| December 31st | Rhode Island |
| | Hawaii |
| | Maryland |
| January 1st | Connecticut |
| | Vermont |

Dates are determined at the local or district level

Colorado
Massachusetts
New Hampshire
New Jersey
Pennsylvania

Source: Education Commission of the States. *Kindergarten: State Characteristics*. <<http://www.ecs.org/ecslecsweb.nsf/>>, March, 2000.

**Table 2:
State Efforts to Assess
Prekindergarten and
Kindergarten Children**

| State | Type of Screening |
|----------------|--|
| Alabama | Alabama Learning Inventory <ul style="list-style-type: none"> Administered by teachers to every public school kindergarten student within the first four weeks of school. Measures pre-reading and quantitative concepts. Information used for instructional purposes. Data compiled at the local and state level. |
| Alaska | Alaska Developmental Profile <ul style="list-style-type: none"> Global measure used to provide summary information on each school to the state Department of Education. Districts decide how to gather the information. Information is used to determine patterns and identify areas with high need. |
| Arkansas | Health and developmental screening is conducted on all children entering kindergarten. |
| Florida | <ul style="list-style-type: none"> All children entering kindergarten are assessed by their teachers within the first three weeks of school. Local districts can decide upon instruments, as long as they measure the 16 indicators outlined by the state Department of Education. Information is used to guide instruction. |
| Louisiana | Kindergarten Developmental Readiness Screening Program <ul style="list-style-type: none"> Every kindergarten child is screened within 30 days of the first day of school (before or after). One of four state identified instruments may be used. Information is used to guide instruction, but is also collected at the state level. |
| Maryland | Work Sampling System <ul style="list-style-type: none"> Data used as a school improvement device. |
| Minnesota | Early childhood health and developmental screening. |
| New Mexico | All children undergo an initial screening upon school entry. |
| New York | All children are screened for health; English proficiency; and motor, cognitive, and language development. |
| North Carolina | Early childhood health and developmental screening. |
| Ohio | <ul style="list-style-type: none"> Through naturalistic observations, teachers collect data on children in preschool programs. The Galileo computer system is used to aggregate data. Information is used for program accountability. |
| Tennessee | <ul style="list-style-type: none"> General screening is done (usually the Brigance is used) of all students entering kindergarten. Information is used to guide instruction. |
| Utah | <ul style="list-style-type: none"> All kindergarten children are assessed during the first two weeks of school. Information is used to guide instruction. |

APPENDIX D

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Craven County Schools

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Central Piedmont Community College
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Irene Pollard
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Kindergarten Teacher
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Sharon Bentley
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Transylvania County Schools

Sheila Hoyle
Executive Director
Southwestern Child Development
Commission
Webster

APPENDIX E

National Expert Reviewers

Health

David Bruton: pediatrician, Secretary of North Carolina Department of Health and Human Services

Social and Emotional Development

Marion Hyson: Director of Professional Development for the National Association for the Education of Young Children (NAEYC); former university, preschool and kindergarten teacher; studies early emotional development

Stanley Greenspan: Clinical Professor of Psychiatry, Behavioral Science, and Pediatrics at the George Washington University Medical School; expert in young children's social and emotional development

Approaches toward Learning

Sam Meisels*: Michigan University; expert in early childhood assessment and school readiness; author of *the Work Sampling System*

Language and Literacy

Marilyn Adams: Harvard University; member of the Committee on the Prevention of Reading Difficulties in Young Children; expert in literacy acquisition

Catherine Snow*: Harvard University; chair of the Committee on the Prevention of Reading Difficulties in Young Children; expert in language and literacy acquisition

Cognitive Development and General Knowledge

Robert Siegler: Carnegie Mellon University; expert in the development of children's problem solving and reasoning skills

Prentice Starkey: Associate Professor of Cognition and Development at the University of California at Berkeley, expert in the development of young children's mathematical skills

Overall Reviewers

Sue Bredekamp*: Council for Early Childhood Professional Recognition; co-editor of NAEYC's *Developmentally Appropriate Practice in Early Childhood Programs*

Sharon Lynn Kagan*: Yale University Bush Center; current president of the National Association for the Education of Young Children; chair of multiple national school readiness committees

Sam Meisels*: Michigan University; expert in early childhood assessment and school readiness; author of *the Work Sampling System*

Special Needs Issues

Don Bailey: Frank Porter Graham Child Development Center; expert in young children with disabilities; co-author of *Assessing Infants and Preschoolers with Handicaps*

Scott McConnell: Professor in the Educational Psychology Department at the University of Minneapolis; investigators on the Early Childhood Research Institute on Measuring Growth and Development; expert in the development of young children with disabilities

Mary McEvoy: Professor in the Educational Psychology Department at the University of Minneapolis; investigators on the Early Childhood Research Institute on Measuring Growth and Development; expert in the development of young children with disabilities

Pat Wesley: Frank Porter Graham Child Development Center; expert in young children with disabilities; Principal Investigator of Partnerships for Inclusion

Cultural Diversity Issues

Kenji Hakuta*: Stanford University; expert in language acquisition and bilingual education

Evelyn Moore*: President of the National Black Child Development Institute; expert in how schools can best serve young African-American children

Catherine Snow*: Harvard University; chair of the Committee on the Prevention of Reading Difficulties in Young Children; expert in language and literacy acquisition

**Member of or advisor to the Goal One (Ready to Learn) Subgroup of the National Education Goals Panel*

APPENDIX F

Description of the Ideal Condition of Children

A description of the condition of children as they enter school should include children's development and learning in five domains:

- Health and Physical Development
- Social and Emotional Development
- Approaches toward Learning
- Language Development and Communication
- Cognition and General Knowledge

These five domains are linked together. Often, development in one area affects development in another. Thus, no single area adequately represents children's condition as they enter school. Additionally, some skills, such as asking complex questions, fall under more than one domain (e.g., language and cognition). For purposes of clarity, however, each skill or condition described in this report is placed under only one domain.

Children's development varies widely at age five. Thus, we should not expect all children to reach a common "standard" of readiness. Children from various cultures and with various experiences will express their competencies differently and should be expected to show different patterns of development. The same is true for children with disabilities.

This document describes the *ideal* condition of children as they enter school. We should not expect any one child to demonstrate all of the skills delineated in this document. However, we should work hard to ensure that each child—including those with disabilities—has the opportunities needed to develop competencies across all five domains.

Finally, this description of the ideal condition of children should *not* be used to determine whether a child should enter kindergarten. All children who meet the legal age requirement are entitled to attend kindergarten, regardless of their competencies.

The domains and their descriptions are based on (a) the work of the National Education Goals Panel, (b) the North Carolina Goal Team members' expertise, (c) feedback from key constituents in North Carolina, and (d) feedback from national experts in each of the five areas. In the following sections, each of the five domains is described in detail.

Health and Physical Development

Ideally, children entering school will be able to see and hear well or have their vision and hearing problems addressed to the extent possible. They will also have healthy teeth (or have their dental problems treated). Children entering school will have been immunized on schedule to prevent diseases. Diseases and other health problems will be detected and treated as early as possible. Early identification and

intervention are also critical for children with disabilities. Ideally, children entering school will be adequately rested, physically fit, and will have a balanced, nutritious diet to ensure that they have the energy needed to focus on learning. Children will also be as mobile as possible (assisted or unassisted) to maximize their ability to explore the environment. Ideally, children will demonstrate many age-appropriate motor skills such as balance, coordination, strength, and ability to grasp writing tools. Finally, children entering school will demonstrate some self-help skills, such as dressing themselves.

Social and Emotional Development

When children enter school, they ideally will demonstrate the emotional well being and social skills needed to interact well with adults and other children. They will be able to form and keep close relationships with familiar adults and other children. Ideally, children entering school will begin to identify and express their own feelings age-appropriately. This includes beginning to develop the ability to manage their anger. Children will also begin to understand others' feelings and intentions (e.g., tell the difference between accidental and intentional actions). They will respect (i.e., not hurt/damage) other people and property. When conflict arises, they ideally will work to resolve it positively and seek adult help when needed.

Ideally, children will demonstrate some degree of independence by separating relatively easily from their parents and working or playing alone at times. They will follow basic rules and routines and be able to adapt to small changes in routines. They also will participate in group activities and work or play cooperatively with other children.

In this section, we have described some ideal indicators of social and emotional development for children entering school. However, children will demonstrate a wide range of skills. Additionally, it is important to recognize that social and emotional development is influenced by cultural expectations. Thus, it is important to understand children's social and emotional development in the context of both their home and school cultures.

Approaches toward Learning

This domain includes children's attitudes toward and interests in learning. Unlike the other four domains, the indicators that fall under this domain are less well-defined and less observable. However, this domain is equally important.

Ideally, children entering school will be curious and confident in their own ability to learn (e.g., show pride in their accomplishments) and enjoy exploration and discovery through play. They will enjoy learning and demonstrate some personal areas of interest as well as strategies for finding out more about those interests (e.g., asking questions). They will express creativity and imagination through a variety of avenues that may include movement, music, dramatic play, and art. They will take initiative when appropriate. Ideally,

children will be able to attend to a task for a short period of time. Finally, children entering school will persist with tasks even after encountering obstacles.

Language Development and Communication

By the time children enter school, they have developed many language and communication competencies. Children entering school will use language as a tool to communicate their needs, to interact socially with others, and to describe events, thoughts, and feelings. Ideally, they will have a large vocabulary in their home language, be able to produce sentences of several words, and be able to ask and answer open-ended and cognitively challenging questions (e.g., where, when, why, and how). Ideally, children's speech will be understandable to unfamiliar adults. Children will be able to demonstrate age-appropriate listening skills, such as recognizing rhymes and identifying two words that start with the same sound.

Children entering school will also be aware of print (e.g., recognize the association between spoken and written words, recognize familiar alphabet letters). They ideally will be interested in books and stories and will understand basic story components (e.g., know that a story follows a sequence). When they enter school, children will know that writing involves making marks that convey meaning on paper. Ideally, children entering school will also use language creatively (e.g., play with rhymes, develop and relate a story).

In North Carolina, an increasing number of children entering school come from families who speak a language other than English. The competencies listed above can be developed in any language and, for most children, will be developed first in their primary language (i.e., whatever language the parents feel the most comfortable and competent to support). Strengthening the language and communication competencies in children's native language will help prepare them for the additional task of learning English.

Cognition and General Knowledge

Children entering school will have a basic knowledge about the world. They will, for instance, know their own name and know the names of some colors. They will have a basic awareness of self, family, and community. They will understand that their actions have an effect on their environment and be able to think about things that are not present. When children enter school, they ideally will understand simple science concepts such as living vs. non-living things. Additionally, children will demonstrate good problem-solving skills.

As children enter school, they will also demonstrate some age-appropriate mathematical skills. Ideally, children will understand basic dimensions such as time (e.g., before and after), distance (e.g., longer, shorter), speed (e.g., faster, slower), and size (e.g., bigger, smaller). They will understand one-to-one correspondence and will know some basic cardinal number names (e.g., one, two) as well as ordinal

number names (e.g., first, second). Ideally, children will understand spatial concepts (e.g., left, right) and basic geometric concepts (e.g., square). They will also have a beginning understanding of patterns and be able to informally measure properties of concrete objects (e.g., identify which of two sticks is longer).

Children with Special Needs

The five domains of development and learning are important for all children, including those with disabilities. It is also important to note that every child, including those with disabilities, will demonstrate strengths in particular areas. We can support each child's optimal development by recognizing, building on, and expanding those strengths. However, adaptations and modifications may be necessary when considering the development and learning of children with disabilities. The following examples illustrate this point. Children with some disabilities may have significant challenges to their health. Maximum health and physical development for them may be substantially different from that of their peers. By considering the characteristics described in the Health and Physical Development domain, families of such children and the professionals serving them can ensure that necessary monitoring and interventions are provided to minimize the potentially negative impact of such challenges on the children's capacity to grow, learn, and develop.

For the Approaches toward Learning domain, it is necessary to consider first the unique ways in which each child interacts with his or her environment and the factors affecting that interaction. For example, children who have experienced safety, stability, predictability, and stimulation in their environments prior to coming to school may manipulate and explore materials and space in different ways from those who have not. Children with cognitive challenges or sensory impairments may express curiosity and demonstrate persistence differently from other kindergarten children.

Summary

This description of the ideal condition of children as they enter school is intended to help schools, early childcare and education programs, families, and communities in North Carolina develop a common understanding of the ideal characteristics of entering kindergartners. The description is not intended to be exhaustive but rather illustrative of the kinds of skills to support in young children as they enter school. Children's development in each of these areas will vary widely, and we should not expect children to have a particular set of skills before they enter school. However, we should work to ensure that every child has opportunities to develop competencies in each of the five areas of development and learning.

APPENDIX G

FACES Assessment Battery Chart

| School Readiness Domain | FACES Battery | Possible NC Adaptations/ Additions |
|---|---|---|
| Health and Physical Development | Parent questionnaire includes several questions about health, including the Rand health status question | Add data from Kindergarten Health Assessment on immunizations and screenings |
| Social and Emotional Development | Parent and teacher: adaptation of Social Skills Rating Scale (SSRS) | Use the SSRS in its original form |
| Approaches toward Learning | Not covered | Use SSRS |
| Language and Communication | <p>Peabody Picture Vocabulary Test-III (PPVT-III) receptive vocabulary measure</p> <p>Woodcock-Johnson-Revised (WJ-R) Letter-Word Identification</p> <p>WJ-R Early Writing</p> <p>Print Awareness</p> | Consider Oral and Written Language Scale instead of PPVT-III and WJ-R |
| Cognition and General Knowledge | <p>WJ-R Knowledge of Numbers and Counting</p> <p>WJ-R Arithmetic calculations</p> <p>McCarthy Number Memory</p> <p>Child questionnaire about basic self and family facts</p> | Consider adding Bracken Basic Concept Scale—Shape and Direction/Position subtests |

APPENDIX H

Schools' Ready for All Children Report

Best Practice Guidelines for North Carolina:

Making Schools "Ready" for Kindergartners: Executive Summary

All children are ready for school when they reach the age of eligibility! Ready schools believe that children entering kindergarten come with a variety of skills and abilities. Because of children's individual differences, Ready Schools respond to this uniqueness by initially assessing each child's experiential base and individualizing curriculum and teaching practices.

After extensive review of the documented, research-supported early childhood knowledge base, the "Schools' Readiness for All Children" committee has developed recommendations for strategies and standards that parents, schools, and community leaders should consider to better prepare schools to receive our children. These strategies and standards are deemed philosophically sound and reflect the national early childhood knowledge base. This Executive Summary provides a summary of the committee's work. Full recommendations and background information are provided in the report that follows.

Readiness hinges on many factors including (1) children's health and physical development; (2) social and emotional development; (3) approaches to learning; (4) language and communication skills; and (5) cognitive factors. Schools are responsible for enhancing the quality of the teaching and learning that will go on in the classroom as children enter eager to learn and "ready to succeed."

The committee identified the following four cornerstones that should guide Ready Schools:

1. Knowledge of growth and development of typically and atypically developing children.
2. Knowledge of the strengths, interests, and needs of each individual child.
3. Knowledge of social and cultural contexts in which each child and family lives.
4. The ability to translate developmental knowledge into developmentally appropriate practices.

The committee deemed the following as most important to Schools' Readiness:

- ✎ Knowledge and understanding of developmentally appropriate early education practices needed to help children reach their full potential.

- ✎ The importance of teachers' readiness if children are to experience success in the early school years.
- ✎ The importance of establishing a nurturing atmosphere in the classroom and making the facilities serve the curriculum and instructional needs of children and families.
- ✎ A curriculum that provides meaningful contexts for learning and addresses learning in all developmental areas—physical, social, emotional, linguistic, aesthetic, and intellectual.
- ✎ Administration's readiness, which translates the unique ways young children learn into classroom and school-wide best practices.
- ✎ Administrators who develop and nurture authentic partnerships with children, site-based teachers, pre-school teachers, parents, community, and institutes of higher education.

Parents, teachers, administrators and communities forming partnerships and working together to provide "what is best for children" will be North Carolina's cause for celebration when children have access to high quality, developmentally appropriate "Ready Schools."

Best Practice Guidelines for North Carolina: Making Schools "Ready" for Kindergartners

All children are ready for school when they reach the age of eligibility!

Ready schools believe that children entering kindergarten come with a variety of skills and abilities. Because of children's individual differences, Ready Schools respond to this uniqueness by initially assessing each child's experiential base and individualizing curriculum and teaching practices.

I. Philosophy, Research, and Early Childhood Knowledge Base

Current understandings and philosophical approaches to developmentally appropriate early education indicate that "it is the responsibility of schools to meet the needs of children as they enter and to provide whatever services are needed in the least restrictive environment to help each child reach his or her potential" (NAEYC, Position Statement on School Readiness, revised, 1995).

"The nature of children's development and learning dictates two important school responsibilities. Schools must be able to respond to a diverse range of abilities within any group of children, and the curriculum in the early grades must provide meaningful contexts for children's learning rather than focusing primarily on isolated skills acquisition" (NAEYC, Position Statement on School Readiness, revised, 1995).

Children entering kindergarten come with a variety of skills and abilities. Because of children's individual differences and variations in their development and experiences, schools and teachers must be able to respond to their uniqueness by individualizing their curriculum and teaching practices.

Broad agreement has been reached by the early childhood development community that programs that will contribute to children's development and enhance their learning must be based on the following:

- ✎ Knowledge of growth and development of typically and atypically developing children.
- ✎ Knowledge of the strengths, interests, and needs of each individual child.
- ✎ Knowledge of the social and cultural contexts in which each child and family lives.
- ✎ The ability to translate developmental knowledge into developmentally appropriate practices.

Schools and teachers must know how to plan a developmentally appropriate curriculum that places a major emphasis on child-initiated, teacher-supported learning experiences; both small and large group activities; integrated lessons; hands-on learning with a variety of materials and activities; and continual progress evaluation and assessment throughout the primary grades.

Schools, teachers, parents, and community need to work together to ensure that every child enters kindergarten (school) with the opportunity to experience success and to attain educational achievement. Exclusion is not acceptable. In a Ready School all children are provided with a firm foundation for learning. As the children arrive at school, they will learn best in the context of the community where they are valued and safe and where developmentally appropriate practices address their physical, social, and emotional needs as well as their intellectual development.

II. The Teacher's Readiness for the Child

The primary goal for kindergarten teachers is to support the development of all children. To achieve this goal, teachers need to know the uniqueness of each child with regard to individual learning styles, interests and preferences, personality and temperament, skills and talents, challenges and difficulties. The teacher must support the development of a positive sense of self-identity in all children if they are to experience success in the early school years. Essential dimensions of the early educator include the following:

- ✎ Knowledge of child development.
- ✎ Knowledge of the implications of child development.
- ✎ Knowledge of curriculum that promotes children's learning in cognitive, language, social, physical, and affective domains.

- ✎ Planning, creating, and organizing learning environments for active exploration and a high level of interaction.
- ✎ Communicating and forming partnerships with important influences in the child's world (parents, colleagues, administrators, the public, and others).
- ✎ Seeking continual professional growth, advocating for developmentally appropriate early education, and engaging in self-evaluation of their teaching behavior.

To perform these functions effectively for all children, the teacher must have knowledge of growth and development of both typically and atypically developing children and be able to translate that knowledge into developmentally appropriate practices by

- ✎ Employing developmentally appropriate practices (Management of Instructional Time).
- ✎ Fostering self-regulation in children (Management of Student Behavior).
- ✎ Facilitating active learning (Instructional Presentation).
- ✎ Observing children's activity in naturalistic settings (Instructional Monitoring of Student Performance).
- ✎ Facilitating children's inquiry and discovery (Instructional Feedback).
- ✎ Planning for children's learning (Facilitating Instruction).
- ✎ Interacting positively with children, parents, co-workers, and community (Interaction with the Educational Environment).
- ✎ Interacting with and relating to the professional/family/community environment (Performance of Non-Instructional Duties) (TPAI, revised 4/25/97).

"Early educators must be schooled in and encouraged to use a wide variety of developmentally appropriate curricula, materials, and procedures to maximize each child's growth and development" (Position Statement on Goal One of America 2000, December 1996).

III. The Readiness of the Environment and Curriculum

"The most important strategy for addressing the school readiness is to prepare the school to be responsive to the wide range of experiences, backgrounds, and needs of the children who are starting school."

Readiness: Children and Schools, Lillian G. Katz, 1991

The Environment

Establishing a nurturing atmosphere in the classroom and making the facilities serve the curriculum and instruction needs of the children is challenging. Learning centers allow choices of materials and activities by

providing stability and order to the classroom while encouraging children to explore and experiment. They provide interrelated, hands-on experiences that meet children's developmental needs and interests. Multicultural materials reflect heritages and communities. Well-planned centers foster development of physical and social skills as well as language and cognitive processes.

Additionally, learning centers provide many ways for children to develop skills and concepts in learning. At the kindergarten level, centers provide for rigorous exploration and experimentation with many materials and ideas, along with opportunities for children of varying abilities and needs to expand their understanding and knowledge. Play is the essence of young children's understanding. Informal work and play activities are major environmental components that enhance children's learning. Center activities and experiences develop language (literacy, reading, writing, listening, and spelling) skills and mathematics (numeracy) concepts as well as knowledge in other disciplines.

“It is the responsibility of schools to meet the needs of children when they enter school and to provide whatever services are needed in the least restrictive environment to help each child reach his or her fullest potential”

NAEYC Position Statement on School Readiness, 1995

Dimensions of the Environment

- ✎ The younger the child, the more informal is the environment.
- ✎ Informal learning environments encourage spontaneous play.
- ✎ Group projects that include investigations of worthwhile topics strengthen dispositions to observe, experiment, inquire, and examine the worthwhile aspects of the environment. This should include constructions and dramatic play and early literacy and numeracy activities.
- ✎ The environment is designed for active learning, with well equipped centers addressing all areas of development.
- ✎ Classrooms are multi-cultural, with respect for diversity.
- ✎ Learning and discovery occur naturally during play.
- ✎ The environment promotes appropriate behavior, positive self-concept, social interaction, self-regulation, independence, and effective supervision in the classroom.

The Physical Environment

The layout of physical space welcomes anyone entering the schools and fosters encounters, communication, and relationships. The arrangement of centers, materials, and activities encourages choices, problem solving, and discoveries in the process of learning and is designed for safety and appropriate safety supervision. The physical space should include classroom learning centers based

on the needs and the size of the group, using the centers and the space needed for the materials. Teachers face the challenge of space useable for children, and in doing so, must value and respect children's perspectives. The North Carolina Department of Instruction suggests guidelines for both indoor and outdoor facilities.

The Schedule

Effective scheduling is key to the success of an early childhood curriculum. Four principles for developing schedules are

- ✎ Include daily rituals and routines.
- ✎ Balance open-ended and structured time.
- ✎ Allow sufficient time for activities and routines.
- ✎ Encourage children to develop awareness of time.

The Early Childhood Environmental Rating Scale (ECERS) by Harms, Clifford & Cryer (1988) provides evaluative descriptions of schedules.

Curriculum and Instructional Strategies

The early childhood (kindergarten) curriculum is the planned management of time, materials, and activities to guide children's learning and development. It is an organized framework that delineates the content children are to learn, the processes through which they achieve the identified curricular goals, what teachers do to help children achieve these goals, and the context in which teaching and learning occur. Ideally, the curriculum is shaped by communities and families as well as by children and teachers. Classroom practice is driven by the information teachers gain from developmentally appropriate assessment (including K-2 assessment). While gaining content knowledge is a goal, curriculum includes everything that happens from the time children walk into the classroom until the time they leave, including human interactions, teaching strategies, language and tone, and the physical arrangement of the room and the materials in it.

Curriculum Should

- ✎ Provide meaningful contexts for the child's learning rather than focusing on isolated skill acquisition.
- ✎ Emphasize informal work and play, activities related to the child's direct, first-hand experience, opportunity to apply skills to meaningful contexts, and a wide variety of teaching methods.
- ✎ Respond to the range of children's backgrounds and needs.
- ✎ Reflect that young children learn most effectively when they are engaged in interaction rather than in receptive and passive activities.
- ✎ Reflect that young children are most likely to strengthen their natural dispositions to learn when they are interacting with adults, peers, materials, and surroundings in ways that help them make better and deeper sense of their own

experiences and environment. (This is best done through investigating and purposefully observing, recording, and representing their findings and observations through activities such as talking, painting, drawing, construction, writing, and graphing.)

- ✎ Employ developmentally appropriate practices using a wide variety of materials, allow for child initiation, provide for child engagement (time on task), exploration, etc.
- ✎ Respond to information gained from developmentally appropriate assessment (including K-2 assessment).
- ✎ Construct integrated goals that address learning in all developmental areas: physical, social, emotional, linguistic, aesthetic and intellectual.
- ✎ Facilitate language and communication development.
- ✎ Respect and support individual, cultural, and linguistic diversity.
- ✎ Provide for children with special needs.

IV. The Readiness of the Administration

“Instead of asking ‘Are our children ready for kindergarten?’ it is more appropriate to ask ‘Are our kindergartens ready for children?’ Neither raising the entry age nor using other readiness criteria will ensure children’s success in kindergarten. Only an appropriate curriculum can make that success possible.”

Peck, McCraig, & Sapp, 1988, p. 27.

A. Administrator’s Role in Preparing School Environment

- Possesses knowledge of Developmentally Appropriate Practices and HOW schools MUST translate this knowledge into classroom and school-wide best practices.
- Establishes an authentic site-based management team that includes parents.
- Utilizes authentic and appropriate teacher evaluation tools.
- Insists that staff development is research based with site-based delivery or professional leave time granted; staff should be involved in development of training needs and delivery of instruction.
- Puts the needs of children FIRST.

B. Administrators Develop and Nurture Authentic Partnerships with Children

- Needs are assessed authentically via teacher observations, work samples, interviews, etc.
- Individual needs are acknowledged and met via personalized education plans.
- Whole child development is valued and reinforced in ALL settings.

Site-Based Teachers

- Teacher leadership/empowerment is encouraged.
- Teachers are involved with Site-Based Management Team.
- Release time is offered to attend developmentally appropriate trainings and for team planning/sharing to include all educators who work with this age group.

Preschool Teachers

- Continuum of learning exists.
- Relationships are cultivated and valued.
- Ongoing communication is supported.
- Expectations are clearly defined.
- Readiness and transition workshops are offered jointly by preschool and kindergarten teachers.

Parents

- Innovative vehicles exist for real involvement within schools.
- Partnerships value parents.
- Relationships are cultivated and valued.
- Open, ongoing and varied types of school-to-home/ home-to-school communication are present.
- Communication of expectations is clearly defined.
- Parents are Involved with site-based management team.
- Community resources are recommended and made available.
- Education opportunities regarding child development are available.

Community

- Innovative vehicles exist for real involvement within schools.
- Relationships are cultivated and valued.
- Community is involved with Site-Based Management Team.
- Mentoring/Tutoring opportunities are provided for community members.
- Reciprocal work-to-school training opportunities are encouraged.
- Focus groups held to educate public about schools.

Institutes of Higher Education

- Undergraduate observations focus on both classroom experiences and school governance groups as well as parent/community involvement activities.
- Students secure outstanding, site-based internships early in undergraduate experience.

- Offer personnel to conduct on-site training in return for schools' release of staff to share school-based experiences and insights.
- Institutes emphasize leadership as an appropriate and necessary role for teachers.

V. Transition to Ready Schools

Transition to Ready Schools is about children and their families moving from home, preschools, or other types of childcare programs into the educational system. Transition is a major milestone for all involved and a change that offers both challenges and new opportunities for growth.

Ready Schools employ transition practices that operate throughout the year and involve an exchange of information and experiences that create as much continuity as possible for children moving from one setting to another. Transition planning assures that the special needs of children and families are addressed and helps minimize later problems.

Community-wide planning for transition to kindergarten works best and involves children, parents, guardians, grandparents, other family members, care providers, preschool and kindergarten teachers, and a variety of community service agencies and programs. The Ready School takes into account the complex ways in which these parties interact to influence the developing child and provides continuity and reinforcement in a developmentally appropriate manner.

Successful transition to school is currently undergoing careful scrutiny and discussion. Lack of research on effective transition procedures, the limitations of present policies, and concern over the type of school environment that awaits the child reflect the gaps and overlaps in the knowledge base about transition to kindergarten. At the same time, an available, somewhat broad perspective reveals the following trends that need to be carefully considered in transition planning:

- ✍ The changing nature of transition and the complex interaction of contextual factors.
- ✍ The emerging conceptual base that integrates knowledge of how children learn and develop with best practices in early education.
- ✍ The increasing diversity of families in America and the younger age school population group.
- ✍ The increase in public school programs for very young children (ages 3 and 4).
- ✍ The movement for accountability across the nation as both readiness and outcomes are assessed.

These emerging trends are particularly important in understanding how children are affected by transitions.

To summarize the findings, transition periods are those in which the child's development is reorganized and new

competencies emerge. Transitions occur in an ecological context and are important for later competencies. It is believed that adjustment in the early school years is highly related to adjustment and experience from infancy through the preschool years. Ready Schools direct serious attention to the many factors influencing the transition process. There is greater coordination and information sharing with all "players" as they work to make schools ready for *all* children who attend.

Elements of Effective Transitions Include the Following:*

- ✍ All parties responsible for children's care and education work collaboratively in developing a *written transition plan* for the community.
- ✍ *Transition activities* are planned cooperatively for children by their families, care providers, teachers, and community representatives.
- ✍ *Transition policies, programs, and practices* reflect the diversity and uniqueness of children, their families, and the community.
- ✍ *Developmentally appropriate practices* (age appropriateness and individual appropriateness) are employed in all programs of care and education from birth to age eight to ensure continuity in assessment, curriculum, and instruction.
- ✍ A *coordinated staff development* approach is employed to bring care providers and preschool and kindergarten teachers together to discuss, learn, and plan.
- ✍ Parents and families are involved in *decision making* and are active *partners* in their children's care and education.
- ✍ A written community transition agreement is created, evaluated, reviewed, and revised as ongoing transition efforts are expanded.
- ✍ Ongoing *leadership* and *advocacy* for effective transition are assured by naming Transition Coordinators, representatives of each participating program/group, to work together over time to guide and refine the community's transition plan.

*adapted from *It's a Big Step* (1995), Bridging Early Services Transition Taskforce, Coordinating Council on Early Childhood Developmental Services, Kansas State Board of Education

VI. Summary

What Is Best for Kids?

This report has focused on the major themes and directions Ready Schools must take to facilitate the success of all children entering kindergarten. There is a shared belief that it takes parents, families, teachers, schools, and communities to help children experience success in school. There is a focus on the continuity between early care and education programs and elementary schools. Ready Schools assume a strong leadership role to create developmentally appropriate learning climates for young children from preschool to grade three.

Finally, Ready Schools celebrate each initiative and undertaking with a flourish that invites participation from all contexts and levels of context that influence children's development. Celebrating the influence of each context is as follows:

Celebrating Parents as the Child's First and Most Important Teacher

- Honoring families' linguistic and cultural characteristics
- Developing opportunities with parents to share two-way information about the child
- Valuing and encouraging beneficial home-school partnerships

Celebrating Teachers Who Employ Best Practices

- Recognizing a teacher, class, or school for doing a good job
- Offering grants for "Ready to Succeed" schools (to supplement regular funding)
- Creating child/teacher celebrations
- Creating community celebrations

Celebrating Administrators and Site-Based Management Teams

- Recognizing elementary school professionals who support Ready Schools
- Recognizing Superintendents who support Ready Schools

VII. Recommendations for "Ready Schools"

The community members of Ready Schools believe that children come to school with a variety of skills and abilities. In order to meet children's diverse needs, Ready Schools respond to this uniqueness by initially assessing children's experiential base and then providing an individualized, developmentally appropriate curriculum with age- and stage-appropriate teaching practices. Quality kindergarten experiences profoundly influence later achievement and attainment as basic skills are acquired and children's strengths are nurtured. Early learning experiences serve as the foundation for later learning (Zill, 1988).

In order for schools to be ready to receive all children, the Schools' Readiness Committee recommends the following:

- ✍ The Ready School Self-Inventory be disseminated to all elementary schools with accompanying staff development activities to ensure every school in North Carolina is aware of the policies and practices necessary for schools to successfully serve all children entering kindergarten.
- ✍ Schools and communities develop transition plans to ensure a coordinated effort to support children moving from the early childhood setting to kindergarten.

✍ North Carolina Department of Public Instruction, public and private school systems, Head Start and preschool programs work together to ensure that the following personnel and environmental resources are in place to support ready schools.

- Personnel resources include reasonable class size and student-teacher ratios; sufficient time for teachers to plan, conference with families, conduct home visits and reflect on best practices; ongoing teacher professional and personal development; and Birth-Kindergarten (B-K) License required for kindergarten teachers.
- Environmental resources include individualized developmentally appropriate curriculum and classroom activities; financial appropriations for manipulatives, books and other learning materials; and reasonable classroom space with an in-class sink and child's toilet. In addition an outdoor playground/learning area designed for typically and atypically developing children should be included.

✍ NCDPI continues to refine the K-2 assessment process, both vertically (by adding earlier developmental pieces) and horizontally (by adding parameters embracing our social and emotional domains). This assessment must be used to inform practice and drive curriculum instruction in North Carolina's kindergartens.

Rationale for Recommendations

Reasonable Class Size and Teacher-to-Student Ratios: American kindergarten students vary in both the skills and knowledge they bring to school. Variations in developmental levels of kindergarten children run the gamut. Schools must maintain teacher-student ratios that ensure all teachers provide quality experiences for the diverse needs of children. Guidelines put forth by the National Association for the Education of Young Children (NAEYC) recommend a class size of a maximum of 20 students (this class size mandates two classroom teachers: one B-K Licensed Teacher and one Teacher Assistant). This recommended ratio assures the possibility of conducting a diverse set of learning activities with an emphasis on informal work and play; activities related to the child's direct, first hand experience; opportunity to apply skills in meaningful contexts; and a wide variety of teaching methods.

Sufficient Time for Teachers to Plan, Conference, Home Visit, and Reflect on Best Practices: Teachers must understand the uniqueness of each student with regard to individual learning styles, interests and preferences, personality and temperament, skills and talents, challenges and difficulties. To gain and apply this knowledge requires enough time for the teacher to plan so all children participate to the fullest extent possible. Opportunity to conference with parents (both at school and

in the student's home) offers teachers a clearer understanding of each child's experiential base, skills, strengths, and vulnerabilities. This understanding will enable teachers to develop a curriculum focusing on the "whole" child. Educators who reflect on this knowledge as they plan offer a flexible curriculum, suitable for a wide variety of young children from various backgrounds. They address varying maturity levels and are better able to meet diverse needs.

Ongoing Teacher Professional and Personal Development: Teachers must understand the process of learning, for themselves as well as for children. Kindergarten teachers must possess knowledge of growth and development of both typically and atypically developing children. Moreover, they must be able to translate that knowledge into developmentally appropriate practices. Teachers must also use assessment information (including K-2 assessment) to inform practice and drive curriculum and instruction. Members of the school community—administrators, physical education specialists, teachers of music, art, technology, media, and others should be offered opportunities to gain current information about young children's growth and development. Professional development must include, but not be limited to, ongoing, planned staff development involving current early childhood related research, child growth and development information; interactive, multidisciplinary instructional strategies and more; attendance at statewide and national early childhood conferences; and membership in professional organizations like the National Association for the Education of Young Children.

Birth–Kindergarten (B-K) License Required for Kindergarten Teachers: Properly certified kindergarten teachers possess an in-depth understanding of the varied patterns of child growth and development. Early educators must be schooled in and encouraged to use a wide variety of developmentally appropriate curricula, materials and procedures to maximize each child's growth and development (Position Statement on Goal One of America 2000, 1996).

Individualized, Developmentally Appropriate Curriculum and Classroom Activities: Learning centers provide a varied approach for children to develop skills and concepts in learning. Students' ability to choose materials and activities provides stability and order to the classroom. At the kindergarten level, learning centers provide for rigorous exploration and experimentation with many materials and ideas. Centers also give children of varying abilities and needs opportunities to expand their understanding and knowledge. Play is the work of young children and the essence of young children's understanding. Supported by the facilitation of a qualified early childhood teacher, work and play activities form major environmental components that enhance children's learning.

Financial Appropriations for Manipulatives, Books and other Learning Materials; Consumable Materials; and Capital Equipment: The essence of an excellent kindergarten environment embraces a developmentally appropriate, integrated curriculum with a variety of activities offered in a meaningful manner. Materials are "hands-on," interactive, and open-ended. For example, manipulatives are critical to children as they can be used individually or in small groups; prior experience with the manipulatives increases the potential for innovation, problem solving, strengthening fine motor/hand-eye coordination skills, and creative thinking! Consumable materials, such as paint and large paper, offer opportunities for self-expression, creative problem solving, and midline development. Tables and chairs, water and sand tables, easels, storage cabinets and shelves, blocks, and other equipment are child sized, in excellent repair and physically support a developmental environment. All these materials are critical to Ready Schools, yet require a significant initial investment with ongoing budget appropriations for consumable and replacement materials.

Reasonable Class Space with an In-Class Sink and Child's Toilet: Kindergarten classes must be large, physically safe, well ventilated with plenty of natural light, and pleasant in appearance. In-class sinks allow easy cleaning up and encourage good hygiene; in-class toilets promote self-help skills and encourage independence in meeting children's toileting needs.

Outdoor Playground/Learning Area: The education of young children extends beyond the classroom. Outdoor playground/learning areas are important to support and expand children's understanding of their world. The playground/learning area should be designed for the whole child and to enhance children's physical, language, cognitive, and social-emotional development. Outdoor learning centers should include opportunities for cooperative play, art and science activities, nature studies, fine and gross motor development, water and sand play, and space for children to move freely. It is important to choose quality outdoor equipment and material and to design and organize the area to accompany the classroom.

Ready School Inventory

The Ready Schools' subcommittee developed a questionnaire to help schools determine their level of readiness to receive all children. This self-inventory was designed to highlight crucial components of high quality and developmentally appropriate kindergarten programs. The Inventory, included in Appendix I of this report, is designed for schools to use as part of a self-assessment process. A team including the principal, kindergarten teachers, parents and other personnel involved with children's transition to kindergarten should work together to complete the inventory and develop strategies to ensure that the school is prepared to receive all children.

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APPENDIX I

Ready School Self Inventory

Schools must be ready to receive all children in order for children to succeed. “Ready schools” will assess their degree of readiness in a variety of ways. This self-inventory was designed to highlight crucial components of high quality and developmentally appropriate kindergarten programs. Items reflect concrete policies and strategies that schools can employ to help each child grow in competence and meet high expectations.

A team including the principal, kindergarten teachers, parents and other personnel involved with children’s transition to kindergarten should work together to complete the following inventory and develop strategies to ensure that the school is prepared to receive all children. Use the comments column to make notes about each individual item and the space at the end of the Inventory to document a Ready Schools Improvement Plan.

| INDICATOR FOR A READY SCHOOL | READY | NOT READY | COMMENTS |
|--|-------|--------------|----------|
| Administrators have read, processed and understood NAEYC’s Developmentally Appropriate Practices. | | | |
| Teachers have read, processed and understood NAEYC’s Developmentally Appropriate Practices. | | | |
| Parents have been offered information (via workshops, NAEYC brochures and other reading materials, etc.) about child development and best practices for kindergarten children. | | | |
| Parents are valued as genuine (authentic) partners with on-going communications (weekly newsletters or audio-taped information, home visits, volunteering opportunities, parent-teacher and/or student-led conferences). | | | |
| School offers a parent resource library and a place for families to gather, network, reflect, and share discussions with others. | | | |
| School uses developmentally appropriate assessment instruments that: <ul style="list-style-type: none"> • assess early life experience. • recognize and support individual differences. • determine reasonable/appropriate expectations of children’s capabilities. • attend to the WHOLE child and seek information about all five readiness domains. | | | |
| Teachers assess each child’s growth and development authentically via collected work samples, student and parent interviews, teacher observations, photographs, etc. | | | |
| Physical Environment is welcoming and child-centered. | | | |
| Physical Environment is arranged in learning centers encouraging choices, problem solving and discovery in the learning process. | | | |
| Curriculum provides meaningful contexts for the children’s learning (rather than focusing on isolated skill acquisition). | | | |
| Curriculum offers learning centers; values “play” as the work of young children; and provides interrelated, hands-on, active learning experiences. | | | |

| | | | |
|---|--|--|--|
| Curriculum contains goals addressing all five domains of learning and is based on the interest and needs of individual children. | | | |
| Curriculum integrates new learning with past experiences through project work and mixed-ability/mixed-age grouping in an unhurried setting. | | | |
| Teacher uses a wide variety of teaching materials and methods. | | | |
| Schedule balances open-ended and structured time. | | | |
| Schedule includes daily rituals and routines. | | | |
| Cultural and linguistic diversity of students is nurtured and celebrated. | | | |
| Multicultural materials reflect global heritage and culture. | | | |
| Language and communication development is a rich and valued curriculum component. | | | |
| Children's social skills are developed with conflict resolution strategies taught in meaningful contexts. | | | |
| Inclusion is practiced and each child is placed in the least restrictive environment. | | | |
| Students are well fed, rested, and immunized; on-site health assessments for physical, vision, and dental health conducted annually. | | | |
| Teachers participate in research-based, state of the art, developmentally appropriate, on-going professional development. | | | |

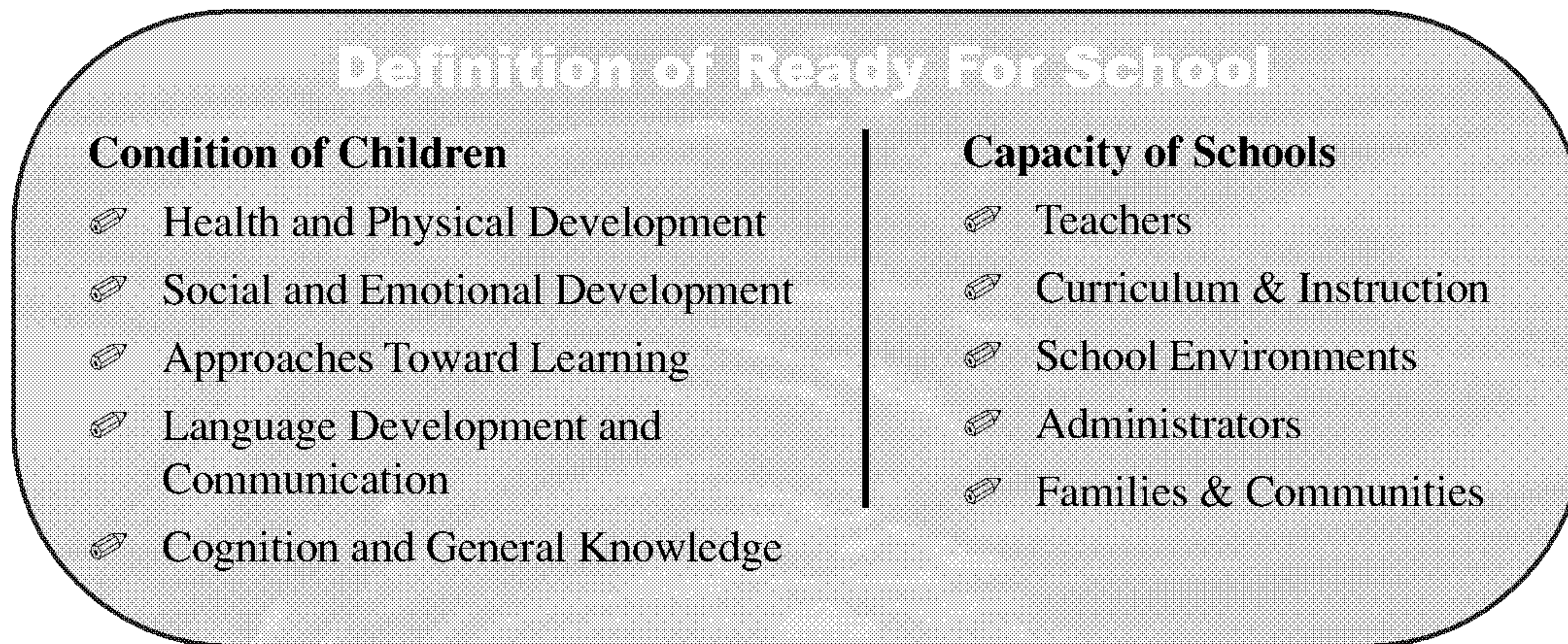
Our school's top three areas needing improvement to enable us to be ready for all children are

TOP THREE PRIORITIES

PLANS FOR IMPROVEMENT

APPENDIX J Ready for School (R4S) Framework

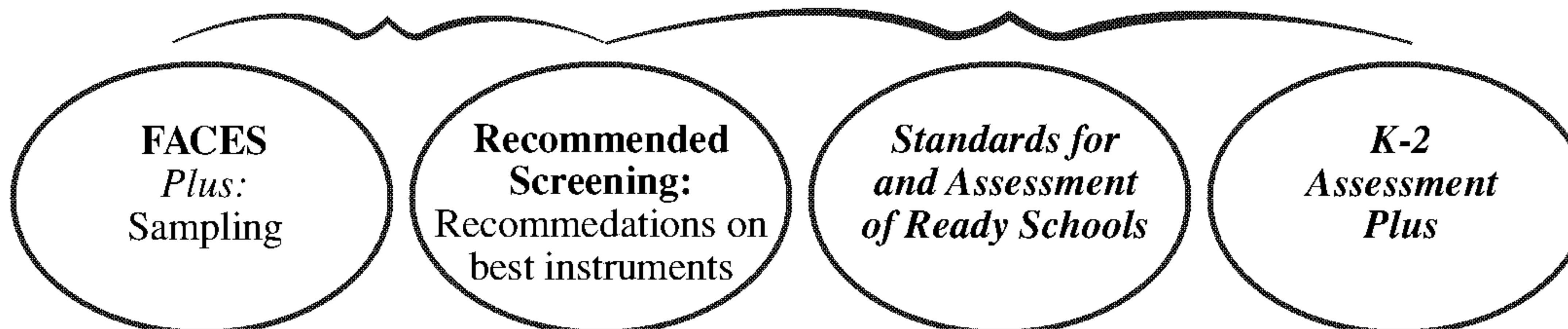
Preamble of Beliefs and Guidelines



**R4S System Accountability
Ready Kids**



**Schools Ready for Children
Ready Schools**



N C W I S E D A T A S Y S T E M

Goals

- Assess the readiness of all children for school
- Increase the readiness of all children for school
- Improve the readiness of schools for all children

Alignment to Definition ~ Uniformity ~ Consistency ~ Data for Improvement

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NC Early Childhood Data System Work Group

Participating Birth-to-Five

Agencies, Programs, and Organizations

- DPI, Office of the Superintendent, Office of Policy and Strategic Planning, Data Enterprise
- DPI, Division for Exceptional Children, Preschool EC
- DPI, Office of School Readiness (OSR), More at Four*
- DPI, OEL, Head Start State Collaboration Office
- DPI, OEL, Even Start and Title I Preschool
- DHHS, Division of Public Health, Early Intervention
- DHHS, Division of Child Development and Early Learning, (DCDEE) NC PreK*
- DHHS, Office of Child Care, Licensing and Subsidy
- NCPC, Smart Start
- NC Interagency Coordinating Council
- NC Family Support Network

Note: DPI's Office of School Readiness (OSR) is now the Office of Early Learning (OEL); More at Four is now NC Pre-K located within DHHS DCDEE

Collaboration & information-sharing with other interested entities

- NC Center for Health Statistics
- Duke University Center for Child and Family Policy
- NC DPI, K-13 CEDARS Longitudinal Data System
- NC Children's Action Network
- NC DHHS, Data Advisory Committee
- NC Division of Public Health, Women's and Children's Health
- UNC School of Social Work (DSS Data Management Project)
- NC Pre- and Peri-natal Hospital Data Quality Collaborative

Resource Connections and Advisors

- National Data Quality Campaign & EC Data Collaborative
- BUILD Initiative
- Early Learning Challenge Collaborative
- University of Pennsylvania Project KIDS
- Pennsylvania Early Intervention System
- University of Kentucky
- Colorado Department of Public Instruction

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| Division of Public Health (DPH), DHHS | Deborah Carroll, Early Intervention Branch |
| | Sherry Franklin, Part C Coordinator |
| | Schatzi McCarthy, Quality Assurance |
| Office of Early Learning (OEL), DPI | John Pruette, Director |
| | Norm Allard, Preschool Exceptional Children |
| | Vivian James, Part B (619) Coordinator |
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| Smart Start, Local Program | Linda Blanton , Cumberland County Partnership |
| Family Support Network of NC (FSN) | Irene Zipper, Director; Steve Day, Evaluation |
| Division of Public Health (DPH) | Elizabeth Mizelle, Children & Youth Branch |
| Division of Child Development & Early Learning (DCDEE) DHHS | Heather Laffler |
| | Anna Carter, Deputy Director |
| Division of Social Services (DSS) , DHHS | Kevin Kelley, Child Welfare Services, NC FAST |
| Division of Information Resource Management (DIRM), DHHS | Anthony Vellucci, Director NC FAST |
| Interagency Coordinating Council (NC ICC), DPH | Laura Curtis, Coordinator |
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| Early Childhood Data Work Group | Duncan Munn, convener |
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| NC Action for Children | Laila Bell, Data Advisory Committee |
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| Duke University Center for Child and Family Policy | Kara Bonneau, NC Education Research Data Center |
| UNC-CH School of Social Work | Dean Duncan, DSS Data Management Project |

Detailed NC EC Data System Plan, Activities, and Additional Supporting Information

| GOAL 1: Establish Data System Governance Structure | | |
|---|-------------------------|---|
| Key Activities | Responsible Parties | Additional supporting evidence of implementation status & supports |
| 1.1 Determine structure, authority, roles, relationships among ECAC and EC data system partners and agency data system leadership | ECAC, data system reps | High-level leadership, authority of Governor's Office, broad representation |
| 1.1a Create a committee process and structure, engaging all relevant stakeholders and incorporating both policy and technology functions | ECAC, EC agencies | Existing governance manuals delineates time-tested policies and procedures in DPI, DHHS |
| 1.2 Enhance EC Data System Design | ECAC | Building on existing system capacity |
| 1.2a Articulate, prioritize, and adopt the critical policy and practice questions that will drive system development and use | ECAC, stakeholders | Established national guidelines (ECDC), existing NC questions, broad stakeholder forums |
| 1.2b Evaluate current and future data collection and linkage needs based on the state's critical policy questions | Policy and Tech reps | Prior report for update, recent ELC stakeholder input, ELC RFP guidelines |
| 1.2c Articulate specifications to meet joint needs (including specific criteria for ELC E2 a-e delineated on p.69 of the RFP) | ECAC with dedicated FTE | Highly qualified agency data system technology reps already included in process |
| 1.2d Develop criteria for in-depth technical data systems design consultation resulting in design options | staff support: EC-DED | Expert consultant(s) to assist senior agency data system specialists, planning in progress |
| 1.2e Decide among options that build on previous investments and existing infrastructure strengths; prioritized by feasibility | (Early Childhood Data | Expert consultant(s) to present choices, EC-DED to guide ECAC, agencies are engaged |
| 1.2f Develop and gain agreement on MOU that outlines joint policies and procedures including all requirements of RTT-ELC | Enterprise Director) | Prior consensus on core elements by EC data partners; E2 (a)-(e) to be included |
| 1.2g Implement a phased approach; systematically build and implement the chosen design | EC-DED, DPI, DHHS | Supported by dedicated staff in each initial agency of phase-in, training/TA to be planned |
| 1.3 Oversee and manage data collection and use system-wide | ECAC | Staffed by Data Enterprise System Director |
| 1.3a Implement data oversight policies for ensuring the quality, privacy, and integrity of data in the system, including transparency | ECAC, EC-DED | Defined by multi-level cross-agency structure and roles established in Activities 1.1-1.2, |
| 1.3b Institutionalize such practices as master data management and transparent, coordinated decision-making and operational policies | ECAC, EC-DED | phased approach to support success of implementation, public awareness plan to support |
| GOAL 2: Build Enhanced EC Data System Design | | |
| 2.1 Institute expansion of common child UID assignment | DHHS, DPI, EC-DED | Phased in approach to learn from each phase |
| 2.1a Complete enhancement design; enable assignment and storage of UID | EC-DED | Existing UID via e-Scholar software is established, DPI supports licensure expansion, Pre-K database has existing capacity to accept UID, other programs have agreed to adopt; Subsidy program and NC FAST to provide future link to relevant expanded social services data |
| 2.1b Identify and implement enhancements, as needed, to DPI CEDARS UID system to accommodate expansion of users | DPI, EC DED | |
| 2.1c Phase in priority programs: NC Pre-K, Child Care Subsidy Program, Part C Early Intervention Infant-Toddler Program; 3 other programs to be added in years 3 and 4: DSS, DMH/DD, Medicaid; IT staff positions dedicated to each | DHHS, DPI, EC-DED; | |

| | | |
|---|--|--|
| 2.2 Ensure EC Data System interoperability | EC-DED | NC EC sector is included in an in-depth data mapping for Common Education Data Standards (CEDS) alignment, provided at no cost to NC or ELC grant; part of ongoing P-20+ collaboration w/ K-13, higher ed, employment |
| 2.2a Incorporate the Essential Data Elements | DPI, DHHS, CCSSO and PGG (TA consultation) | Ensured by Governance Structure (1.3) |
| 2.2b Enable uniform data collection | ECAC + all EC partners | Enhanced EC Data System Design (1.2) |
| 2.2c Facilitate data exchange by using standard data structures, formats, and definitions | DED, NCPC, Smart Start | Established formal network of community public/private partnerships to improve EC |
| 2.2d Institute effective data practices | Cumberland, Harnett, Hoke | Formal commitment to participate by local Partnerships in potential counties |
| 2.2e Plan for child-, program-, workforce-level data linkage | Wayne/Other Counties TBD | Innovation Approaches project in place, draft plan, community support |
| 2.3 Build local capacity for data collection, integration, use, outcomes improvement, and state interface via innovative models | NCPC, ECAC | Established capacity for rigorous evaluation |
| 2.3a Exemplary model to expand local Smart Start electronic data management, reporting, and use capacity; state and local interface | DCDEE and contractor | Completed system assessment and business requirements, ready to implement; fully sustainable after initiated (in-kind); project director budgeted to ensure focus and success |
| 2.3b Triage model to develop local child wellness longitudinal database system involving Smart Start Partnership(s) | | |
| 2.3c Evaluate projects and explore scale-up potential and methods | | |
| 2.4 Implement web-based integrated Child Care Workforce System | | |
| 2.4a Automate, streamline, and expedite current processes | | |
| 2.4b Consolidate and standardize data collection and storage | | |
| 2.4c Build in capacity for future expansion of the system | | |
| GOAL 3: Develop Professional Development to Support the Enhanced System & Stakeholder Engagement to Foster Understanding of System | | |
| 3.1 Ensure use of effective data practices: all relevant stakeholders will be | | |
| <ul style="list-style-type: none"> prepared to provide high quality data input that meets rigorous joint standards of data integrity; and prepared to make effective and appropriate use of the data to guide instruction, support decision-making and continuous improvement | | |
| 3.1a Develop detailed specifications for Data Professional Dev. plan | EC-DED, DPI, DHHS, NCPC, state and local stakeholders, contracted specialists | NC has many models: DPI SLDS and DHHS NC FAST data system training experience, in-depth training module package shared by Part C EI and B Preschool designed to improve outcome data collection, quality, entry, reporting, and use; can be modified as leverage |
| 3.1b Design a multi-tiered training and technical assistance support package that meets multiple cross-agency/system user needs | | |
| 3.1c Field test; revise as needed to assure usability and best practice | | |
| 3.1d Phase in deployment in conjunction with phased approach of data system development and implementation | | |
| 3.2 Ensure that all stakeholders, including families, EC professionals and programs, and other relevant stakeholders are aware of the existence, purpose, and use of the data system and its protections | EC-DED, DPI, DHHS, NCPC, state and local stakeholders, contracted specialists, | Extensive network of state and local stakeholders to be engaged in design: state- and community-level entities that are logical and willing partners in conducting the data system stakeholder engagement campaign; staff in EC-data system dedicated positions in all agencies to provide focus specifically on EC data system and support implementation |
| 3.2a Develop detailed specifications for Stakeholder Engagement plan that conforms with data system transparency policy | | |
| 3.2b Design a multi-tiered stakeholder engagement package that meets multiple cross-agency and public needs, including families | | |
| 3.2c Phase in deployment in conjunction with phased approach of data system development and implementation using local networks | | |

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