

# THE HEAD START LEADERS GUIDE TO POSITIVE CHILD OUTCOMES



## *Strategies To Support Positive Child Outcomes*



DEPARTMENT OF HEALTH AND HUMAN SERVICES

ADMINISTRATION FOR CHILDREN AND FAMILIES

Administration on Children, Youth and Families

Head Start Bureau

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# I. INTRODUCTION: THE HEAD START LEADERS GUIDE TO POSITIVE CHILD OUTCOMES

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This *Guide* is designed to help Head Start agencies improve the quality and effectiveness of child development services. Its purpose is to guide and inform education managers and program directors as they lead efforts to implement the Head Start Program Performance Standards and to help staff and families prepare children for success in school. The core of this *Guide* is a comprehensive set of effective teaching strategies to foster children's progress toward a broad range of key early learning and development goals as articulated in the Head Start Child Outcomes Framework (see pages 10-14).

This *Guide* provides a clear vision of what educational quality looks like. It is not a curriculum nor is it an assessment tool. Rather it offers a picture of what a high quality Head Start program looks like in action and in detail: intentional, outcomes-oriented teaching and engaging, challenging learning opportunities for groups and individual children. The education leadership team in every Head Start program is responsible for making this vision a reality by explaining it to staff, parents, and community partners; using it to improve curricula and assessment efforts; and preparing teachers, home visitors, and other staff to become skillful in implementing it through supervision, mentor-coaching, and ongoing professional development.

This *Guide* offers a picture of what a Head Start program looks like in action and in detail.

## About This *Guide*

To help education leaders achieve a vision of quality and accountability, this *Guide* is organized into sections:

- **A Vision of Quality and Accountability.** This section includes a description and rationale for new policy requirements; a chart illustrating the context for these requirements; and the Head Start Child Outcomes Framework.
- **Frequently Asked Questions about the Head Start Child Outcomes Framework.** These questions address issues about using the Framework with curriculum and assessment procedures.
- **Seeing the Big Picture in Head Start.** This section provides a brief description of how current policies and practices build on the strong foundation of a Head Start program.

- **What It Looks Like: Effective Teaching Practices for Supporting Children’s Learning and Development.** These descriptions of each of the 8 Domains of the Child Outcomes Framework include explanations of why they are important, followed by suggestions for effective teaching practices in the “Strategies” sections. Education leaders can expect teachers and home visitors to demonstrate these strategies as they guide children’s progress toward the outcomes.
- **Adaptations for Individual Children.** These suggested strategies are research-based modifications for children with special needs and gifted children. They also may be effective for other children who are not making age and individually appropriate progress.
- **Looking Ahead: Next Steps.** These strategies suggest how to implement the Head Start requirements for improved quality and increased accountability.

This *Guide* can be used in many different ways. Head Start staff who work directly with children and their families need to understand the Child Outcomes Framework and related teaching strategies. Education management and Early Literacy Mentor-Coaches (ELMCs) can use the *Guide* as the basis for staff training. The Policy Council needs to be familiar with the learning outcomes as well. Program managers and governing bodies need to ensure that the program systems (i.e., Governance, Planning, Communication, Record-keeping and Recording, On-Going Monitoring, Self-Assessment, Human Resources and Fiscal Management) provide the necessary support to ensure that the outcomes can be achieved. In addition to its use for staff training and parent education, the *Guide* can be read by classroom teachers and home visitors on their own who want to reflect on their practices. A user of the *Guide* might decide to start at the beginning and read through to the end or alternately, might chose to read the sections of greatest interest. In any case, the *Guide* is an invaluable resource to the Head Start team.

In the sections that follow, the word “teacher” refers to any of the people who serve preschoolers in Head Start, whether in family child care, center-based programs, or home-based programs. As a rule, the practices suggested also are appropriate for parents to use at home.





## II. A VISION OF QUALITY AND ACCOUNTABILITY FOR HEAD START

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ith the beginning of the 21st century, the Head Start program enters an era of increased accountability for both resources and outcomes. Building on more than 35 years of experience and success in providing comprehensive services to the nation's poorest children and their families, Head Start continues in its roles as a national laboratory and leader for the entire field of early childhood education. In these roles, Head Start has assumed the challenges of improving the quality of educational experiences provided for young children and increasing accountability for the public expenditures and trust that have been placed in it.

Quality and accountability can best be improved when administrators, education managers, Early Literacy Mentor-Coaches (ELMCs), teachers, home visitors, other staff, and parents:

- understand the program's goals for children's learning and development—specifically, the outcomes they want children to achieve;
- articulate plans for helping children achieve those outcomes through well-designed curricula and effective teaching strategies;
- evaluate children's learning and developmental progress through ongoing assessment; and
- use the results of assessment of child progress and classroom practices to support each child's learning and development for continuous program improvement.

The 1998 reauthorization of Head Start by Congress requires programs to demonstrate that children make progress on specific learning outcomes. To ensure that practices in Head Start reflect the most current research about child development and learning and to ensure the continued comprehensive approach that is the hallmark of the program, the Head Start Bureau developed the Child Outcomes Framework. The Framework provides, for the first time in Head Start's history, a set of consistent, research-based, developmentally appropriate outcomes for preschoolers in Head Start.

The Framework incorporates the legislatively mandated (required) outcomes within a comprehensive set of learning and developmental goals for preschool-aged children. These long-term goals are referred to as Domains. There are 8 general Domains: Language Development; Literacy; Mathematics; Science; Creative Arts; Social & Emotional Development; Approaches to Learning; and Physical Health & Development. (See pages 10-14 for the Head Start Child Outcomes Framework with the 4 mandated Domain Elements and 9 mandated Indicators noted by a star ★.)

Head Start is built on the principle that the areas of children's development and learning are all important and interrelated. The program's long history of attention to

The Child Outcomes Framework describes the knowledge, skills, and behaviors that are important for all children when they enter kindergarten.

children's physical and mental health, social and emotional well-being must continue. However, Head Start programs can and should do more to support children's cognitive development, especially to significantly boost language development and to help preschoolers acquire the knowledge, skills, and attitudes that predict later success in reading, writing, and mathematics.

Beginning in Fall 2003, all 4- and 5-year-olds in Head Start, including children with disabilities and English Language Learners, will be assessed on specific language, literacy, and numeracy outcomes. They will be assessed again in the Spring before they go to Kindergarten. This new accountability system is referred to as the National Reporting System (NRS). (See page 9 in the *Guide* for an overview of the NRS and the *Head Start Bulletin* on Child Outcomes (July 2003/Issue 76).

Head Start continues to be a comprehensive child development program with the ultimate goals of enhancing social competence and school readiness in preschool children from low-income families. Programs must comply with the Head Start Program Performance Standards (2002) because meeting the Program Performance Standards provides the context in which children are most likely to achieve positive learning outcomes, social competence, and school readiness. In short, Head Start needs to continue what it has been doing well, while at the same time, Head Start needs to take some new and different steps.

### **Why emphasize educational quality in Head Start?**

Head Start needs to place more emphasis on promoting school readiness for several reasons. First, there is new research and knowledge that indicate children are capable of learning more in the early years than was previously assumed (Bowman, Donovan, & Burns 2001). For example, children who enter kindergarten with certain kinds of knowledge and skill in early literacy are more likely to succeed in reading later on. Even more important, children who are severely lacking in these areas are more likely to experience difficulties in learning to read (Snow, Burns, & Griffin 1998).

Several major reviews of current research provide a strong knowledge base and rationale for each Domain of the Child Outcomes Framework and for the practices recommended here. These include extensive reviews by the National Research Council of the National Academies: *Preventing Reading Difficulties in Young Children* (Snow, Burns, & Griffin 1998), *From Neurons to Neighborhoods: The Science of Early Childhood Development* (Shonkoff & Phillips 2000), *Eager to Learn: Educating Our Preschoolers* (Bowman, Donovan, & Burns 2001), and *Adding It Up: Helping Children Learn Mathematics* (Kilpatrick, Swafford, & Findell 2001). In addition, The Child Mental Health Foundations and Agencies Network (FAN) reviewed research on social and emotional development in *A Good Beginning: Sending America's Children to School with the Social and Emotional Competence They Need to Succeed* (FAN 2000).

Further impetus to focus on educational quality comes from the Head Start Family

and Child Experiences Survey (FACES) (ACYF 2001). This study found that while children are making significant progress in some areas such as vocabulary and pre-writing during the Head Start year, they are not improving in others, such as letter identification and knowledge of print conventions which are strong predictors of later reading success. The FACES research also finds that classroom quality is linked to child outcomes. All Head Start programs should be achieving maximal gains for children and families.

Many research studies indicate that achievement gaps continue to persist between children from low-income families and children from middle-class families. Professionals and parents are concerned about these disparities in children's achievement. These gaps are evident as early as kindergarten entry (West, Denton, & Germino-Hausken 2000). Therefore, interventions at kindergarten may not be sufficient for some children. It is necessary that preschool programs, including Head Start, begin to close that gap.

In conclusion, the Child Outcomes Framework is an important step that Head Start is taking to close the achievement gap and prepare disadvantaged children for school. It provides a consistent set of goals for all Head Start preschoolers that will promote their overall development and their school success. Each Head Start program needs to align its specific curriculum and assessment tools with the Child Outcomes Framework to ensure that children make progress toward the expected goals.

*Photos (from left to right) by B. Clark, Allegany County HS; L. Salazar, Family Services Agency, Inc. EHS.*



# A Context for Head Start Child, Family, and Program

## HEAD START PROGRAM PERFORMANCE STANDARDS AND OTHER REGULATIONS 45 CFR Parts 1301, 1302, 1303, 1304 and Guidance, 1305, 1306, and 1308 and Guidance

### HEAD START PROGRAM

#### PERFORMANCE STANDARDS

“What are the minimum standards for the quality of Head Start services, staffing, and management systems?”

- Head Start Program Performance Standards provide quality standards for all aspects of early childhood development and health services, family and community partnerships, and program design and management.
- Qualified staff, in partnership with parents, select and adapt or develop a curriculum for each Head Start program. The curriculum is a written plan that addresses the goals for children and includes their experiences, appropriate materials, and the roles of staff and parents. Staff implement and individualize the curriculum to support each child's learning and developmental progress.
- Each program is required to implement a curriculum that promotes children's cognitive development and language skills, social and emotional development, and physical development.
- All programs must adhere to specific Program Performance Standards in the areas of groups size, adult:child ratios, and staff qualifications, including ensuring that each classroom has a teacher with a Child Development Associate (CDA) credential or its equivalent. The 1998 Head Start Act requires that by September 30, 2003, at least 50% of all Head Start teachers nationally in center-based programs have an associate, baccalaureate or advanced degree in early education or in a related field with preschool teaching experience. Classroom teachers who do not meet this requirement must have a CDA or an equivalent State-issued certificate or be in the process of completing a CDA or degree within 180 days of hire.
- Families are to be involved through the family partnership agreement process in their children's development and learning, in increasing their own literacy and child observation skills, and in the governance process of the Head Start program.

### SCREENING AND ONGOING

#### CHILD ASSESSMENT

“How do programs use information they gather on children?”

- Upon entry to Head Start, each child receives required screenings to determine the child's overall health status, developmental strengths, and needs. If a concern is identified, such as a possible serious delay or disability, a formal evaluation is conducted and a determination of eligibility for disability services is made. If the disability criteria are met, a plan for special education and/or related services is made.
- Staff and parents gather ongoing information to document children's progress toward positive child outcomes in language, literacy, mathematics, science, creative arts, social and emotional development, approaches to learning, and physical development, including the 13 mandated learning indicators (as described in the Child Outcomes Framework). Programs select, develop, or adapt an instrument or set of tools for ongoing assessment of children's progress that aligns with their curriculum.
- Child observation and ongoing assessment continue throughout the child's enrollment in Head Start. Staff and parents follow each child's progress, coming to know the child's strengths, interests, needs, and learning styles in order to individualize the curriculum, to build on each child's prior knowledge and experiences, and to provide meaningful curriculum experiences that support learning and development. In these ways, staff, parents, and programs support each child's progress toward stated goals.
- Child outcome information from groups of children becomes part of the data considered by agencies as they engage in self-assessment to determine how the program is meeting its goals and objectives and how it is implementing the Program Performance Standards and other regulations. The results of the self-assessment contribute to continuous program planning and program improvement.

### LOCAL PROGRAM SELF-ASSESSMENT

#### AND ONGOING MONITORING

“How is the local program doing?”

- Grantees establish procedures for the ongoing monitoring of their own operations, as well as those of their delegate agencies, to ensure effective implementation of all Federal regulations.
- At least once a year, Early Head Start and Head Start agencies conduct a self-assessment to check how they are doing in meeting their goals and objectives and in implementing the Head Start Program Performance Standards and other regulations.
- The process involves the policy group, governing body, parents, staff, and the community.
- Grantees should ensure that their system for ongoing assessment of children includes collection of some data in each of the 8 Domains of children's learning and development. In addition, because they are legislatively mandated, programs must gather and analyze data on certain specific Domain Elements or Indicators or progress in language, literacy, and numeracy skills.
- Grantees must develop a system to analyze data on child outcomes that centers on patterns of progress for groups of children over time as they receive services through the program year. At a minimum, data analysis should compare progress beginning when children enter Head Start, at a mid-point in the program year, and when they complete the program year.
- The results of the self-assessment process, including the analysis of child outcomes, influence the agency's program planning and the continuous improvement process.

# Accomplishments and Outcomes

## SYSTEMS AND OUTCOME MEASURES FOR HEAD START NATIONAL ACCOUNTABILITY Head Start Act, ACYF-IM-HS-00-03, ACYF-IM-HS-00-18, ACYF-IM-HS-03-07, PRISM, FACES

### FEDERAL ON-SITE

#### SYSTEMS MONITORING

"How is our compliance with Head Start regulations and program implementation?"

- After the first full year of operation, grantees are monitored at least once every three years.
- A review of effective management systems supports the implementation of a comprehensive child development program leading to positive child outcomes.
- A partnership between Federal and grantee staff monitors the progress of Early Head Start and Head Start grantees in implementing the Head Start Program Performance Standards and other Federal regulations.
- Using the PRISM (Program Review Instrument for Systems Monitoring), a team of Federal staff and other experts conducts an on-site PRISM review of grantee management systems and program quality through a combination of focus groups and individual interviews; observations; discussions with parents, staff, and policy groups; and review of written program documents. Grantees must correct all identified areas of noncompliance.
- Information from the PRISM, including compliance with the child outcomes requirements of the 1998 Head Start Act and ACYF-IM-HS-00-18, is to be used by grantees for continuous program improvement.

### NATIONAL REPORTING SYSTEM

"How are 4- and 5-year-old Head Start children progressing on a common national assessment of key indicators of literacy, language, and numeracy learning?"

- In April 2002, President Bush launched the Early Childhood Initiative—*Good Start, Grow Smart*—that included strengthening Head Start by developing a new accountability system to ensure that every Head Start program assesses child outcomes. This new accountability system is referred to as the National Reporting System (NRS).
- Starting in Fall 2003, all 4- and 5-year-olds in Head Start, including children with disabilities and English Language Learners, will be assessed through the NRS. They will be assessed again in the spring before they go to kindergarten.
- All Head Start programs will use a brief, common set of valid, reliable, age-appropriate assessment tools on specific language, literacy, and numeracy outcomes. The assessments will take approximately 15 minutes per child. They will be conducted in English or Spanish by trained program staff.
- The NRS will provide comparable data about the progress that children are making in each Head Start program. NRS information will be reported back to programs to supplement the ongoing child assessment and continuous program self-assessment that each program undertakes. The Head Start Bureau and the Regional Offices will use the NRS information to guide training and technical assistance and to develop new ways of incorporating outcomes into future PRISM reviews. Data on individual children will not be reported by the NRS.

### RESEARCH

"What are some key outcomes and indicators of national program quality, effectiveness, and outcomes?"

- The Family and Child Experiences Survey (FACES) is a national, longitudinal study to examine the quality and outcomes of Head Start. In 1997 and 2000, data were collected from a nationally representative sample of several thousand children in about 40 Head Start programs who were followed up in kindergarten. Teachers, staff, and parents were interviewed; observations of classroom quality were made. Results indicate that Head Start children's social skills improve and that they make more progress than the typical child their age on vocabulary and early writing measures, but still fall short of national averages. Classroom quality is linked to child outcomes. A new national sample is being launched in Fall 2003.
- The Head Start Impact Study is a Congressionally mandated longitudinal study of nearly 5,000 3- and 4-year-olds from a nationally representative sample of agencies. Children have been randomly assigned to Head Start or to a comparison group which does not receive Head Start services. Data collection includes direct child assessments through first grade, parent interviews, surveys with staff, observations of the quality of care settings, and teacher ratings. The study is designed to answer the mandated questions and benefit program quality.
- The Quality Research Centers (QRC) Consortium I (1995-2000) created partnerships among ACYF, Head Start grantees, and the academic research community to enhance quality program practices and outcomes. In 2001, a second cohort of QRCs was funded for five years to improve child outcomes in literacy, social and emotional development, and other domains of school readiness, through enhancements to curriculum, teacher training, parent involvement, and assessment practices. Research teams implement and evaluate their projects with their Head Start partners, then replicate them. Measures from FACES are used across sites.

**R**eleased in 2000, the Head Start Child Outcomes Framework is intended to guide Head Start programs in their curriculum planning and ongoing assessment of the progress and accomplishments of children. The Framework also is helpful to programs in their efforts to analyze and use data on child outcomes in program self-assessment and continuous improvement. The Framework is composed of 8 general Domains, 27 Domain Elements, and numerous examples of specific Indicators of children's skills, abilities, knowledge, and behaviors. The Framework is based on the Head Start Program Performance Standards, Head Start Program Performance Measures, provisions of the Head Start Act as amended in 1998, advice of the Head Start Bureau Technical Work Group on Child Outcomes, and a review of documents on assessment of young children and early childhood program accountability from a variety of state agencies and professional organizations.

- The Domains, Elements, and Indicators are presented as a framework of building blocks that are important for school success. The Framework is not an exhaustive list of everything a child should know or be able to do by the end of Head Start or entry into Kindergarten. The Framework is intended to guide assessment of three- to five-year-old children—not infants or toddlers enrolled in Early Head Start and not infants or toddlers in Migrant Head Start programs.
- The Framework guides agencies in selecting, developing, or adapting an instrument or set of tools for ongoing assessment of children's progress. It is inappropriate to use the Framework as a checklist for assessing children. It also is inappropriate to use items in the Framework in place of thoughtful curriculum planning and individualization.
- Every Head Start program implements an appropriate child assessment system that aligns with their curriculum and gathers data on children's progress in each of the 8 Domains of learning and development. At a minimum, because they are legislatively mandated, programs analyze data on 4 specific Domain Elements and 9 Indicators in various language, literacy, and numeracy skills, as indicated with a star ★ in the chart. Local program child assessment occurs at least three times a year. The National Reporting System (NRS) child assessment includes measures of the mandated child outcomes.
- Information on children's progress on the Domains, Domain Elements, and Indicators is obtained from multiple sources, such as teacher and home visitor observations, analysis of samples of children's work and performance, parent reports, or direct assessment of children. Head Start assessment practices should reflect the assumption that children demonstrate progress over time in development and learning on a developmental continuum, in forms such as increasing frequency of a behavior or ability, increasing breadth or depth of knowledge and understanding, or increasing proficiency or independence in exercising a skill or ability.

*The English version of the Head Start Child Outcomes Framework was translated into Spanish by the Migrant and Seasonal Head Start Quality Improvement Center. The Spanish version of the Head Start Child Outcomes Framework can be accessed at [www.mhsqic.org/spandocs/spandocs.htm](http://www.mhsqic.org/spandocs/spandocs.htm).*

*(From The Head Start Path to Positive Child Outcomes updated Summer 2003)*

## THE HEAD START CHILD OUTCOMES FRAMEWORK

DOMAIN	DOMAIN ELEMENT	INDICATORS
LANGUAGE DEVELOPMENT	Listening & Understanding	◆ Demonstrates increasing ability to attend to and understand conversations, stories, songs, and poems.
		◆ Shows progress in understanding and following simple and multiple-step directions.
		★ Understands an increasingly complex and varied vocabulary.
		★ For non-English-speaking children, progresses in listening to and understanding English.
	Speaking & Communicating	★ Develops increasing abilities to understand and use language to communicate information, experiences, ideas, feelings, opinions, needs, questions; and for other varied purposes.
		◆ Progresses in abilities to initiate and respond appropriately in conversation and discussions with peers and adults.
		★ Uses an increasingly complex and varied spoken vocabulary.
		◆ Progresses in clarity of pronunciation and towards speaking in sentences of increasing length and grammatical complexity.
		★ For non-English-speaking children, progresses in speaking English.
LITERACY	★ Phonological Awareness	◆ Shows increasing ability to discriminate and identify sounds in spoken language.
		◆ Shows growing awareness of beginning and ending sounds of words.
		◆ Progresses in recognizing matching sounds and rhymes in familiar words, games, songs, stories, and poems.
		◆ Shows growing ability to hear and discriminate separate syllables in words.
		★ Associates sounds with written words, such as awareness that different words begin with the same sound.
	★ Book Knowledge & Appreciation	◆ Shows growing interest and involvement in listening to and discussing a variety of fiction and non-fiction books and poetry.
		◆ Shows growing interest in reading-related activities, such as asking to have a favorite book read; choosing to look at books; drawing pictures based on stories; asking to take books home; going to the library; and engaging in pretend-reading with other children.
		◆ Demonstrates progress in abilities to retell and dictate stories from books and experiences; to act out stories in dramatic play; and to predict what will happen next in a story.
		◆ Progresses in learning how to handle and care for books; knowing to view one page at a time in sequence from front to back; and understanding that a book has a title, author, and illustrator.
	★ Print Awareness & Concepts	◆ Shows increasing awareness of print in classroom, home, and community settings.
		◆ Develops growing understanding of the different functions of forms of print such as signs, letters, newspapers, lists, messages, and menus.
		◆ Demonstrates increasing awareness of concepts of print, such as that reading in English moves from top to bottom and from left to right, that speech can be written down, and that print conveys a message.
◆ Shows progress in recognizing the association between spoken and written words by following print as it is read aloud.		
★ Recognizes a word as a unit of print, or awareness that letters are grouped to form words, and that words are separated by spaces.		

★ Indicates the 4 specific Domain Elements and 9 Indicators that are legislatively mandated.

DOMAIN	DOMAIN ELEMENT	INDICATORS	
LITERACY (CONT.)	Early Writing	◆ Develops understanding that writing is a way of communicating for a variety of purposes.	
		◆ Begins to represent stories and experiences through pictures, dictation, and in play.	
		◆ Experiments with a growing variety of writing tools and materials, such as pencils, crayons, and computers.	
		◆ Progresses from using scribbles, shapes, or pictures to represent ideas, to using letter-like symbols, to copying or writing familiar words such as their own name.	
Alphabet Knowledge		◆ Shows progress in associating the names of letters with their shapes and sounds.	
		◆ Increases in ability to notice the beginning letters in familiar words.	
		★ Identifies at least 10 letters of the alphabet, especially those in their own name.	
		★ Knows that letters of the alphabet are a special category of visual graphics that can be individually named.	
MATHEMATICS	★ Number & Operations	◆ Demonstrates increasing interest and awareness of numbers and counting as a means for solving problems and determining quantity.	
		◆ Begins to associate number concepts, vocabulary, quantities, and written numerals in meaningful ways.	
		◆ Develops increasing ability to count in sequence to 10 and beyond.	
		◆ Begins to make use of one-to-one correspondence in counting objects and matching groups of objects.	
		◆ Begins to use language to compare numbers of objects with terms such as more, less, greater than, fewer, equal to.	
		◆ Develops increased abilities to combine, separate and name “how many” concrete objects.	
	Geometry & Spatial Sense		◆ Begins to recognize, describe, compare, and name common shapes, their parts and attributes.
			◆ Progresses in ability to put together and take apart shapes.
			◆ Begins to be able to determine whether or not two shapes are the same size and shape.
			◆ Shows growth in matching, sorting, putting in a series, and regrouping objects according to one or two attributes such as color, shape, or size.
	Patterns & Measurement		◆ Builds an increasing understanding of directionality, order, and positions of objects, and words such as up, down, over, under, top, bottom, inside, outside, in front, and behind.
			◆ Enhances abilities to recognize, duplicate, and extend simple patterns using a variety of materials.
◆ Shows increasing abilities to match, sort, put in a series, and regroup objects according to one or two attributes such as shape or size.			
◆ Begins to make comparisons between several objects based on a single attribute.			
SCIENCE	Scientific Skills & Methods	◆ Shows progress in using standard and non-standard measures for length and area of objects.	
		◆ Begins to use senses and a variety of tools and simple measuring devices to gather information, investigate materials, and observe processes and relationships.	
		◆ Develops increased ability to observe and discuss common properties, differences and comparisons among objects and materials.	
		◆ Begins to participate in simple investigations to test observations, discuss and draw conclusions, and form generalizations.	
		◆ Develops growing abilities to collect, describe, and record information through a variety of means, including discussion, drawings, maps, and charts.	
		◆ Begins to describe and discuss predictions, explanations, and generalizations based on past experiences.	

★ Indicates the 4 specific Domain Elements and 9 Indicators that are legislatively mandated.

DOMAIN	DOMAIN ELEMENT	INDICATORS
SCIENCE (CONT.)	Scientific Knowledge	◆ Expands knowledge of and abilities to observe, describe, and discuss the natural world, materials, living things, and natural processes.
		◆ Expands knowledge of and respect for their bodies and the environment.
		◆ Develops growing awareness of ideas and language related to attributes of time and temperature.
		◆ Shows increased awareness and beginning understanding of changes in materials and cause-effect relationships.
CREATIVE ARTS	Music	◆ Participates with increasing interest and enjoyment in a variety of music activities, including listening, singing, finger plays, games, and performances.
		◆ Experiments with a variety of musical instruments.
	Art	◆ Gains ability in using different art media and materials in a variety of ways for creative expression and representation.
		◆ Progresses in abilities to create drawings, paintings, models, and other art creations that are more detailed, creative, or realistic.
		◆ Develops growing abilities to plan, work independently, and demonstrate care and persistence in a variety of art projects.
	Movement	◆ Begins to understand and share opinions about artistic products and experiences.
		◆ Expresses through movement and dancing what is felt and heard in various musical tempos and styles.
	Dramatic Play	◆ Shows growth in moving in time to different patterns of beat and rhythm in music.
◆ Participates in a variety of dramatic play activities that become more extended and complex.		
SOCIAL & EMOTIONAL DEVELOPMENT	Self-Concept	◆ Shows growing creativity and imagination in using materials and in assuming different roles in dramatic play situations.
		◆ Begins to develop and express awareness of self in terms of specific abilities, characteristics, and preferences.
		◆ Develops growing capacity for independence in a range of activities, routines, and tasks.
	Self-Control	◆ Demonstrates growing confidence in a range of abilities and expresses pride in accomplishments.
		◆ Shows progress in expressing feelings, needs, and opinions in difficult situations and conflicts without harming themselves, others, or property.
		◆ Develops growing understanding of how their actions affect others and begins to accept the consequences of their actions.
	Cooperation	◆ Demonstrates increasing capacity to follow rules and routines and use materials purposefully, safely, and respectfully.
◆ Increases abilities to sustain interactions with peers by helping, sharing, and discussion.		
◆ Shows increasing abilities to use compromise and discussion in working, playing, and resolving conflicts with peers.		
		◆ Develops increasing abilities to give and take in interactions; to take turns in games or using materials; and to interact without being overly submissive or directive.

★ Indicates the 4 specific Domain Elements and 9 Indicators that are legislatively mandated.

		INDICATORS
SOCIAL & EMOTIONAL DEVELOPMENT (CONT.)	Social Relationships	◆ Demonstrates increasing comfort in talking with and accepting guidance and directions from a range of familiar adults.
		◆ Shows progress in developing friendships with peers.
		◆ Progresses in responding sympathetically to peers who are in need, upset, hurt, or angry; and in expressing empathy or caring for others.
	Knowledge of Families & Communities	◆ Develops ability to identify personal characteristics, including gender and family composition.
◆ Progresses in understanding similarities and respecting differences among people, such as genders, race, special needs, culture, language, and family structures.		
◆ Develops growing awareness of jobs and what is required to perform them.		
◆ Begins to express and understand concepts and language of geography in the contexts of the classroom, home, and community.		
APPROACHES TO LEARNING	Initiative & Curiosity	◆ Chooses to participate in an increasing variety of tasks and activities.
		◆ Develops increased ability to make independent choices.
		◆ Approaches tasks and activities with increased flexibility, imagination, and inventiveness.
		◆ Grows in eagerness to learn about and discuss a growing range of topics, ideas, and tasks.
	Engagement & Persistence	◆ Grows in abilities to persist in and complete a variety of tasks, activities, projects, and experiences.
		◆ Demonstrates increasing ability to set goals and develop and follow through on plans.
Reasoning & Problem Solving	◆ Shows growing capacity to maintain concentration over time on a task, question, set of directions or interactions, despite distractions and interruptions.	
	◆ Develops increasing ability to find more than one solution to a question, task, or problem.	
	◆ Grows in recognizing and solving problems through active exploration, including trial and error, and interactions and discussions with peers and adults.	
PHYSICAL HEALTH & DEVELOPMENT	Gross Motor Skills	◆ Develops increasing abilities to classify, compare and contrast objects, events, and experiences.
		◆ Shows increasing levels of proficiency, control, and balance in walking, climbing, running, jumping, hopping, skipping, marching, and galloping.
	Fine Motor Skills	◆ Demonstrates increasing abilities to coordinate movements in throwing, catching, kicking, bouncing balls, and using the slide and swing.
		◆ Develops growing strength, dexterity, and control needed to use tools such as scissors, paper punch, stapler, and hammer.
		◆ Grows in hand-eye coordination in building with blocks, putting together puzzles, reproducing shapes and patterns, stringing beads, and using scissors.
	Health Status & Practices	◆ Progresses in abilities to use writing, drawing, and art tools, including pencils, markers, chalk, paint brushes, and various types of technology.
		◆ Progresses in physical growth, strength, stamina, and flexibility.
		◆ Participates actively in games, outdoor play, and other forms of exercise that enhance physical fitness.
		◆ Shows growing independence in hygiene, nutrition, and personal care when eating, dressing, washing hands, brushing teeth, and toileting.
		◆ Builds awareness and ability to follow basic health and safety rules such as fire safety, traffic and pedestrian safety, and responding appropriately to potentially harmful objects, substances, and activities.

★ Indicates the 4 specific Domain Elements and 9 Indicators that are legislatively mandated.

### III. FREQUENTLY ASKED QUESTIONS ABOUT THE HEAD START CHILD OUTCOMES FRAMEWORK

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To help education leaders fully understand what the Framework means for a Head Start program, here are responses to the most frequently asked questions about the Framework and the new accountability requirements (see pages 10-14).

#### **Why is The Head Start Child Outcomes Framework needed?**

Head Start has always taken the lead in early childhood education by operating according to a set of national Program Performance Standards. They describe what programs are required to do in early childhood development and health services, family and community partnerships, and program design and management.

*The new emphasis in the Child Outcomes Framework is on what programs are required to accomplish for children.* Head Start parents, teachers, home visitors, and administrators—as well as the nation’s policymakers and citizens—want to know that what is happening in Head Start is benefiting children. Keeping track of children’s progress toward accomplishing positive child outcomes helps assure that all children benefit fully from their participation in the program.

What is an outcome?  
Is the Framework  
a curriculum?

#### **What is an outcome?**

An outcome is a learning or developmental goal. It is a long-term goal. The Head Start Child Outcomes Framework explicitly states the goals toward which preschool children should be progressing over the course of their participation in the Head Start program. When outcomes are measured, it is assumed that outcomes are changes in children’s learning and behavior related to their participation in the program. These are referred to as gains.

#### **Are all children expected to achieve all the outcomes at the same time?**

No. Children learn and develop at different rates and in different ways. They bring different levels of prior learning to their Head Start experiences. However, groups of children should demonstrate significant progress toward the outcomes during their participation in preschool Head Start. The outcomes are not fixed points of progress.

#### **Is the Child Outcomes Framework a curriculum?**

No. The Child Outcomes Framework describes long-term goals while curricula guide programs in how to get there. The Framework provides guidance for programs in selecting, developing, planning, and adapting curricula. A curriculum goes beyond goals or outcomes to describe a cohesive framework with a strong philosophical base that guides learning experiences, materials, teaching strategies, and roles of adults. Program personnel need to be sure that their written curriculum is comprehensive enough to address all the areas of the Framework yet specific enough to help children achieve desired outcomes.

**Is the Child Outcomes Framework an assessment?**

No. The Framework itself is not a checklist or tool for assessing children's learning. However, it can and should be used to make decisions about assessment tools that the program will use to determine children's progress and to inform teaching. Assessment tools are often designed to relate to specific curricular approaches.

**Does the Framework apply to children with disabilities?**

Yes. As with every dimension of Head Start, children with identified disabilities are fully included in the child outcomes, with appropriate accommodations for instruction and assessment. Programs will want to collect information on the progress toward child outcomes of children with disabilities. In addition, specific outcomes from the Framework will be included in children's Individualized Education Programs (IEPs).

**Does the Framework apply to Early Head Start?**

No. Because the Framework describes outcomes for children entering kindergarten, it does not apply directly to Early Head Start. However, achieving the outcomes by kindergarten entry is the result of cumulative experiences that begin at birth. Programs are required to have a written curriculum that provides developmentally appropriate experiences for all Early Head Start and Head Start children that build the necessary foundations for later learning. Many of the practices described here are appropriate for infants and toddlers as long as they are adapted for the age, abilities, interests, and experiences of the children—that is, as long as they are developmentally appropriate. For example, reading to children should begin in the first months of life, using age-appropriate board books (Barclay, Benelli, & Curtis 1995; Barclay and Benelli 1997). Essential language development occurs during the first three years of life that lays the foundation for all later learning. Relationship building in the earliest years supports not only social and emotional development but also the foundation for all other areas of development.

**Does the program have to address all the Indicators in the Framework?**

No. The Indicators are examples that help describe the outcome areas of the Framework. Other examples can be cited. However, the Domain Elements and Indicators that are starred ★ are required by legislation to be assessed through the National Reporting System (NRS). Programs must address all the Domains and Domain Elements in their curriculum. At a minimum, programs must demonstrate that children are making progress toward the legislatively mandated child outcomes and include them in their local assessments.

**Are the Head Start Program Performance Standards in use along with the Child Outcomes Framework?**

Yes. The Program Performance Standards (2002) include specific requirements regarding many aspects of Head Start. They specify requirements related to initial screening of children, child observation and ongoing assessment, and written curriculum. The Framework

provides a consistent set of child outcomes that are supported by other aspects of the educational program described in the Program Performance Standards.

### **Does a Head Start program set individual goals for children in addition to the long-term goals specified in the Framework?**

Yes. For each Head Start child, there are short-term goals based on their unique developmental status and progress. They represent the “next steps” for a child in working toward the long-term goals specified in the Outcomes Framework. For example, in the Literacy Domain, specifically in the area of alphabet knowledge, one 4-year-old’s short-term goal is to learn the first letter of her name. For another 4-year-old, who already knows the letters in her name, the immediate goal is to help her recognize those same letters in other words. The individual, short-term goals are based on observations of the child and other forms of assessment by the Head Start staff and parents. Learning experiences that are part of the curriculum are planned to help children reach their individual goals. As a child shows progress, the short-term goals are revised. The long-term goals are the learning outcomes in the Framework and they remain the same for all Head Start children who will enter kindergarten.

### **Does the Framework prescribe teaching strategies?**

No. The Framework specifies the learning outcomes for children – the destination – but not how to get there. Along with a Head Start’s program curriculum, this *Guide* provides something of a road map. It suggests instructional strategies that teachers and home visitors can apply to each of the 8 Domains of the Framework (see pages 32-111). These strategies can be implemented across a variety of different comprehensive curricula that are currently used in Head Start settings.

### **Does the Framework indicate that the teacher’s role has changed?**

No. The teacher’s or home visitor’s roles are unchanged, but some aspects are emphasized even more under the Framework (see pages 24-26). Working with parents, Head Start educators will need to make educational decisions based on their understanding of the Framework and incorporating what they know about child development and learning; about the strengths, interests, and needs of individual children in the group; and about the social and cultural contexts in which the Head Start children live (Bredekamp & Copple 1997).



## IV. SEEING THE BIG PICTURE IN HEAD START

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Even with the emphasis on the Child Outcomes Framework and the National Reporting System (NRS), the basics of Head Start's education program remain the same. Young children need to talk, create, pretend, sing, move around, hear stories, quarrel, and learn to resolve their conflicts. The tried-and-true methods that good early childhood teachers use are as important as ever. The organization and rhythm of the preschool day remain much the same.

The traditional emphasis on developmentally appropriate practices also continues. Developmentally appropriate practices are ways of teaching children that are based on what is known about children's learning and development, about individual children, and about the social and cultural context in which children live (Bredekamp & Copple 1997). Because knowledge about all three dimensions is always changing, the understanding of developmentally appropriate practices also changes. Developmentally appropriate teaching practices vary with the age, experience, interests, and abilities of individual children. So teachers must regularly observe and assess individual children to know how to provide developmentally appropriate teaching experiences.

Teachers should continue to use a variety of teaching strategies. Appropriate teaching practices may be seen as varying along a continuum from least directive to most directive (Bredekamp & Rosegrant 1992, see chart on page 20). Less directive strategies include acknowledging, modeling, and facilitating. More directive strategies include scaffolding and instructing. Research demonstrates that many different teaching strategies are effective. Based on extensive review of existing research, the Committee on Early Childhood Pedagogy concludes:

Good teachers acknowledge and encourage children's efforts, model and demonstrate, create challenges and support children in extending their capabilities, and provide specific directions or instruction. All of these teaching strategies can be used in the context of play and structured activities. Effective teachers also organize the classroom environment and plan ways to pursue educational goals for each child as opportunities arise in child-initiated activities and in activities planned and initiated by the teacher (Bowman, Donovan, & Burns 2001, 10-11).

While much remains unchanged in Head Start, there are exciting visions of what Head Start can become to ensure that all children in the program receive the foundation to succeed in school and life.

While much remains unchanged in Head Start, there also are exciting visions of what Head Start can become. Research over the last two decades offers insight about the skills and knowledge children need for future success. As a result, much more is known about how to ensure that all children in Head Start get the right foundation to succeed in school and life.

**CONTINUUM OF TEACHING BEHAVIORS**

NONDIRECTIVE		MEDIATING			DIRECTIVE		
Acknowledge	Model	Facilitate	Support	Scaffold	Co-construct	Demonstrate	Direct
give attention and positive encouragement to keep a child engaged in an activity	display for children a skill or desirable way of behaving in the classroom, through actions only or with cues, prompts, or other forms of coaching	offer short-term assistance to help a child practice in developing a skill (as an adult does in holding the back of a bicycle while a child pedals)	provide a fixed form of assistance, such as displaying the alphabet near a writing center for children to refer to	set up challenges or assist children to work "on the edge" of their current competence	learn or work collaboratively with children on a problem or task, such as building a model or block structure	actively display a behavior or engage in an activity while children observe the outcome	provide specific directions or instructions for children's behavior within narrowly defined dimensions of error

*Based on Bredekamp & Rosegrant 1992.*

Based on such knowledge, here are five guidelines for teaching teams in Head Start programs. Although none of these guidelines is entirely new, each receives greater attention as Head Start moves into this new era of accountability.

**1. USE THE CHILD OUTCOMES FRAMEWORK AND A WELL-DESIGNED CURRICULUM TO PLAN AND INDIVIDUALIZE IN ALL DOMAINS.**

What should children leaving Head Start know and be able to do? The Child Outcomes Framework answers that question in terms of the big ideas, the important achievements in each area of school readiness.

All early childhood programs should have goals that guide curriculum planning, teaching, and assessment of children's learning. The Child Outcomes Framework in Head Start provides a comprehensive set of research-based learning and development goals. Accordingly, Head Start administrators, education leaders, Early Literacy Mentor Coaches (ELMCs), teachers, assistant teachers, home visitors, family child care teachers, and parents plan learning experiences that increase in complexity with those goals in mind. They also assess children's progress toward the outcomes and adapt teaching and

learning experiences when children are not making progress. The Child Outcomes Framework provides structure for aligning curriculum, assessment, and teaching.

Too often in the early childhood setting, learning experiences are not planned within a comprehensive curriculum. Without curriculum-based planning, even interesting and appropriate experiences are unlikely to add up to a meaningful whole. More than they have in the past, Head Start education managers must convey to teachers the importance of content and sequence in the education program. Research has shown that children typically need to focus on a new idea or skill in some depth to understand it and to put it to use (Bowman, Donovan, & Burns 2001). Familiarizing staff with the key content and processes in each Domain and how these build on one another is a big job and a vital one.

Thus, teachers must do careful planning, assessment, and follow-through, shaping the curriculum to allow children to learn effectively. Education managers must actively support teaching teams' work by providing leadership and ensuring that they get high quality professional development. Mentor-Coaches contribute to child outcomes by modeling and coaching teaching staff behaviors, as well as challenging them to grow intellectually by introducing new readings and ideas. Teaching staff also need curriculum resources and training on how to use them to the best advantage.

**2. BE PLANFUL AND INTENTIONAL IN INTERACTING WITH CHILDREN AND CREATING LEARNING EXPERIENCES TO ACHIEVE DESIRED CHILD OUTCOMES.** In everything teachers plan and do in the Head Start education program, they need to be highly intentional. That is, they need to work with the outcomes for children in mind and consciously seek out every opportunity to help children achieve these outcomes—through the learning experiences they plan, the ways they interact with children, and the ways they create and regularly modify the environment.

Group time, active involvement in learning centers and play, meals and snacks, outdoor play, and story reading are still important. But now, even more than in the past, teachers need to plan carefully for learning opportunities in all of these times and places, using the child outcomes to guide their planning and teaching across the curriculum. For example, early childhood educators have always known the value of reading and singing with children and the benefits of dramatic play. Now more is known about specific strategies to make these experiences even richer and more productive for achieving particular goals for children.

To promote language and literacy, for example, teachers need to make intentional use of proven strategies in familiar activities such as story reading, singing together, and dramatic play (such as those as described under Domains 1 and 2 of this *Guide*). They supply literacy-related props to play areas. They choose songs and games that extend children's phonological awareness. They ask questions and make comments to focus children's attention on the things they want them to learn. They also work with small groups of children so each one can be actively involved and participate in the learning experience. In these ways, Head Start teachers further children's progress in all Domains.

## Small-Group Learning Experiences in the Real World? FOUR IDEAS THAT WORK

The teaching team in the Head Start classroom—teacher and assistant teacher—have 16 to 18 children to think about. So how do they manage to carry on focused learning experiences with small groups or work with individual children? Here are four ways to go about it, and creative Head Start teaching teams can think of others.

### **1 Plan a focused learning experience that children come to in groups during choice/free play time.**

Fairly common in early childhood classrooms is for teachers to plan a particular learning experience for the children to visit during their choice time. To increase the value of these experiences, teachers need to give careful thought to the focus of each activity and to the sequence of experiences over time. Children can come to the small group as space permits (for instance, no more than three at a time), or the teacher may invite the group of children by name.

### **2 Divide the group to make small-group learning experiences more feasible.**

One adult takes half the children—eight, let's say—to the music room or on the playground, and the other adult is with the other children in the classroom. While four of the latter build in the block area or draw in the art area, the teacher works with the other four children in a focused experience for about 15 minutes. The two groups switch, and the teacher works with the other four children. Then the children in the classroom go out and the others come in, and the cycle repeats itself.

### **3 Get double value from having classroom volunteers.**

An extra adult in the classroom makes a big difference. One teacher can do focused work with small groups while the other adult is

available to the other children. In some Head Start programs, parents, grandparents, college students, or older children come in regularly to read with the preschoolers. During these times one or both of the teachers can do small-group learning experiences.

### **4 Use various times in the children's day for small groups and other learning experiences.**

During breakfast or lunch, perhaps several times a week, put place cards for four children at a special table with the teacher—sitting at the “Teacher’s Table” becomes an eagerly anticipated privilege. Besides talking pleasantly with the children, the teacher may incorporate a learning experience in the area she is focusing on—perhaps an idea relating to pattern or one-to-one correspondence, or observation and discussion of what happens when the juice is poured from a tall, thin pitcher to a short, fat one.

Even the bus ride to and from Head Start can be a learning experience. One Head Start bus driver stopped the bus at intervals to allow the children, with the guidance of the bus aide, to take pictures with a camera they had learned to use in the classroom. The next day the children from the bus told their classmates about what they had seen on their route, passing around photographs to show what various things looked like. Then they worked together to make a book called “Our Ride to School.”

### **3. PAY ATTENTION TO WHAT CHILDREN NEED TO KNOW AND BE ABLE TO DO TO SUCCEED IN SCHOOL.**

Recognizing that early experiences shape children's prospects in school and beyond has always been fundamental to Head Start. Now the growing research base spells out more fully the kinds of experiences needed to achieve these important outcomes. As vital as ever are children's health, social competence, and sense of their capacity to learn and achieve. Among the areas to receive greater emphasis are vocabulary and language proficiency, literacy knowledge and skills, and key mathematics and science concepts.

### **4. REGULARLY ENGAGE CHILDREN IN FOCUSED, SMALL-GROUP EXPERIENCES TO PROMOTE THINKING PROCESSES AND CONCEPT LEARNING.**

Day by day and week by week, teaching teams should be thinking about the key ideas to introduce and explore with children. Because small groups are such an appropriate way to focus children's attention on a particular idea, they should be used more often in Head Start classrooms. The logistics can seem daunting with only two adults in the classroom, but there are a variety of strategies to make small-group work practical (see page 22, Small-Group Learning Experiences in the Real World).

Working with children in small groups expands the teaching team's opportunities to observe and involve each child actively. With a small group, a teacher is better able to provide support and challenges tailored to the children's individual levels. She can give clues, ask follow-up questions, and notice what every child is able to do and where each has difficulty. Small groups make it possible for each child to participate often, thus eliminating long waits for a turn. An added plus of small groups is the high amount of verbal exchange, so critical for children in Head Start.

### **5. REFLECT ON THE TEACHER'S ROLE.**

In order to help children achieve positive outcomes and get ready for school, the Head Start teaching team needs to think about what they do well and what they can do even better. The following tables (on pages 24-26) highlight what needs to be emphasized as teachers A) create the environment, B) use routines, C) plan focused activities, D) support and extend play, and E) integrate all Domains throughout the curriculum. By re-examining aspects of their teaching practices, the teaching team will be promoting their own professional growth as well as the development and learning of the Head Start children.

## ***A. CREATE THE ENVIRONMENT***

so that children are comfortable, engaged, and continually learning in all Domains.

Within a carefully planned curriculum and learning environment—set up with areas and materials much like those found in Head Start settings now—the teaching team will make some important additions.

### **CONSISTENTLY...**

Carefully plan the environment, typically arranging and provisioning a number of centers with materials for block building, dramatic play, reading, and other activities. Children find the setting interesting and comfortable; it reflects their varying developmental levels and cultural, linguistic, and family backgrounds. Teachers regularly change materials to support children's optimal development and learning.

### **DO MORE...**

Enriching all areas with materials to promote learning and development in Domains such as literacy, science, and mathematics, for example, offering literacy-related props in the block and dramatic play areas.

Making thoughtful changes to the materials over the days and weeks to add interest and to support topics and skills in the curriculum.

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## ***B. USE EVERYDAY ROUTINES***

such as snack and mealtimes, cleanup and other transitions, circle times (with regular activities such as story reading, singing, talking about shared experiences) to further outcomes in all Domains.

Routines will remain an important part of the Head Start day.

### **CONSISTENTLY...**

Plan effective and supportive routines that are consistent enough for children to feel comfortable because they know what to expect, and flexible enough to be adapted to day-by-day teaching goals and unexpected learning opportunities.

### **DO MORE...**

Incorporating into routines all areas of the curriculum from physical and social development to mathematics and literacy.

Adapting routines to acknowledge and build on children's individual differences in experiences and development.

## C. PLAN FOCUSED ACTIVITIES

that engage children, often in small groups, in teacher-led learning experiences that challenge the children to build skills and understanding.

Many Head Start programs have not encouraged teacher-directed, small-group activities in which the adult works with the children and focuses on a particular concept. Such teaching, along with ample opportunity for self-directed play and investigation, enhances children's learning.

### CONSISTENTLY...

Interact with children informally to foster their thinking and learning. They engage small groups of children in activities such as games in which the participants learn and practice certain concepts and skills.

### DO MORE...

Small-group learning experiences that focus on key knowledge and understandings in depth (these may be created or chosen and adapted from the program's curriculum and other teaching resources).

Using the full range of teaching strategies from direct instruction to open-ended questions to enhance each child's thinking and learning, choosing the most appropriate strategies for each goal and for individualizing.

## D. SUPPORT AND EXTEND PLAY

as a powerful vehicle for young children's learning and development in all Domains.

During children's play, teachers will take active roles—observing, supporting, modeling, interacting—to enhance children's play skills and to optimize the benefits they get from it.

### CONSISTENTLY...

Schedule uninterrupted periods of time to enable children to get deeply involved in play. Arrange and equip the room to provide spaces and materials suited to various kinds of play. Provide materials that reflect a range of cultures, including all those of the children in the group.

### DO MORE...

Strategic teacher and assistant teacher involvement to introduce fresh possibilities and enable children to take the play a little farther.

Modeling and scaffolding dramatic- or block-play skills for children with limited play competence ("Let's pretend this is a hammer and we're fixing the fence").

Enhancing all play areas with props to promote learning in literacy, mathematics, science, and other Domains (signs with logos and other print in the block area).

## ***E. INTEGRATE ALL DOMAINS THROUGHOUT THE CURRICULUM***

The Child Outcomes Framework provides clear guidance as to the knowledge and skills in each Domain that are most important to integrate. Now education leaders and teachers have a clear outline of the big ideas and foundational knowledge and skills to weave through the curriculum. They will choose, adapt, and develop curriculum and teaching strategies to help children attain these outcomes.

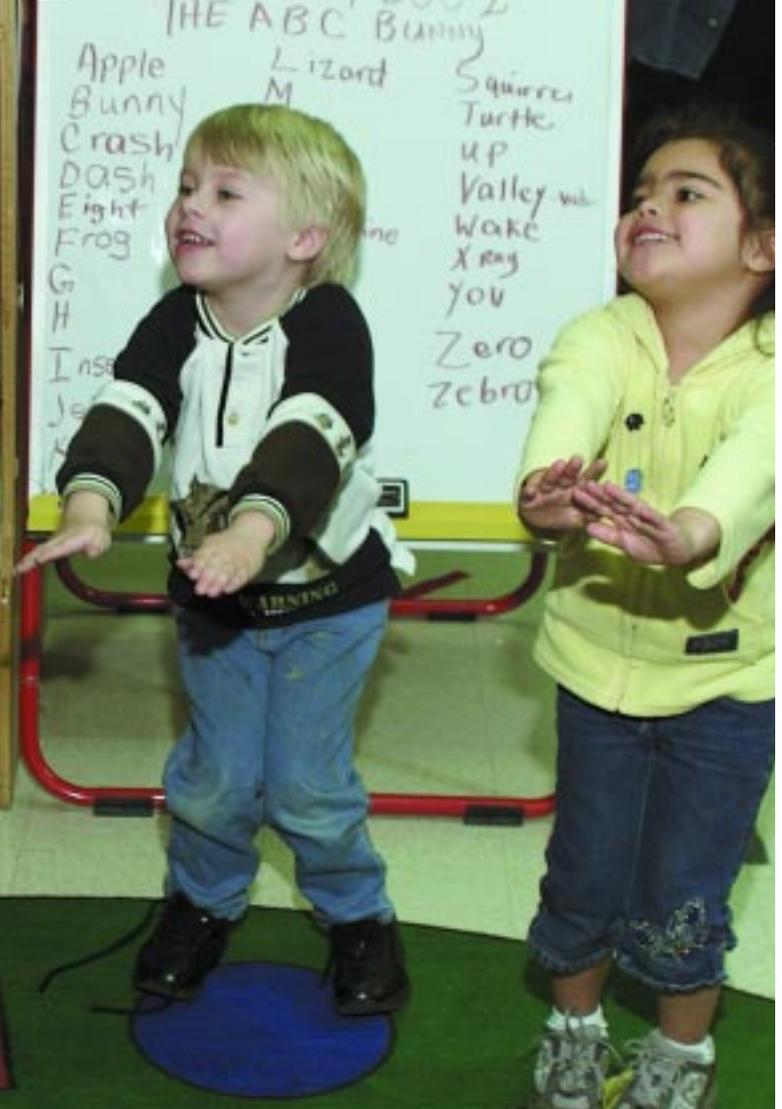
### **CONSISTENTLY...**

Curriculum is integrated across learning Domains. Children learn through active engagement in projects, learning centers, play, and other activities that interest them. For example, when they build and operate a store or set up and care for an aquarium, children develop and represent their plans; discuss what they are doing; negotiate and cooperate with each other; classify, compare, measure, count; and solve problems.

### **DO MORE...**

Enriching the learning throughout the day by intentionally extending children's ideas, engaging them in conversation, and challenging their thinking.

Small-group learning experiences focused on key outcomes together with intentional teaching—throughout the environment and the day—for children to build and practice these ideas and skills.





## V. WHAT IT LOOKS LIKE: EFFECTIVE TEACHING PRACTICES FOR SUPPORTING CHILDREN'S LEARNING AND DEVELOPMENT

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The learning and developmental outcomes listed in the Head Start Child Outcomes Framework are goals for all children to progress toward during their participation in the Head Start program. In this section of the *Guide*, each of the 8 learning Domains is addressed to help education leaders get a more detailed picture of what happens every day in a program committed to helping children achieve these positive outcomes.

Each Domain and Domain Element is described, and an explanation is given as to why they are important. Understanding the rationale for each aspect of the Child Outcomes Framework is essential if education leaders, Early Literacy Mentor-Coaches (ELMCs), teachers, assistant teachers, home visitors, family child care teachers, and other staff are to be fully committed to achievement of the outcomes. Also included in each section are examples of effective teaching strategies that help children achieve the desired outcomes. Because the 1998 Head Start reauthorization legislation mandates—that is, requires by law—that programs demonstrate children's progress in certain

Head Start teachers need to plan learning experiences and use teaching strategies in a thoughtful and intentional way in each Domain.

Domain Elements and Indicators, these are addressed in somewhat greater detail. The Child Outcomes Framework also affirms the importance of a number of Domains and outcomes not specifically addressed in legislation, and these are discussed as well.

The suggested effective teaching strategies that are listed under each Domain are by no means the only practices that are of value. The main point is: *The teaching team needs to plan learning experiences and use teaching strategies in a thoughtful and intentional way in each Domain.* Teachers also must regularly track children's progress in achieving the desired learning outcomes and adapt teaching strategies or learning experiences when children are not making expected progress. (A description of research-based adaptations for children with special needs, gifted children, or an individual child who is not making expected progress appears on pages 112-119.)

All the learning outcomes in the Child Outcomes Framework matter, and each needs attention in the early childhood curriculum. Because the Domains are so interrelated and the early childhood curriculum lends itself to integration across Domains, many teaching strategies appear in several Domains. This redundancy is deliberate in order for teachers to see that good learning experiences can meet many different objectives. For

example, storybook reading could promote listening and understanding, vocabulary, phonological awareness, alphabet knowledge, print awareness, knowledge in a subject area such as science or math, and even social problem-solving skills. Dramatic play can support language development, understanding of narrative and functions of print, social skills, problem solving, emotional self-control, and many other important learning outcomes. Good learning experiences often promote outcomes across multiple Domains.

Even though there is considerable connection between Domains, progress in one area does not ensure progress in another. At times, it may be helpful to focus on learning in relation to a specific Domain Element or Indicator. At other times, it is better to integrate teaching and learning experiences across Domain Elements.



*THE HEAD START CHILD OUTCOMES FRAMEWORK*  
*DOMAIN 1: LANGUAGE DEVELOPMENT*

DOMAIN	DOMAIN ELEMENT	INDICATORS
LANGUAGE DEVELOPMENT	Listening & Understanding	◆ Demonstrates increasing ability to attend to and understand conversations, stories, songs, and poems.
		◆ Shows progress in understanding and following simple and multiple-step directions.
		★ Understands an increasingly complex and varied vocabulary.
		★ For non-English-speaking children, progresses in listening to and understanding English.
	Speaking & Communicating	★ Develops increasing abilities to understand and use language to communicate information, experiences, ideas, feelings, opinions, needs, questions; and for other varied purposes.
		◆ Progresses in abilities to initiate and respond appropriately in conversation and discussions with peers and adults.
		★ Uses an increasingly complex and varied spoken vocabulary.
		◆ Progresses in clarity of pronunciation and towards speaking in sentences of increasing length and grammatical complexity.
★ For non-English-speaking children, progresses in speaking English.		

★ *Legislatively mandated.*

**A**mong the most important tasks of the first five years of life is the development of language. Children’s language ability affects learning and development in all areas. Language strongly predicts later success in learning to read and write (Snow, Burns, & Griffin 1998). Children who are skilled communicators are likely to demonstrate better social competence and school readiness.

Because children seem to learn language naturally, adults often assume that it is simply the product of maturation. But it is not. Children’s language development does tend to follow a similar pattern—beginning with cooing and babbling and moving to words and sentences. But like all areas of development, learning to communicate is the result of cumulative experiences from birth on (Weitzman 1992). Children gradually learn language over many years from verbal interaction with adults and other children. And most important, preschool-aged children are already experienced users of language. In fact, during the preschool years, language develops far more rapidly than at any other time. Because the language children use is acquired in the context of their home and cultural communities, it may differ from the language used in the Head Start or child care setting. Finally, language learning is far from complete when children enter kindergarten. Human beings continue to learn language throughout school and life.

Children’s language ability affects learning and development in all areas. Language strongly predicts later success in learning to read and write.

The Head Start learning outcomes in Domain 1 include two kinds of language.

- Receptive language is understanding what is being said by others.
- Expressive language is children’s use and knowledge of spoken language—in other words, their ability to communicate.

The desired learning outcome is to increase both the quantity and quality of children’s receptive and expressive vocabulary. It is not enough that children speak a lot. We must pay attention to the range of words they understand and use—the vocabulary, which is the number of words a person knows when listening or speaking, and the use of pronouns, prepositions, adverbs, adjectives, and other parts of speech. Another important element of language development is the complexity of sentence structure—in other words, the syntax or grammar that children use. A related learning goal is for children to begin to acquire the “scripts” that people use to communicate in different settings. For example, what the doctor says is different from what the grocery clerk says, and the way one talks during circle time is different from the way one talks outside on the playground.

Children are developing language and early literacy skills during roughly the same period, and the two are interrelated (Dickinson & Tabors 2001). Reading to children enhances their language development, especially vocabulary, because the structures and words used in books are more varied than those in speech. Knowing more words, in turn, helps children make sense of print and find what they read more meaningful and interesting. And talking with children about what is read, further boosts both vocabulary and comprehension.

#### **DOMAIN ELEMENT: LISTENING & UNDERSTANDING**

Receptive language skills—listening and understanding—tend to develop earlier than the expressive abilities of speaking and communicating. In other words, at any point in time children understand more words and more advanced structures than they use themselves. This is also true for English language learners who understand what is being said in the second language (English) but are not yet speaking it. Research from the Family and Child Experiences Survey (FACES) shows that although Head Start children make more progress than the typical child in acquiring receptive vocabulary, they still fall short of national averages (ACYF 2001). Because of its enormous importance and because it is an area that needs strengthening among many children who grow up in poverty, receptive language development needs to be a major focus of teaching and learning experiences in Head Start programs.

*★Indicator: Understands an increasingly complex and varied vocabulary.*

*★Indicator: For non-English-speaking children, progresses in listening to and understanding English.*

Receptive Vocabulary—the number of different words that children know and understand—is one of the most powerful predictors of children’s success in learning to read and write and in their later comprehension of what they read. The more words a child understands, the more easily she can use contextual clues to help her read new words. Receptive vocabulary may be viewed as the labels for concepts that we are learning, as well as for those we already know and understand. Young children typically think out loud, with interpersonal language coming before internal thought (Vygotsky 1978). So the more limited the vocabulary, the more limited the child’s conceptual understanding of the world.

Not only does vocabulary affect children’s learning and achievement, research shows that by the preschool years, there are already dramatic differences in the size and scope of children’s vocabularies, especially when children from low-income families are compared with their middle class peers (Hart & Risley 1995). These differences must be addressed and reduced early on to improve children’s prospects because verbal language is so critical to learning in and out of school.

## STRATEGIES

**To promote listening to and understanding an increasingly complex vocabulary**

- Model good listening such as maintaining eye contact and expressing interest in the speaker.
- Play listening games with children. For example, place items in a mystery box for children to identify from clues, and play matching sounds, lotto, and treasure hunt games where children must listen to and follow a series of directions. Games such as “Simon Says” offer opportunities for children to learn specific concepts.
- Build children’s auditory discrimination skills by playing games where the same/different sounds of words are highlighted.
- Provide new and different experiences that expand receptive vocabulary like field trips, visitors, and objects to explore. Afterward, have children describe their experiences in their own words to see what they understand and what new words they’ve learned.
- Provide a rich and varied curriculum incorporating science, mathematics, social studies and other areas of study that expand children’s conceptual understanding and listening vocabulary.
- Read to children every day with the express purpose of enhancing their vocabulary and listening skills. Regularly read in small groups of three to six to ensure children’s active participation. During small group reading, children tend to learn more vocabulary and comprehend the story better.
- Use children’s interests, such as trains or trucks, to identify new words—locomotives, caboose, and dining car, or 18 wheeler, tanker, and pick-up.
- Choose stories or books with rich vocabulary and uncommon words, such as those that preschool children may not hear or use regularly. Take a minute before reading to explain a few of the words that will be new for most children. Point out the new words as they appear in the text.
- Use the strategies that are identified in the next section under speaking and communicating.

**DOMAIN ELEMENT: SPEAKING & COMMUNICATING**

This Domain Element refers to expressive language—children’s ability to express their ideas and feelings in words. Children’s growing ability to communicate with other people during the preschool years is directly linked to their learning in general and to their development in other areas, particularly social relationships and emotional development.

*★Indicator: Develops increasing abilities to understand and use language to communicate information, experiences, ideas, feelings, opinions, needs, and questions; and for other varied purposes.*

*★Indicator: Uses an increasingly complex and varied spoken vocabulary.*

*★Indicator: For non-English-speaking children, progresses in speaking English.*

Beginning in the earliest years of life, children need to engage with adults in extended, responsive conversation about interesting and engaging topics. The first three years of life are especially critical to language development, including the time before children them-

selves begin talking. For infants and toddlers, teachers adjust their talk to the child's level, responding to and expanding the child's vocalizations and language attempts. During the preschool years, language development explodes, if it is well supported by adults. These are the years when extended, interactive conversation is especially important. Children need to engage in one-to-one conversations with more accomplished speakers of the language, and they need something interesting to talk about (Dickinson & Tabors 2001). The primary sources for such conversation are personal and family events, everyday classroom experiences and routines (such as mealtimes), play, and curriculum content. Preschool children should have curriculum topics of study that provide them with interesting things to think and talk about, including science, social studies, mathematics, literature, creative arts, and other subject areas.



### **To enhance children's ability to communicate and to use an increasingly complex and varied vocabulary**

- Engage in one-to-one, extended conversations with individual children about their personal experiences or events in the program.
- Respond to children's speech with expansions and questions that point out causes and consequences.
- Introduce new words, including the kinds of multi-syllable words that are not typically part of a preschooler's vocabulary. Use new words numerous times and observe to see if children begin to use them appropriately.
- Engage children in conversations about events, experiences, or people that are beyond the here and now—events from the past, the future, or children's imaginations (in other words, decontextualized speech). Such interaction requires children and adults to use more complex and varied vocabulary in explanations, descriptions, narratives, dialogue, and pretend talk.
- Talk about a book you are going to read to children before reading it, asking them to predict from the title or cover what the story will be about or what might happen next.
- Talk with children after reading a story; ask them to retell the story or act it out. Encourage them to talk about the characters and events, answering their questions and responding to their comments.
- Write down children's messages to parents or others, dictations for language experience charts, or stories, and read them back.
- Provide dramatic play areas, props, materials, and themes that encourage talking and listening, such as office, post office, bookstore, restaurant, library, supermarket, medical clinic, and construction site.
- Participate in play to get it going if children have difficulty or to extend it to include more language interaction. For instance, the teacher may enter the restaurant and pretend to be a customer: "Could I see a menu please. I'd like to order dinner." In play, children naturally try to imitate adults and their language becomes more complex and sophisticated. They need many opportunities to practice such verbal interaction with other children and occasionally with adults. (See examples of teaching behaviors in chart on page 20.)
- Get in the habit of giving children plenty of time—five seconds or so—to respond to a question or

conversational comment. Adults rarely allow sufficient time for children to respond, rushing ahead to answer for them or going on to a different question. The simple act of providing wait time increases children's verbal responses, especially for children who tend to speak less often.

- Plan in-depth projects with children to investigate questions or topics of interest that expand vocabulary and provide opportunities for extended discussion and different points of view.
- Encourage parents to talk with and read or tell stories to their children at home.
- Invite parents, older siblings, and other family members to talk with the group about special events or home experiences of all kinds.
- Provide good language models for children. If possible, model standard grammatical speech in the child's home language. Recognize that many of children's errors in English ("I wented there," or "I saw three sheeps") show their efforts to learn a rule, like the ed of the past tense, which they overgeneralize. Instead of correcting the child, pick up on what he says but say it correctly. For example, a child may say, "I gots two foots" and the teacher replies, "Yes, you have two feet so you need two socks."

***★Indicator: For non-English-speaking children, progresses in listening to and understanding English.***

***★Indicator: For non-English-speaking children, progresses in speaking English.***

In Domain 1, Language Development, the Child Outcomes Framework includes two legislatively mandated Indicators that relate to children who are English language learners. Defining these learning outcomes is difficult in specific terms. What "progress" looks like varies greatly with individual children, their level of language acquisition and proficiency in their home language, and their prior and current exposure to English.

Children's "progress" also depends on the context within which they are being served. That is, some Head Start programs are monolingual; others are bilingual and use English and one other dominant language such as Spanish. Some programs may have many languages in one classroom—even as many as 10. These Head Start programs may use some English as a Second Language (ESL) principles where the main language for interactions with children and families is English. These programs may also provide regular contact with other children or adults in the classroom who speak the home languages.

Whatever the situation, the multicultural principles embodied in the Head Start Program Performance Standards (2002) require that programs support children's home language and culture as they acquire English. This helps provide a sense of continuity between home and the classroom for the children served and allows them to feel connected to their family and culture so the process of ongoing communication in their home language is not interrupted or lost. A strong foundation in children's home language can transfer over to their capacity to learn English with less difficulty. To achieve bilingualism, the process of second language acquisition—in this case, English—must be "additive." That is, learning a second language should not mean losing the first. The goal is to create learning environments in Head Start programs that are "additive, not subtractive."

All children in our society need to acquire English for success in school and in life. But they can become proficient without losing their home language (Cummins 1979; Wong Fillmore 1991; Tabors 1997). What is key is for teachers to communicate with parents about this issue. Head Start teachers can help parents make informed decisions about language usage in the home. They need to be aware that focusing exclusively on English acquisition at a very early age might mean that children will give up their home language. If parents do not speak English well and their children lose the home language, serious communication and relationship problems are likely to occur (Wong Fillmore 1991). Teachers should especially encourage parents to speak to children and read or tell stories to them in whatever language the parent is most comfortable, as an important means of helping to achieve the other desired language and literacy outcomes. Strengthening children's home language experiences may be considered a short-term goal that will help them progress toward the long-term goal of understanding and communicating in English.

Assessing English language learners' language development requires special tools and expertise. Perhaps the most effective strategy for assessing second language learning is for teachers to observe carefully and interact regularly with English language learners. No assumptions about children's competence or intellect should be based on measures in a language in which children are not fluent. Assessing children in the language they know best is most effective.

Too many English language learners are judged to be language delayed when they are actually demonstrating typical stages of second language development. Children often experience a silent period of several months during which they speak neither language. Parents and teachers might be concerned at such times that children are not progressing, or even that they are losing ground. In fact, this silent period—the length varies—may be followed by experimentation in the new language.

There is a relatively predictable sequence of second language acquisition, but we need to bear in mind that English language learners are individual children who differ just as English-speaking children do. They vary in temperament, ability, interests, and many other dimensions. Some of these differences affect their second language learning. Children who are risk-takers, for instance, are likely to make better progress in learning a new language. Any child who feels confident, comfortable, and accepted is likely to be more motivated to learn to communicate with others in a new environment.



### **To help English language learning children progress in understanding and speaking both English and their home language**

- Build positive, warm, nurturing relationships with English language learners so that they feel safe and less anxious. Not being able to communicate creates considerable anxiety for young children who cannot learn anything well if they are stressed.

- Speak English in ways that help English language learners understand: For example, use simple sentences, repeat what is said, use gestures and facial expressions, point to objects, use everyday vocabulary.
- Speak in English clearly and slowly but not loudly, simplifying language when needed as you would for younger children who are just learning their first language. Gradually expand your vocabulary so English language learners continue to make progress in vocabulary development and are challenged.
- Help children link English vocabulary to firsthand experiences with pictures, concrete objects, and real-life events. At the beginning, talk about the here and now, until children become more proficient in English.
- Respect and value children’s home language and cultural identity.
- Encourage children’s attempts to express themselves in English. Let them know how much you appreciate their efforts.
- Use songs to help children learn new phrases and sentences, such as, “Hello, hello, hello and how are you? I’m fine, I’m fine, and I hope that you are too.”
- Write children’s own stories or audiotape them in their home language, involving volunteers, parents, and older children who speak the language.
- Provide social support for English language learners—regular contact with other children or adults who speak their language to help support their identity and help them make sense of what is happening around them.
- Provide lots of time and opportunities for children to talk among themselves. Pair English language learners with dominant English speakers for some activities.
- Stick to predictable, comfortable classroom routines so English language learners know what to expect.
- Provide small group reading times using concept books or predictable texts, such as *Brown Bear, Brown Bear*, books in the *Spot* series, or the bilingual collection of *Alma Flor Ada*, with simplified vocabulary where children can clearly see the pictures and follow along.
- Read often in small groups in order to support children who seem confused or uncertain about the story.
- Read a book not once but many times, as long as children are enjoying it, so they become familiar with the story and text.
- Provide interesting topics of study that give children something to talk about and help them make connections among concepts and make sense of the new words they are learning.
- Offer opportunities and support for play because children’s natural interest in playing and communicating with other children provides motivation for their language development.
- Help children acquire book knowledge and appreciation, print awareness, and phonological awareness in their home language, drawing on family and community members as resources. Once acquired, these skills will transfer as children become proficient in English.
- Include environmental print, such as signs and labels, in English and the children’s home language.
- Provide books, magazines, newspapers and other text in English and the children’s home language.
- Encourage parents to talk with and read to children in their home language and English, where possible.
- Invite families to engage children in cultural experiences and oral traditions such as storytelling and puppetry in their home language and English.

- Provide a listening center with stories and songs on tape in children’s home languages and in English.
- Involve children in dramatizing a story or event, encouraging children to repeat dialogue, actions and phrases together.
- Consider using sign language in conjunction with spoken words to provide multisensory learning.

The essential features that make up a quality Head Start classroom or home-based program can support both first and second language acquisition. Implementing the above strategies to enhance language and literacy development will help to establish an environment in which children can strengthen and expand their home language while learning English.

As children become more proficient users of language, their abilities in other areas grow too. But differences in children’s language abilities continue to persist between socioeconomic groups at entrance to school. Unfortunately, these differences become greater over time and contribute to the persistent achievement gap in our country. Head Start programs must take on the challenge of accelerating children’s language progress. Think about it—Does teacher talk dominate the classroom? When teachers talk, are they mostly issuing directives like “do this” or “don’t do that”? OR are children and teachers engaged in extended conversations? Are teachers talking with children in cognitively stimulating ways?

Home visitors and family service workers have an important role to play in children’s language development too. They can help parents understand the importance of a rich language environment at home. Think about it—Do they help parents understand the importance of children’s vocabulary development? Do they encourage parents to read or tell stories to their children? Do they talk about or model ways to extend children’s vocabulary and to ask engaging questions when reading or telling stories? Do they help parents learn to use everyday routines as opportunities for conversations with their children? The language environment in the Head Start program, reinforced by the language environment of the home, has important implications for learning across all Domains of the Child Outcomes Framework.



*THE HEAD START CHILD OUTCOMES FRAMEWORK*  
*DOMAIN 2: LITERACY*

DOMAIN	DOMAIN ELEMENT	INDICATORS
LITERACY	★ Phonological Awareness	◆ Shows increasing ability to discriminate and identify sounds in spoken language.
		◆ Shows growing awareness of beginning and ending sounds of words.
		◆ Progresses in recognizing matching sounds and rhymes in familiar words, games, songs, stories, and poems.
		◆ Shows growing ability to hear and discriminate separate syllables in words.
		★ <b>Associates sounds with written words</b> , such as awareness that different words begin with the same sound.
	★ Book Knowledge & Appreciation	◆ Shows growing interest and involvement in listening to and discussing a variety of fiction and non-fiction books and poetry.
		◆ Shows growing interest in reading-related activities, such as asking to have a favorite book read; choosing to look at books; drawing pictures based on stories; asking to take books home; going to the library; and engaging in pretend-reading with other children.
		◆ Demonstrates progress in abilities to retell and dictate stories from books and experiences; to act out stories in dramatic play; and to predict what will happen next in a story.
		◆ Progresses in learning how to handle and care for books; knowing to view one page at a time in sequence from front to back; and understanding that a book has a title, author, and illustrator.
	★ Print Awareness & Concepts	◆ Shows increasing awareness of print in classroom, home, and community settings.
		◆ Develops growing understanding of the different functions of forms of print such as signs, letters, newspapers, lists, messages, and menus.
		◆ Demonstrates increasing awareness of concepts of print, such as that reading in English moves from top to bottom and from left to right, that speech can be written down, and that print conveys a message.
		◆ Shows progress in recognizing the association between spoken and written words by following print as it is read aloud.
		★ <b>Recognizes a word as a unit of print</b> , or awareness that letters are grouped to form words, and that words are separated by spaces.
	Early Writing	◆ Develops understanding that writing is a way of communicating for a variety of purposes.
		◆ Begins to represent stories and experiences through pictures, dictation, and in play.
		◆ Experiments with a growing variety of writing tools and materials, such as pencils, crayons, and computers.
		◆ Progresses from using scribbles, shapes, or pictures to represent ideas, to using letter-like symbols, to copying or writing familiar words such as their own name.
	Alphabet Knowledge	◆ Shows progress in associating the names of letters with their shapes and sounds.
		◆ Increases in ability to notice the beginning letters in familiar words.
★ <b>Identifies at least 10 letters of the alphabet, especially those in their own name.</b>		
★ <b>Knows that letters of the alphabet are a special category of visual graphics that can be individually named.</b>		

★ *Legislatively mandated.*

Literacy for children birth to five refers to the skills and abilities that are the forerunners of conventional reading and writing. Learning to read and write does not happen overnight. It is the result of many cumulative, interrelated experiences beginning at birth. Many different kinds of experiences are needed, but three are essential. Children need—

- purposeful conversation among adults and other children that supports their developing language;
- access to many different, high quality, developmentally appropriate books and other reading and writing materials; and
- opportunities to playfully explore and engage in literacy activities involving reading, writing, and learning letters and sounds.

Young children learn from experience. From the earliest days of life, they get messages from their environment about what is important and what has meaning. This is why all early childhood environments need to be rich in literacy-enhancing materials and experiences. Literacy-rich environments are literally full of opportunities for reading and writing, but they are not overwhelming or overstimulating. Print should be used for real purposes or functions, not as clutter.

It is important to note the strong connection between language development and early

Language and literacy development are interrelated. The more words children use and understand and the more familiar they are with grammatical structures, the stronger foundation they have for reading and writing.

literacy (Dickinson & Tabors 2001). Although the Language Development and Literacy Domains are discussed separately here, they cannot be separated in actuality. Language—the more words children use and understand, and their familiarity with the full range of grammatical structures—is the foundation of reading and writing (i.e., literacy).

Of course, children’s learning in the Language Development and Literacy Domains cannot be separated from their learning in all other Domains. The content that they learn in mathematics, science, and other areas provides essential background knowledge and concepts that are necessary for literacy learning and later reading comprehension (the ability to make sense of what is read). Children’s interests in various content areas can spark their conversation and opportunities for reading and writing. For example, preschoolers’ interest in family life (considered a social studies topic) can lead to many literacy related activities including drawing pictures and dictating stories about family celebrations, pets, and everyday events. Their curiosity and perseverance—that is, their approaches to learning—stimulate their language and literacy development and their

learning across all other Domains.

A primary goal of teaching is concept development. Young children need lots of first-hand experience with objects, events, and people as they learn new words to describe them. To fully develop concepts, children need to explore and manipulate using their senses and their bodies. In preschool, one important curriculum goal is to expand children's knowledge of the world. The curriculum should include many planned experiences such as field trips, experiments, projects, or visitors that expose children to important content. From these rich curriculum experiences, receptive and expressive language grows.

Reading books, especially information or nonfiction books, also expands children's background knowledge. Play and projects help children use and expand their knowledge. Projects especially motivate children to "find things out" by doing research in books, asking adult experts, or using the Internet. Throughout the curriculum, teachers focus children's attention by asking questions that encourage children to observe carefully, make comparisons, or review past experiences. Because the ultimate goal of reading is making meaning from print, enhancing comprehension and background knowledge must be a focus of teaching from the very beginning.

The Literacy Domain includes several mandated Domain Elements and Indicators that require particular attention on the part of education leaders and teaching teams.

### ★ DOMAIN ELEMENT: PHONOLOGICAL AWARENESS

Phonological awareness is the understanding that the stream of spoken language is made up of smaller units of sound. Phonological awareness refers to the full range of awareness of the different size units of sound in spoken language. Figure 1 (see page 46) refers to the continuum of phonological awareness, representing the progression that most children go through in learning about how the sounds of words work. The journey toward phonological awareness begins with listening attentively to words, then organizing sounds into simple categories (by ending and beginning sounds), understanding the concept of words, manipulating the sounds (syllables) in words, and finally hearing the individual sounds (phonemes) in words. Making auditory discriminations is key to developing phonological awareness. (It is important, of course, that children's hearing impairments be detected early and appropriate treatment be provided if necessary.)

Phonemes are the smallest units of sound in the spoken language. Phonemic awareness is part of the broader concept, phonological awareness. Phonemic awareness is the understanding that spoken words are made up of individual sounds. These sounds can be blended ("What word sounds like /r/ 'ed'?") or segmented ("If I take away /t/ from tape, what word do I have?").

Phonological awareness is the ability to focus attention on the sounds of spoken language rather than the meaning of the words (Yopp & Yopp 2000). This is a difficult task, especially for very young children. Because so much attention during early childhood is on helping children acquire vocabulary and understand meaning, developing phonological

awareness requires special focus. For example, if you ask a five-year-old what sound the word “dog” starts with, the child might say, “Woof, woof” instead of /d/ (Yopp 2001). Of course, understanding the meaning of words is essential for young children, but becoming aware of the sounds of language is also important. It is not a choice between focusing either on meanings or sounds; we must do both to help prepare children for later success in reading and writing.

In the English language, there are approximately 44 phonemes that are represented by the 26 letters of the alphabet either alone or in combination. For example, the word *bat* is made up of three phonemes: /b/, /a/, and /t/. If one phoneme is changed— /m/ instead of /b/, the meaning of the word is changed. Phonemes differ by language and also by regional dialects of the same language. Phonemes are important because these are the sounds that human beings have chosen to record in written language.

Paying attention to the sound structure of language is an oral language skill involving hearing and listening, not a written skill. Phonological awareness is *not* phonics, which is a system of teaching the correspondences between letters or groups of letters and the sounds they represent.

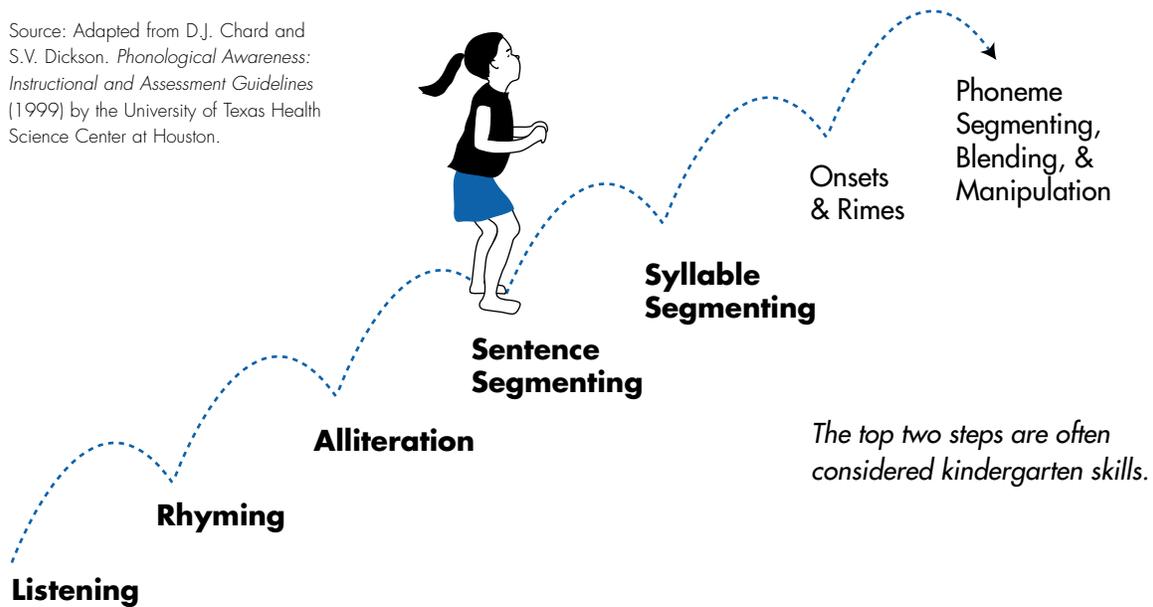
Phonological awareness has been found to be one of the most powerful predictors of later success in reading (Snow, Burns, & Griffin 1998). One study found that as much as 50% of the differences in reading outcomes at the end of second grade for former Head Start children was accounted for by differences in their phonological awareness assessed when they were in Head Start (Whitehurst & Lonigan 1998). Without phonological awareness, later instruction in phonics and decoding does not make sense because children do not discriminate the sounds of letters, words, and parts of words in the spoken language stream. If possible, the teaching team can help children develop phonological awareness in their home languages because most rhymes in English do not have the same meaning if translated directly.

Like virtually every other early literacy skill, children do not automatically acquire phonological awareness. Teachers need to purposefully support children’s phonological awareness beginning in preschool. How they do this is equally important. Rather than lengthy periods of whole group instruction on sounds, there are many natural ways of supporting this important learning that are motivating for both children and teachers (Yopp & Yopp 2000) Teachers need to plan small group learning experiences too. It is helpful to keep the continuum of phonological awareness in mind when planning literacy-related learning experiences for Head Start children (see Figure 1, page 46). Although not all children move through the progression sequentially, most do. Therefore, the earlier concepts are best taught before the later concepts are emphasized.

## HEARING SOUNDS

### Along the Phonological Awareness Continuum

Source: Adapted from D.J. Chard and S.V. Dickson. *Phonological Awareness: Instructional and Assessment Guidelines* (1999) by the University of Texas Health Science Center at Houston.



**Figure 1.**

The continuum is like a stairway that children move along as they progress from a limited to far deeper understanding of how the sounds of words work. The steps are progressive for most, but not all, children. Some children hop ahead to master complex skills, only to have to return to grasp some seemingly easier ones. Activities for learning the continuum include:

- listening games that focus children’s attention on words
- rhyming, which focuses attention on sounds at the end of words
- alliteration, which focuses attention on the sounds at the beginning of words
- exercises to compare and contrast sounds at the beginning and end of words reinforcing what has been learned with rhyming and alliteration
- counting the numbers of words in sentences (sentence segmenting)
- counting and clapping the syllables in words and blending them back together into words (syllable segmenting and blending)
- dividing one-syllable words by their initial consonant sound and all their other sounds (onset-rime)
- deleting and substituting sounds in words
- blending together individual sounds (phoneme blending)
- breaking down words into individual phonemes (phoneme segmentation)
- replacing individual sounds in a word. For example, take “mitt,” change the /i/ sound to the /a/ sound, and you have “mat” (phoneme manipulation).

## STRATEGIES

**To promote phonological awareness**

- Be intentional and plan experiences that focus children's attention on the sounds in words and speech. These activities need to be fun and playful to ensure children's participation, motivation, and interest.
- Engage children in daily experiences that promote phonological awareness. These include but are not limited to: playing rhyming games, singing songs, and chanting nursery rhymes; learning fingerplays; or reading and memorizing poems.
- Put phonological awareness games, activities, and rhyming books in learning centers around the room. Make phonological awareness part of the everyday classroom environment.
- Use phonological awareness activities during transitions and routines. For example, sing the Name Game or say, "Everyone whose name starts with the sound of 'sss,' get your coat," being sure to emphasize the sound, not the letter name.
- Whenever possible, phonological awareness should be taught to English language learners in their primary language as well as English. This foundation facilitates the transfer of reading and writing skills to learning a second language. For example, include rhyming and alliteration patterns in children's primary languages. Enlist parents to help you.
- Engage children in a variety of listening activities including listening to stories on tape, taking "listening walks" in the building or outdoors, or matching the actual sounds of objects to their pictures.
- Emphasize rhyming activities by
  - ~ letting children fill in a rhyme when reading, reciting poetry, or chanting
  - ~ making up nonsense rhymes with their names and other words
  - ~ reading books with strong rhyming patterns such as Dr. Seuss
  - ~ incorporating rhymes from the children's home languages and cultures
- Use alliteration activities such as
  - ~ singing songs like Head, Shoulders, Knees, and Toes and substitute the first sounds of words: Bed, Boulders, Bees, and Boes
  - ~ making a class book where each child's picture is matched with a picture that begins with the same sound as his or her first name.
- Play matching games where children match words or pictures that have the same beginning or ending sounds (e.g., ball and bear; cat and bat) to build awareness of alliteration and rhyming.
- Focus on syllable segmenting by
  - ~ playing a game in which you say two words or syllables and ask children to put them together. Ask, "What word can you make with 'chalk' 'board'?" or "What word do you hear when I say 'pen' 'cil'?" If possible, use similar strategies in children's home languages.
  - ~ using rhythm instruments with children to play with words and syllables in songs. Leave the instruments out for children to practice their skills.
  - ~ playing a guessing game in which you clap out the number of syllables in a word and the children have to find the object or picture match. This activity can be tied into a curriculum study. For example, if the class is studying farm animals, one clap might match with a toy cow; two claps with a toy rooster and so on.
- Use a variety of teaching resource materials to build your repertoire of appropriate activities along the phonological awareness continuum.

**★Indicator: Associates sounds with written words.**

In the Child Outcomes Framework, phonological awareness is a legislatively mandated Domain Element and the specific Indicator—associates sounds with written words—is also mandated. As children become more aware of the sounds of spoken language and have more experience with print, they will begin to make connections between written words and sounds (for example, connecting the beginning letters in their names with the corresponding sounds). This Indicator is not really phonological awareness, because phonological awareness is strictly an auditory process. Associating sounds with written words is beginning phonics.



**To help children associate sounds with written words**

- Whenever possible, introduce letter-sound recognition and associations in the home language of English language learners.
- Take children's dictation, and focus on the sounds in the child's words rather than the names of letters, saying the sounds in an elongated manner as you write.
- Use children's attempts at writing to engage them in trying to sound out words and help draw their attention to words they know that begin with the same sound. "How do you spell Mom? Sounds like it starts like Marishka's name."
- Stretch out the sounds occasionally as they are read: "Whose name starts like MMMMom?" (with the teacher stretching out the /m/ sound and pointing to the written word).
- Provide magnetic alphabet letters or other kinds of letters for children to manipulate and explore. Be available to scaffold their learning ("You made CAT. What happens if we replace the C with an M?").
- Provide high quality computer programs that highlight words and sounds when a child clicks as the story is being read.
- Play a game of onset/rime pairings. One child has a card with the onset, the other a card with the rime (m-at). They form a pair. Then give another child a different onset (c-at) and have them form a new pair.

**★ DOMAIN ELEMENT: BOOK KNOWLEDGE & APPRECIATION**

Children who are motivated to read show interest in books and reading, connect reading events to real life, and experience both the pleasure and power of reading. All children can come to appreciate books and find that reading is enjoyable. But they also learn that literacy has a purpose and can help people do things, by helping them find out about things outside their immediate environment or communicate with people far away.

Interactive book reading in small group settings is one of the most effective strategies for promoting book knowledge as well as other outcomes identified in the Literacy Domain (Dickinson & Smith 1993; Karweit & Wasik 1996; Morrow 1988; Whitehurst et al. 1994). Small groups provide opportunities for adult-child interaction when the teacher can clarify a child's misunderstanding, extend a child's idea, or ask a probing question. Such exchanges promote vocabulary development and syntactical awareness. They deepen children's conceptual comprehension; they build self-confidence. The effective teaching strategies listed here are based on these well-substantiated research findings.

Books are important tools for learning that require special knowledge and handling. Children need to learn how to hold the book and turn the pages from front to back. Children also learn the elements of the book and where to look for them. Where is the cover? How do we know the name of the book and who wrote it (the author)? Who drew the pictures (the illustrator)? Where do I start reading? What are letters? What are words? Where do I go next (left to right and top to bottom)? Children also become familiar with these elements when they work to create their own books.

To gain the most benefit from books, children need hands-on experience with them and adult guidance (Neuman & Roskos 1993). The books must be accessible and in children's hands, not on top of a piano or in a box that the teacher controls. But books are expensive and valuable, so teachers are often hesitant to let young, impulsive children handle them. Young children, especially those who have had little experience with books, will need teachers to demonstrate careful handling of books.

Most preschool programs provide children with storybooks, but all preschools should have libraries with many different kinds of texts, including non-fiction and poetry (Neuman 1997). While most children love stories, some prefer information books that relate to their own interests, whether about bears, trucks, dinosaurs, or space travel. Non-fiction books are more likely to motivate these children to engage in literacy experiences.

Reading to children is one of the best ways to help children become familiar with different kinds of books and texts. By reading and re-reading stories, teachers help children follow the elements of narrative. Then children may retell the story to demonstrate their understanding of events and plot or act out the story in dramatic play or in a teacher-guided story dramatization. Dramatic play also serves the function of engaging children in creating narratives and "scripts," which, in turn, support their understanding of story elements.

Developing young children's appreciation for books and their motivation to read are fundamental goals during the early years. For nearly every child, the process of learning to read becomes difficult at some point along the way, whether in first grade where decoding becomes the focus of instruction, in second grade where conventional spelling is demanded, or in third grade where comprehension takes center stage. Young children who

are motivated to learn to read are more likely to persist when they encounter challenges. Another reason that motivation and appreciation for books are important is that the more a child reads, the better reader she becomes (Snow, Burns, & Griffin 1998). Children who like reading are almost always better readers.

Developing positive approaches to learning is critical to learning to read (see Domain 7). Children's curiosity will take them to books to find the answers. Their persistence will help them concentrate and work through difficult reading tasks. Furthermore, their reasoning abilities will support their comprehension of the text.



### To enhance book knowledge and appreciation

- Read one-on-one to children on laps or snuggled close by in small groups of three to six where children can see and touch the book and develop positive feelings about reading.
- Read to children in small groups, to best support children's active participation, vocabulary development, and comprehension.
- Read the same book over and over if children request it.
- Actively engage children in reading time—asking questions about the book before reading it (such as where is the cover or title), posing questions that call on them to predict what will happen, noticing cause-effect relationships, chanting with rhyme and patterns.
- Assist children in seeking information in books or using books as resources to help solve problems (“What does the space shuttle really look like so we can build it with blocks?”).
- Make sure literacy experiences are fun, meaningful, and interesting.
- Teach children how to properly care for and handle books, protect the spine, turn pages slowly so they do not tear, and when necessary participate in repairing books as needed. Model respect and careful handling of books.
- Engage children in retelling stories or acting them out in dramatic play. With the children's help, write down the stories they make up as they play and retell them later.
- Have children make their own books, either individually or as a collaborative group project.
- Provide an inviting, cozy, comfortable library area, stocked with at least five books per child, two to three per child on display at one time (Neuman 1997).
- Display books attractively on open shelves, with covers facing front, accessible for children to make their selections.
- Make sure that books in the classroom reflect children's culture, home language, and identity.
- Plan times during the day when children select their own books to look at alone or with a friend.
- Read to children several times a day, every day, expressively and enthusiastically. Read favorite books repeatedly when requested.
- Use books as resources to support children's play (how to build a dog house or draw a dinosaur).
- Talk with children about their favorite books and authors. Encourage children to write or e-mail them. Use the Internet to get more information about authors' lives and work.
- Provide ways for children to take books home or to receive books to keep.

- Put books in various areas of the classroom such as in the block and puzzle areas.
- Integrate books across the curriculum, including literature related to the creative arts and math.
- Support parents in telling stories, reading to children, and talking about books at home.
- Provide parents with the opportunity to get library cards. Encourage them to take their child to the library to check out books and to attend “story hours.”
- Create story boxes for the dramatic play area filled with appropriate props to facilitate children acting out the story.
- Guide the children in a story dramatization where all the children take on the role of the main character and experience the same sequence of events (see Domain 5).

### ★ DOMAIN ELEMENT: PRINT AWARENESS & CONCEPTS

Print awareness is beginning knowledge about written language that includes different concepts and abilities such as—

- understanding that print performs a variety of functions and purposes;
- recognizing print in the environment (signs, labels);
- knowing that print, not pictures, carries the message in the story;
- distinguishing separate words, understanding the concept of *word*, that specific clusters of letters on the page with spaces between them represent the words said by the reader;
- realizing that print represents speech or thoughts written down and that it is permanent; and
- realizing that print in English is read left to right, top to bottom.

The skills listed above are all important elements of reading and writing development (Clay 1985). They constitute developmentally appropriate outcomes in literacy learning. In fact, another strong predictor of later reading success is the ability to write one’s name at the beginning of kindergarten, a skill that encompasses many of the elements of print awareness (Riley 1996). Developing print awareness is challenging and achievable for pre-school children, if they have good teaching and planned learning experiences.

Children’s play is one of the most effective contexts for learning concepts of print as well as other important literacy skills (Morrow 1990; Neuman & Roskos 1992, 1993; Vukelich 1994). Play is highly motivating for young children. Enriching play settings and experiences with environmental print and literacy tools plus having staff who support such play are effective ways to help children accomplish many literacy outcomes.

There are different forms (types) and functions (purposes) of print. The different forms or genres of writing that young children may encounter include stories (narratives), non-fiction or information books, poems, lists, signs, directions or recipes, letters and invitations. Different types of text have different characteristics. A narrative is a story with a beginning, middle, and end; characters; dialogue; and plot (usually a problem to solve or a dilemma to be resolved). Non-fiction books provide information. They are especially useful when we want to answer a question or figure out why something happened or how something works. They help us find out what we want to know about places, people, and events far away in time and space.

Other forms of writing such as lists, letters, directions, or recipes all have specific and distinct functions and forms. For instance, letters start with “Dear,” while lists may have one word on each line. Knowing about types of text helps children make sense of reading and writing experiences even in preschool, but this knowledge becomes even more important in the later grades.

Some of the various functions or purposes of print include: communication, expression, explanation, direction, and information. Different forms of writing can be used for various functions. For instance, a letter can communicate or give directions. A poem can express personal feelings, explain why something happened, make us laugh, or teach us something.

Children need to learn to use print in the environment in a purposeful, functional way. For this reason, labels should be used as needed for a real purpose such as reminders of handwashing steps, today’s menu, or materials children choose to use. However, when labels appear on every possible object, children tend to ignore them and the labels become almost like wallpaper, not useful in promoting print awareness.



### To support print awareness

- Maximize the use of meaningful print around the room, such as menus, order pads, and pads for bills in the “restaurant”; charts, prescription pads, and cards for the “doctor’s office” or “hospital”; builder’s plans, construction and street signs, and books for the block area; magazines, shopping lists, and stationery in the “house”; cookbooks and recipe cards for the “kitchen”; directions, timetables, and maps in the “bus station,” “train station,” or “car.”
- Engage children in making their own signs or labels using pictures, letter-like symbols, letters, and their own “kid-writing.”
- Read aloud to small or large groups of children using Big Books, to allow for children to see print and pictures. These often come with smaller versions for children to hold in their hands.
- Track print while reading to children from Big Books or language experience charts, pointing to specific words and demonstrating left to right, right/left sweep, and top to bottom motion of print.
- Help the child take the next step beyond what he is currently capable of doing. In other words, provide scaffolding. For example, if a child has been writing his name with only a J for several weeks, the teacher may ask “What comes after J, Jamal?” and show him the next letter if he doesn’t know it. Or say “point to the words as I read them” to reinforce a child’s knowledge of left-to-right motion.
- Engage children in writing or exploring with many different kinds of print for different purposes, such as signs, lists, stories, letters, or directions.
- Support parents in print-related activities at home.
- Use high quality, developmentally appropriate computer software to introduce and reinforce concepts of print.

*★Indicator: Recognizes a word as a unit of print, or awareness that letters are grouped to form words, and that words are separated by spaces.*

Recognizing a *word* as a unit of print is a fairly difficult, abstract concept for young children. Because children do not automatically hear and distinguish the individual words in the spoken speech stream, they need adults to help them learn to distinguish words in written language. Teachers need to help children become aware that letters are grouped to form words and that words are separated by spaces in print.


**STRATEGIES**

### To help children recognize a word as a unit of print

- Point to individual words when reading to children, especially in Big Books or on language experience charts.
- Talk with children to assess their understanding of the concept of “word.” Ask them which is the first word in a sentence or which word starts like their name.
- Provide lots of opportunities for children to write. As they write their own messages for their purposes, they will focus on the individual words they want to use.
- Scaffold children’s writing by drawing lines for the number of words they want to write. (“You want to write, I love you. OK, that’s three words,         .”)
- Expose children to varying structures of print that reflect the diverse languages within the classroom.

## DOMAIN ELEMENT: EARLY WRITING

Encouraging young children to write is one of the best ways to help them learn to read (Neuman, Copple, & Bredekamp 2000). Engaging children in their own writing promotes print awareness as well as the many other early literacy skills described in the Child Outcomes Framework. Toddlers should have access to paper, crayons, and other materials for drawing and writing. They will explore making shapes and imitating features of adult writing. Engaging children in early writing is an essential hands-on learning experience to help them learn about print and written words that they will eventually read and spell.

As young children experiment with writing, teachers have many opportunities to convey basic information about print. For example, it is written from left to right, it uses special symbols called letters, and letters have specific names and sounds. The more frequently they write, the more children learn about print and how it works.

Their first writing attempts resemble scribbles. Gradually their scribbles become more deliberate and controlled. Soon, they incorporate letter-like shapes or symbols, circles and lines, in their drawings. Eventually, alphabetic letters and invented spelling will replace their marks. Temporary invented spelling, also called developmental or phonetic spelling, results from their initial attempts to associate sounds with letters, as when a child writes “bk” for “bike”. This process of trying to figure out how to write words is an important step on the way to learning conventional spelling (Snow, Burns, & Griffin

1998). Observing and talking with children as they produce these spellings enables teachers to monitor children's understanding of letter-sound relationships.

There should be materials and opportunities for children to engage in writing throughout the classroom, such as making grocery lists in the housekeeping area or writing prescriptions while playing in the doctor's office. Children's "writing", which may be drawing, scribbling, "driting" (a combination of drawing and writing), some letter-like forms, and even some letters, is incorporated into play and projects.

Early writing is not only about learning to form letters; it is about using print for real reasons. When children see adults writing, children want to write themselves. They learn that writing is useful and feel grown-up doing it, and we want to reinforce their sense of competence. When writing focuses on forming letters properly, it is likely to be less meaningful and more frustrating.

Instead of giving children letters to trace, young children need to see adults write. They will quickly pick up a pencil or a marker and begin to follow. Besides using writing for many purposes in the Head Start program, teachers can encourage parents to write grocery lists together with their children, or notes to friends or relatives. Children learn that different text forms are used for different functions of print—for example, a list versus a letter—and they learn new vocabulary. Encourage their efforts by making sure they see writing as a useful way to share information and have fun.

Other curriculum experiences should expose children to various types of writing. A cooking project requires them to attend to a recipe. Science experiments require data collection. A party requires a list of things to buy on a field trip to the store. Children's desire to protect a block structure motivates them to write a sign.

STRATEGIES

### To support children's early writing

- Encourage children to record their thoughts in pictures or writing in their personal journals.
- Ask children to sign-in each morning. The most meaningful word to any young child is his or her name. They are naturally motivated to see their name in print and spell their name when they are ready.
- Display the alphabet at eye level and functional print, such as children's names, next to the classroom jobs for the week. Children can begin to recognize the letters in their own names and those of their friends, as well as other important words.
- Ask children to include print in their drawings like the authors in storybooks.
- Display their writing attempts as proudly as you do their pictures. Keep in mind children learn about print by using it. They need encouragement: "You wrote me such an interesting note!"
- Watch their scribbles change to letter-like symbols and eventually recognizable forms of print as they progress through predictable developmental stages reflecting their knowledge about writing as well as their developing fine motor skills.
- Provide opportunities to write daily and make writing materials available in each activity or interest area in the classroom. Have a clipboard with pens and pencils attached in many different areas in

the classroom for both children and adults to use. In the block area, provide markers and paper for children to make signs to label constructions, create street signs, and the like.

- Help children write and draw recipe cards related to a cooking activity.
- Enrich outdoor play by including sidewalk painting with water, writing with sidewalk chalk, and making a mural or sign to hang on the fence.
- Stock a writing center with all kinds of writing tools and paper for children to experiment with.
- Take dictations from children—their own stories or messages or large language experience charts—and let children take turns pointing to words as they read. They gain in many ways from seeing you write out their own words and reading the sentences back to them.
- Give children opportunities to demonstrate what they know about types of text and what they have learned in a given area by either dictating or “kid-writing” letters, lists, signs, and other kinds of writing.
- Support early writing experiences for English language learners in their home language whenever possible.
- Ask children to retell or act out a story and see what elements they include.
- Give children journals in which to draw and write on their own.

### **DOMAIN ELEMENT: ALPHABET KNOWLEDGE**

The ability to read and write depends on mastering the alphabetic principle—the understanding that there is a systematic relationship between letters and sounds and that all spoken sounds and words can be represented by a limited set of agreed-upon symbols called letters (Adams 1990). In preschool, children will not fully grasp the alphabetic principle, but they should be well on their way to knowing letter names and recognizing most of the letters, especially those that are meaningful to them such as the letters in their name, friends’ names, or special words, like Mom.

Most of all, teachers need to keep alphabet learning fun and meaningful because many children tend to be naturally motivated to learn these skills if adults clearly value them and connect them to what children already know. Trying to teach letters in isolation or without any connection to words and sounds that children know leads to frustration or mere memorization which does not predict later reading success (Adams 1990).

This Domain Element of the Child Outcomes Framework includes two legislatively mandated Indicators:

***★Indicator: Identifies at least 10 letters of the alphabet, especially those in their own name.***

***★Indicator: Knows that letters of the alphabet are a special category of visual graphics that can be individually named.***

Being able to recognize letters quickly and accurately is a necessary prerequisite for later decoding of unfamiliar print. Knowing the alphabet at kindergarten entry is a strong pre-

dictor of success in reading during first grade (Riley 1996; Snow, Burns, & Griffin 1998). One reason knowing letters is valuable is because for 18 of the 26 letters in the English alphabet, saying the letter name is close to the sound of the phoneme itself and the sound it makes in words (for example, the name of B is closely related to the phoneme /b/). So knowing letter names helps children begin to understand the letter-sound relationships.

Preschoolers are not expected to write letters properly on the line or to correctly associate written letters with all possible sound combinations. But children who have had good teaching and many of the literacy experiences described here should be able to identify at least 10 letters, especially those in their names. Under these conditions, many children will be able to identify substantially more than 10 letters by the time they enter kindergarten. Teachers can examine children's writing samples for evidence of children's letter learning and observe their use of letters in classroom activities. While letters should be taught in a meaningful context, at times teaching teams will want to assess children's knowledge of letter names out of context ("What letter is this?") to get a full picture of what they know and are able to do. Keep in mind that English language learners may recognize and identify letters of the alphabet in their home language as well as in English.

Adults can assess children's knowledge of letters in the context of their everyday activities by observing children's play and examining their drawing/writing samples for evidence of letter learning. For example, while children are playing doctor, they may give each other eye tests, naming letters they see; or children at the block corner may demonstrate their understanding of letters through making signs around their "construction." Younger children, while finger painting, might exclaim, "Ooooh, I made a curvy line" or "Look, I did a straight line," indicating that they see and understand the differences between types of lines they will later find in the letters of the alphabet.

Children most readily approach letter learning by first focusing on the letters in their own names. If children frequently hear their name spoken and see it in writing, at some point between about 18 months and age 3, they will identify the first letter of their name as their own. Often a child is even affronted if someone else claims the letter too. Toddlers love to sing the alphabet song, play with alphabet blocks, and look at alphabet books. Although very young children do not yet grasp the alphabetic principle, they are developing awareness of letters and finding out that the alphabet is something special that adults value.

These experiences continue during preschool, with teachers beginning to teach the alphabet in many ways in meaningful contexts. Children learn letters at different rates. Some letters are more easily learned, while others are more difficult. The issue for teachers is to keep track of children's progress in learning letters and use many strategies to support learning letters, while not underestimating children's competence in developing alphabet knowledge.

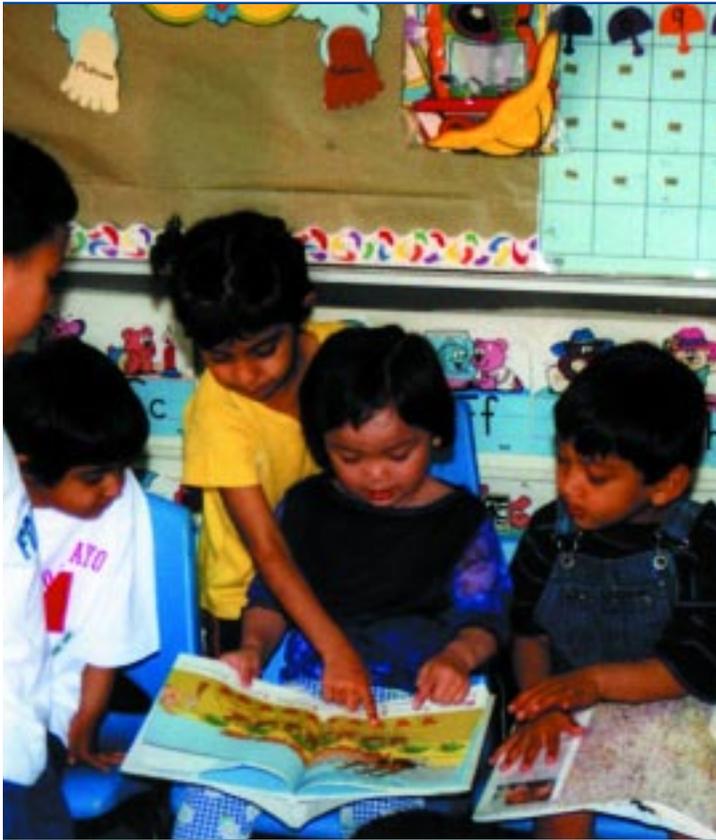
## STRATEGIES

**To teach the alphabet**

- Display the alphabet in the classroom at children’s eye level. Place letters where children see them, touch and manipulate them (for instance, magnetic or sandpaper letters), and use them where they work and play.
- Create a sign-in sheet for children, grouping names by initial letters in first name. At first, children may just make a scribble or a mark, but gradually they will begin to write the letters in their names. Grouping the names by initial letter reinforces the concept of the alphabet.
- Use letter name knowledge during transitions. “Everyone whose name starts with B, wash your hands.”
- With small groups of children, play games like Lotto or Concentration that require them to look closely at letters and begin to say letter names.
- Provide alphabet puzzles, computer software, and toys that reinforce letter knowledge.
- Provide the writing center with alphabet samples readily available for children to copy if they choose to or refer to as they try to write their names or other messages.
- Expose children to both upper and lower case letters as well as different fonts of the same letter. Children need to learn the “essence” of the letter symbol rather than only one representation of it. Use puzzles with matching pieces for upper and lower case letters.
- Support children’s attempts at writing letters, realizing that forming upper case letters is easier at first.
- Use well-written alphabet books that clearly illustrate the sounds of the letters with pictures of objects.
- Use reading aloud and shared reading to reinforce letter-name knowledge, inviting children to say what letter a new word starts with or having them find the word that starts with S.
- Provide daily opportunities for children to write, which supports their growing interest in and desire to learn the letters. As children write, teachers give them specific help when requested in identifying or forming letters.
- Sing the alphabet song and other songs that play with letters and sounds.
- Expose all children to various ways an alphabet can appear in other languages.
- Provide multi-sensory experiences such as writing letters in sand or shaving cream; shaping letters out of play dough or pipe cleaners.
- Encourage children to make letter shapes with their bodies, “Stand like an L, roll up like an O.”
- Use pieces of string to make letter shapes on table tops or rope to make them on the floor.
- Reinforce children’s written names by using them in meaningful ways such as
  - ~ setting up a job chart; an absent/present chart; labeling cubbies.
  - ~ selecting a child who will be star for the week. Create a poster or a book about the child’s family and interests. Write the child’s name over and over.
- Make a puzzle out of each child’s name. Cut out the letters in such a way that they can only be put together in the one, correct order.
- Make a word wall if you have space. Write each letter in upper and lower case on a card; put them in alphabetical order. On separate cards, write a few familiar words. Place the words under the appropriate letters on the letter wall. The first words to put up are the first names of all the children!

In conclusion, the knowledge and skills described in the Literacy Domain of the Child Outcomes Framework come before and lead up to conventional reading and writing. A large body of research now demonstrates that children who achieve these outcomes before school entrance are more likely to become successful readers and writers (Snow, Burns, & Griffin 1998). Perhaps more important, children who do not display these literacy-related competencies are more likely to have difficulty learning to read. Many of these teaching practices are not new to good early childhood programs. Tried-and-true practices like storybook reading and singing are already part of teachers' repertoires. Other practices may be new or require more emphasis than in the past, such as phonological awareness activities, writing, and teaching letters.

Early literacy experiences are a key part of every good early childhood program, but they should not become the whole curriculum. Literacy lends itself very well to curriculum integration. Literacy experiences should be integrated with other Domains and, likewise, a focus on other Domains should incorporate literacy learning.



Our Visit to the fire department

1. Tanton saw a red fire truck, water pump and a red punching bag.
2. Austwi saw poppy, red and green fire truck.
3. Austen Logan saw fire lights.
4. Randy saw 2 numbers on the fire truck.
5. Caleb saw all kinds of stuff and I really liked it.
6. Jackson saw lights and fire truck and ambulance.
7. Renea saw jackets they put on and a hat.
8. Brittany saw a fireman and jackets.
9. Emilee saw a ladder and the lights blink.
10. Baylie saw lights blink.
11. Paige saw a fire truck, jackets and fire hats.
12. Brandie saw a fireman and the lights blink.
13. Austwi Amburgey saw lights flash, a yellow fire truck and a red fire truck.
14. Autumn saw a fireman he turned the lights on.



*THE HEAD START CHILD OUTCOMES FRAMEWORK*  
**DOMAIN 3: MATHEMATICS**

DOMAIN	DOMAIN ELEMENT	INDICATORS
MATHEMATICS	★ Number & Operations	◆ Demonstrates increasing interest and awareness of numbers and counting as a means for solving problems and determining quantity.
		◆ Begins to associate number concepts, vocabulary, quantities, and written numerals in meaningful ways.
		◆ Develops increasing ability to count in sequence to 10 and beyond.
		◆ Begins to make use of one-to-one correspondence in counting objects and matching groups of objects.
		◆ Begins to use language to compare numbers of objects with terms such as more, less, greater than, fewer, equal to.
		◆ Develops increased abilities to combine, separate and name “how many” concrete objects.
	Geometry & Spatial Sense	◆ Begins to recognize, describe, compare, and name common shapes, their parts and attributes.
		◆ Progresses in ability to put together and take apart shapes.
		◆ Begins to be able to determine whether or not two shapes are the same size and shape.
		◆ Shows growth in matching, sorting, putting in a series, and regrouping objects according to one or two attributes such as color, shape, or size.
		◆ Builds an increasing understanding of directionality, order, and positions of objects, and words such as up, down, over, under, top, bottom, inside, outside, in front, and behind.
	Patterns & Measurement	◆ Enhances abilities to recognize, duplicate, and extend simple patterns using a variety of materials.
		◆ Shows increasing abilities to match, sort, put in a series, and regroup objects according to one or two attributes such as shape or size.
		◆ Begins to make comparisons between several objects based on a single attribute.
		◆ Shows progress in using standard and non-standard measures for length and area of objects.

★ *Legislatively mandated.*

# M

athematics helps children find meaning in their environment. As they learn to reason, connect ideas, and think logically, they gain important tools and concepts for making sense of the world. Mathematics relates to other curriculum areas, including science, social studies, art, and music. Last, but by no means least, math knowledge, interest, and skills are basic to children's success in school.

Children develop math knowledge in part through their play and explorations of the world around them. Learning to recite the correct counting sequence or number facts ( $1 + 1 = 2$ ) is possible for young children, but without concrete experiences they will not have a real understanding of what they are doing and why. In play, daily routines, and other meaningful activities, children question, analyze, and talk about their discoveries. When children see mathematics as part of everyday life, they find it useful, intriguing, and within their reach.

Head Start education staff play indispensable roles in promoting children's mathematical thinking and learning.

Mathematics is an area where many English language learners accelerate because they can manipulate materials, as well as their bodies and hands, to practice math skills. If children know how to count in their home language they can easily transfer that knowledge of numbers into English.

### **Problem Solving and “Thinking Mathematically”**

To become mathematical thinkers, children need to learn mathematical concepts and relationships. Equally important, they need to learn basic but powerful aspects of problem solving and reasoning.<sup>1</sup> Children need to recognize, for instance, that there are many different ways to solve a problem and that more than one answer is possible.

As children encounter problems in the classroom or at home, we can encourage them not only to tackle the problem but also to share their thinking with others. In Head Start, the goal is to create a learning environment in which children feel free to take risks and search for solutions to problems. Children become more conscious of their own reasoning and problem-solving strategies when teachers comment on what they are doing or ask about how and why they are doing it:

*“Andre divided the playdough so that each person has the same amount. How did you do that, Andre?”*

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<sup>1</sup> Because children use problem solving and reasoning in all knowledge areas, they appear in The Head Start Child Outcomes Framework under Approaches to Learning (Domain 7). They are discussed briefly here as well because they are integral to mathematics.

*“I see a pattern in the chain you’re making—red, blue, red, blue.”*

*“Now that you’ve run out of long blocks, what are you going to use to finish the last wall of your house?”*

Young children solve a lot of problems that arise in their everyday lives, relying on intuition or trial-and-error (NAEYC/NCTM 2002). On entering school, children will encounter a greater range of problems requiring careful thinking and systematic investigation. The skills and cognitive structures needed to solve problems in this deliberate, logical way are not well developed in preschoolers. However, in early childhood settings, teachers can work to enhance children’s problem-solving dispositions and abilities (Copley 2000). In such learning environments, children become increasingly persistent, flexible, and proficient problem solvers—and they learn to enjoy solving problems.

To promote children’s mathematical thinking and learning, one of the most important efforts teachers and parents can make is to talk with them about problems, patterns, and mathematical connections and listen to what they say. Such dialogue helps children think about what they are doing and clarifies their thoughts (NCTM 2000). In addition, it improves children’s math vocabulary, introducing them to words and phrases useful in mathematical reasoning and problem solving. Exploring ways of expressing mathematical ideas with words, diagrams, pictures, and symbols is also valuable for Head Start children.

Head Start education staff play indispensable roles in promoting children’s mathematical thinking and learning. They must have basic math knowledge and be alert to what children know and want to know about mathematics. Important roles for Head Start teaching teams include—

- creating learning experiences and environments to ensure that children “bump into interesting mathematics at every turn” (Greenes 1999, 46);
- investigating with children and observing what they do and say;
- answering children’s questions and posing interesting questions and ideas for them to think about;
- providing many opportunities for children to represent problem solutions in a variety of ways; and
- serving as examples by modeling mathematics communication and investigation.



**To promote problem solving**

- Engage children in figuring out solutions to everyday situations. Talking about the problem, drawing children into the process of investigating and solving it, and asking how they came up with their solutions—all these strategies help to build eager, competent problem solvers. Make sure to give children time to think at each step along the way.

- Avoid solving problems for children, even though it often seems more practical. Whenever possible, adults should put the problem back in the hands of the children and give them time to resolve it. Of course, the teaching team continues to play the important role of modeling problem-solving steps and strategies and posing questions when children are stuck. But we need to let children do most of the thinking!
- Involve children in representing problems and quantities in ways other than talking. They can make diagrams or draw pictures to work through problems or represent solutions.
- Build into the curriculum lots of materials, situations, and activities where intriguing math problems are likely to arise.

Finding ways to stir children’s natural interest in math and problem solving is extremely valuable, but it is not enough. An effective early mathematics program is not a scattered assortment of unrelated activities—a pinch of this, a dash of that. Rather, a solid foundation in mathematics requires a planned, coherent curriculum that develops the core mathematical ideas and skills spelled out in the Child Outcomes Framework. These outcomes are based in part on the ideas and skills identified as important and achievable for young children in the National Council of Teachers of Mathematics report *Principles and Standards for School Mathematics* (NCTM 2000). These standards reflect a broad consensus among mathematics educators about the main ideas and content knowledge for young children to acquire.

### ★ DOMAIN ELEMENT: NUMBER & OPERATIONS

Number sense involves the ability to think and work with numbers and to understand their uses and relationships. “Operation” is the formal mathematical term referring to addition, subtraction, multiplication, and division of numbers. (The 1998 Head Start reauthorization legislation refers to this Domain Element as numeracy.) Besides counting accurately and competently, children need to learn to see relationships between numbers and to take a specific number apart and put it back together. For example, there are several combinations of numbers adding up to five. As children acquire counting skills and become familiar with numbers, they are better able to understand other aspects of math.

Experiences with estimation make quantity, numbers, and size more meaningful to children (NCTM 2000). As they move on in math, children will find estimation invaluable as a check on whether they have obtained a reasonable result in solving a problem. Young children are not able to make good estimates because they do not know enough about numbers and size, but they can begin to use this skill and will gradually improve.



**To advance children’s understanding of number and operations**

- Encourage children to count all sorts of objects and events and to think about quantity and number. Teachers can use everyday experiences to promote concepts of number, counting, and one-to-one correspondence by posing questions such as, “Do we have enough chairs for everyone? How can we figure that out?” “Shall we count how many steps to the playground?” and “Who is third in line?” The questions listed on page 73 can be used in mathematics as well as other Domains to stimulate children’s thinking.
- Arrange materials and use games and verbal encouragement to involve children in—
  - ~ matching and sorting objects by color, shape, size, and other features;
  - ~ using one-to-one correspondence (one napkin at each person’s place at the table, for instance); and
  - ~ ordering a set of objects that vary in color, size, or another dimension (though not adept at seriation, preschoolers benefit from opportunities to try putting things in order).
- Draw children’s attention to numbers around them and what they are used for, such as finding addresses, prices of objects, and shoe sizes.
- Use strategies to help children learn to count accurately and efficiently, such as—
  - ~ conveying to children that counting lets us know how many things there are in a group;
  - ~ pointing to each object in turn as the person counting (be it the child or the teacher) calls out each number name; and
  - ~ making use of fingers to count and encouraging children to do so.
- Highlight the relationships critical to developing number concepts and operations, such as the parts that make up a whole (a concept that underlies addition and subtraction). A teacher might say, “Brian is showing us how old his brother is by holding up five [fingers] and one. Can anyone think of another way to show six with their fingers?”
- Help children to become familiar with the skills and vocabulary of estimating, such as—
  - ~ using words regularly including more than, less/fewer than, about, near, approximately, and in between;
  - ~ asking children to estimate how much, how long, or how many (“How many shovelfuls do you think it will take to fill that bucket?”). During snack, sand or water play, art activities, and other opportune times, teachers can then encourage children to test for the actual answer; and
  - ~ making it a point to return to a problem type to allow children to try again. As children begin to make judgments closer and closer to the real count, they hone their estimation skills. Teachers should stress that it is not important for children to get the “right” answer, but to see how close they can come.

## DOMAIN ELEMENT: GEOMETRY & SPATIAL SENSE

Geometry is the area of mathematics that involves shape, size, space, position, direction, and movement and describes and classifies the physical world in which we live. Young children can learn about angles, shapes, and solids by handling objects and looking around at the physical world. Spatial sense gives children an awareness of themselves in relation to the people and objects around them.

Spatial sense and familiarity with shape, structure, and location enable children to understand not only their spatial world but also other mathematics topics (Clements, Sarama, & DiBiase 2002). For instance, the teacher can encourage a child to explore number concepts, such as even numbers, as he examines a cube and counts its faces (its sides) (“Someone told me he had a cube with 7 faces—do you think there could be such a thing?”).

### STRATEGIES

#### To build spatial sense and understanding of geometry

- Encourage children to identify different shapes (not just circle, square, and triangle but others as well) and three-dimensional figures as they draw, look at books, work with geometric puzzles, build structures in the block center, or take a neighborhood walk.
- Give children many opportunities to handle objects, such as blocks, boxes or containers, shape sorters, and puzzles.
- Let them climb in and out of boxes or large block structures; on or around outdoor equipment; and under, over, around, through, into, on top of, and out of different things to experience themselves in space.
- Encourage them to make new shapes by putting materials together and taking them apart in different arrangements. They can do this when cutting or folding paper, molding clay or building structures
- Introduce spatial vocabulary, including—
  - ~ location and position words (such as on/off, over/under, in/out, above/below, in front of/in back of);
  - ~ movement words (such as up/down, forward/backward, toward/away from, straight/curved path); and
  - ~ distance words (such as near/far, close to/far from, shortest/longest).

**DOMAIN ELEMENT: PATTERNS & MEASUREMENT**

Taking note of patterns and relationships helps us understand the structure of things. In many areas, we find it useful and satisfying to anticipate what will come next. Patterns and relationships are found in science, music and dance, art, language arts (poetry, for example), and other areas. In mathematics, patterns are found in counting, basic number relationships, and in geometry. Understanding and identifying patterns and relationships means recognizing rhythm and repetition as well as sorting, categorizing, and ordering from shortest to longest, smallest to largest.

Measurement is an important way for young children to look for relationships in the real world. We measure the length, height, and weight of an object using units like inches, feet, and pounds, and we measure time using hours, seconds, and minutes. In working with measurement, children focus on how big, little, long, or short things are and how to figure that out.



**To promote children’s knowledge of patterns and measurement**

- Increase awareness of patterns around the classroom and throughout the day. For instance, teachers—
  - ~ help children find patterns in designs and pictures, as well as in movement and in recurring events such as the daily classroom schedule, the days of the week, or the seasons of the year;
  - ~ engage children in creating and noticing patterns as they string beads; place shapes or blocks into arrays; and arrange other materials. Over time children can reproduce and create more complex patterns; and
  - ~ talk to children about patterns created or noticed in constructing with unit blocks, legos, and other construction materials.
- Let children figure out their own units for measurement (“Carlos is five cereal boxes tall”). Using standard units like inches, feet, and yards is only one way to measure. Children better understand these units when they have lots of experiences working with their own ways of comparing and measuring.
- Use many daily activities such as construction, cooking, woodworking, science, and other experiences that involve measurement. In any of these activities, teachers look for opportunities for children to make comparisons and measurements of volume, weight, length, and temperature.
- Provide simple experiences that help children begin to develop an understanding of time concepts, such as encouraging children to—
  - ~ compare one activity with another in terms of what takes more time. Start by asking simple questions like, “How long can you stand on one foot?”;
  - ~ set simple time limits such as, “You can play for five more minutes and then we’ll start clean-up”. At first, children do not have a sense of how long a minute is, but gradually they get a better idea of time passing. An adult counting “one second, two seconds, three seconds...” or counting

Photos (from top, clockwise) by W. Siegel, Leslie, Knott, Letcher, Perry HS; T. Santiago, Archdiocese of NY/HS; A. Pearson, Fairbanks Native Association EHS.

down from ten until a certain action or event is completed also helps children develop a sense of passing time; and

~ start with ideas like “after lunch” or “after dinner” that provide solid milestones for children.

Older preschoolers can begin to understand more abstract notions like yesterday, today, and tomorrow.

- Capitalize on children’s interest in comparing all sorts of things about themselves. In charts and graphs, they can see quantities displayed, which contributes to their understanding of numbers and their ability to make comparisons. You can create a chart recording children’s favorite desserts and pose questions such as, “Do more children like ice cream or cookies best?” Chart-making can be a very simple process. For example, placing one color form or sticker in a column to indicate each child’s preference creates a basic bar graph that makes sense to children.

As adults share with children the kinds of experiences described here, they discover that mathematics is interesting and enjoyable to explore with preschoolers.



*THE HEAD START CHILD OUTCOMES FRAMEWORK*  
**DOMAIN 4: SCIENCE**

DOMAIN	DOMAIN ELEMENT	INDICATORS
SCIENCE	Scientific Skills & Methods	◆ Begins to use senses and a variety of tools and simple measuring devices to gather information, investigate materials, and observe processes and relationships.
		◆ Develops increased ability to observe and discuss common properties, differences and comparisons among objects and materials.
		◆ Begins to participate in simple investigations to test observations, discuss and draw conclusions, and form generalizations.
		◆ Develops growing abilities to collect, describe, and record information through a variety of means, including discussion, drawings, maps, and charts.
		◆ Begins to describe and discuss predictions, explanations, and generalizations based on past experiences.
	Scientific Knowledge	◆ Expands knowledge of and abilities to observe, describe, and discuss the natural world, materials, living things, and natural processes.
		◆ Expands knowledge of and respect for their bodies and the environment.
		◆ Develops growing awareness of ideas and language related to attributes of time and temperature.
		◆ Shows increased awareness and beginning understanding of changes in materials and cause-effect relationships

**Y**oung children are often called natural scientists. Their inclination to be curious, explore, ask questions, and develop their own theories about how the world works makes science an excellent Domain for enhancing learning and school readiness. The Child Outcomes Framework identifies two Domain Elements of science: scientific skills and methods, and scientific knowledge. Children need to learn to use inquiry skills such as observing, exploring, problem solving, and applying the scientific method. They also need to learn the content of science—basic concepts about the living and physical worlds. The content of early childhood science is directly related to young children’s natural interest in how the world works, in living things, their bodies, and the environment.

### DOMAIN ELEMENT: SCIENTIFIC SKILLS & METHODS

Children learn science by doing science.

They need to be actively engaged in observing, exploring, questioning, experimenting, reflecting, and reporting. In other words, engaging children in scientific inquiry is the best way to teach science. The fact that such learning experiences are a natural fit with young children does not mean that they happen “naturally” or automatically. The curriculum should provide an organized program of scientific experiences that build on one another so

that children can begin to develop key concepts and skills. Of course, teachers will want to use spontaneous experiences, play, and everyday routines to introduce children to science, but we need to keep in mind that science learning is too important to be left to chance. Therefore, staff must be intentional in their planning and implementation of learning experiences connected to the Science Domain.

When children are actively engaged in doing science, they form their own theories based on what they already know. These theories then get tested and either confirmed or challenged by new experiences. So science teaching is an excellent way to build on and expand children’s existing knowledge and understandings.

Research now shows that scientific study during the preschool years lays an important foundation for later success in school. The National Research Council (Bowman, Donovan, & Burns 2001) reports that a preschool curriculum that promotes skills such as reflecting, predicting, questioning, and hypothesizing is most effective for engaging young learners. Examples of teachers’ questions that promote an attitude of inquiry and deepen scientific understanding in young children appear in the chart on page 73. Science is the perfect topic to promote acquisition of these skills.

Children need to learn to use inquiry skills such as observing, exploring and problem solving. They also need to learn the content of science.



## To help children learn scientific skills and methods

- Model curiosity, inquiry, and investigation for children.
- Provide a variety of tools for scientific observation and experimentation, such as magnifying glasses; scales and other measuring tools; collection boxes.
- Teach children observation skills. Encourage them to go beyond just “looking.” Have children describe, draw, discuss with others, redraw and describe again to refine observation skills, build vocabulary, and develop understanding of concepts.
- Give children journals, clipboards, and writing tools to engage them in recording observations, gathering data, and communicating their findings to others.
- Listen to children and ask about what they are seeing and doing. When children talk with interested adults about what they see, hear, and think, they do more noticing, wondering, and reflecting. They make connections, think about causes, choose words to express what they mean and learn new, often rare words. Suggestions for teachers’ questions appear on page 73.
- Incorporate science concepts and skills as children play with blocks, water, sand, playdough and other materials, and as they engage in dramatic play, cooking, art, music and movement, stories, and outdoor experiences.
- Build on and extend children’s interests in the physical world and living things by using information books, field trips, visitors, and other ways of opening up the classroom to science.
- Engage children in formulating questions, such as “What do you want to know?”; designing experiments, such as “How can we find out?”; and making predictions, such as “What do you think will happen if...?” Children attend more closely to what they see, hear, smell, and feel when they have put forth their own prediction or question. When they have considered how to go about investigating something, they are also more likely to think about what their observations mean.

### DOMAIN ELEMENT: SCIENTIFIC KNOWLEDGE

As important as it is to foster children’s interest and introduce them to the processes and methods of science, expanding their content knowledge is also essential. As noted in the Eager to Learn report (Bowman, Donovan, & Burns 2001, 185), “[d]eveloping expertise requires both a foundation of factual knowledge and skills and a conceptual understanding that allows facts to become ‘useable’ knowledge.”

Across the vast and varied areas of scientific knowledge, what is important for children to know? There are many ways of approaching and organizing this knowledge. The National Science Education Standards (National Research Council 1996) uses four basic categories: life science, physical science, earth/space science, and scientific inquiry. (Three other content areas focus on science and technology, science in personal and social perspectives, and the history and nature of science. However, these content areas are less relevant to young children’s education).

Science for preschoolers can provide opportunities to experience and explore major concepts in the four categories and build a foundation for later learning:

- In the *life sciences*, major concepts include living and non-living, basic needs, the life cycle, diversity and variation and habitats.
- In *physical science*, as children explore structures, water, shadows, prisms and rolling things, they experience concepts including properties of objects and solid and liquid materials; how things move; and characteristics of sound and light.
- In *earth and space science*, as children investigate their environment, they begin to observe more closely what is under their feet such as soil, sand and human-made surfaces. As they look upwards, they notice the sky and the changes that take place and the seeming movement of the sun and moon.
- *Inquiry skills* are part of all that children do as they explore their world. They use their senses to observe and gather data; they think about their experiences and form new ideas; and they communicate what they are learning.

As well as the specific content of science, there are unifying themes and processes that span the sciences. These include change, patterns, and cause and effect. Regardless of the focus of children's exploration—whether in the life, physical, or earth/space sciences—teachers can highlight these themes. Watching plants grow and nails rust can be talked about in terms of change. A tap on a ball causes it to roll; a large block placed on top of a structure may cause it to fall. Using the language of cause and effect introduces children to this theme in the context of their work and play.

An example of integrating broad themes and specific content from life science comes from one classroom where children had been investigating plants and animals in their local environment for several weeks. To guide their explorations and challenge their thinking, the teacher had posed questions related to concepts in the life sciences and to themes of change, pattern, and cause and effect. Furthermore, the questions helped focus children's attention and provided rich language learning experiences:

*What are the differences in the plants we have seen? In their leaves?*

*Can we organize them by shape or size?*

*What do we have to do to keep our plants alive in the terrarium?*

*How have our plants grown and changed in the last week?*

*How could we find out what our snails like to eat best?*

*How do snails move? Worms? Do they move in the same ways?*

An effective science program is integrated with the total life of the classroom (Education Development Center [EDC] 2001). Teaching teams promote science knowledge through the intentional, careful planning of the environment, preparing focused learning experiences, extending children's play, and creating an integrated curriculum. Children can learn science when they wash a greasy dish, scoop out the insides of a pumpkin, ride down a slope on a tricycle or sled, or watch ants on a sidewalk. Children can also learn science when working with math and computers or when reading.

Science content helps children acquire knowledge and skills relevant to other out-

come Domains. Notions of number, shape, pattern, and measurement and processes such as categorizing, problem solving, and reasoning used in science are also important to mathematics. Scientific inquiry offers many opportunities for teachers to intentionally stimulate children's language and literacy development. In science, children read nonfiction books related to the topics of study, record their observations, write or dictate their findings. Some children may want to keep science journals; others may choose to make their own books on science topics. The content and vocabulary of science are rich additions to children's language and to the background knowledge needed for reading comprehension. As children document and share their observations and findings, they use various forms of representation and different media which they also put to use in the creative arts. "In a good science program, science is embedded in the curriculum yet maintains the depth and focus required for conceptual learning" (EDC 2001, 10).

Science also helps children develop positive approaches to learning. The sense of wonder and excitement at watching flowers grow or ants build their villages, the sense of accomplishment and pride at figuring out a cause and effect or the workings of a machine encourage and reward perseverance and curiosity while enhancing reasoning and problem-solving abilities.

Science can be important for social and emotional development. Some children who may be shy or withdrawn in other areas of learning can shine in the science area. They can gain the positive attention of their classmates, enhancing their self-concept and expanding their social relationships. Self-control and ability to cooperate can also develop as children hear each other's ideas and work together to solve problems.

The Domain of science is attractive to English language learners because they can touch, manipulate, and explore without using language until they are comfortable. Children can listen to English being spoken around them to pick up on content vocabulary. However, it is preferable that children first learn science content in their home language so they are familiar with the concepts when introduced to science in English.

STRATEGIES

### To help children acquire scientific knowledge

- Model an attitude of openness and flexibility to asking questions, not needing to have all the answers.
- Focus on teaching scientific knowledge that is familiar and meaningful to children, such as concepts of temperature based on their own experiences with weather. Although children are more capable of abstract learning than previously thought, it is usually easier to begin with more concrete, accessible experiences that can be seen, touched, tasted, or heard.
- Involve parents in sharing science-related experiences from home.
- Read information books or explore the Internet to learn more about a given topic of study.
- Plan in-depth projects or topics of study related to science knowledge that build on and expand children's interests.
- Engage children in coherent, organized studies of animals, plants, and the environment.

- Spend sufficient time on topics for children to follow their interests. For instance, in a class study of local animals, small groups of children or individuals may study one animal in-depth and report their findings to the others in the group.
- Focus children’s attention during a scientific study on relevant and interesting phenomena. Describe what is happening and point out details. Invite their questions and observations.
- Emphasize phenomena that can be observed and experimented with directly because the children’s interest and learning will be high. When children express interest in remote or invisible things and events, such as those in outer space or long ago, we need to find ways to support their interests while keeping a focus on more accessible topics and concepts.
- Encourage children to reflect on their experiences and share their ideas with others (EDC 2001). Young children’s direct experience with materials is important to their science learning, but it is not enough. Reflecting on what they have experienced, representing observations and ideas, and communicating with others are also crucial.
- Emphasize questions that can be explored. For example, ask what will happen if the child squeezes an object or challenge several children to blow on a spool to move it across a table. From infancy, children learn about the physical world by acting on objects. They often explore effects without knowing how they achieved the results. Getting children involved in focused explorations and asking about what they did and what happened helps them think about cause and effect.
- Give children a variety of ways to document and represent their work, which is powerful in promoting their insight and understanding (EDC 2001). Ongoing discussion between teachers and children, informally and in planned groups, gives children the chance to hear others’ thinking and perspectives and to develop skills in communication.

In the Head Start program, we can ensure that children have access to science experiences, concepts, and thinking skills. These experiences will make an enduring difference in children’s knowledge, problem solving, interest in the world around them, and in learning in general.

## TEACHERS’ QUESTIONS

Watch closely and use well-timed questions or comments to prompt children to—

### Think aloud

What are you doing now?

What have we got here?

What is next?

### Reflect on their actions and solutions

What did you do before that worked?

How do you know? How did you figure that out?

What do we need to solve the problem?

How will we keep track of the ones we’ve counted?

### Make predictions

I wonder what will happen if...

What will it look like if...?

### Provide justifications for their choices or answers

Why did you choose that?

How did you decide on that one?

Why are you putting three of them there?

### Go further in their thinking

Can you find another way to...?

What if you tried that with 8?

What else does this graph tell us?

*THE HEAD START CHILD OUTCOMES FRAMEWORK*  
*DOMAIN 5: CREATIVE ARTS*

DOMAIN	DOMAIN ELEMENT	INDICATORS
CREATIVE ARTS	Music	<ul style="list-style-type: none"> <li>◆ Participates with increasing interest and enjoyment in a variety of music activities, including listening, singing, finger plays, games, and performances.</li> <li>◆ Experiments with a variety of musical instruments.</li> </ul>
	Art	<ul style="list-style-type: none"> <li>◆ Gains ability in using different art media and materials in a variety of ways for creative expression and representation.</li> <li>◆ Progresses in abilities to create drawings, paintings, models, and other art creations that are more detailed, creative, or realistic.</li> <li>◆ Develops growing abilities to plan, work independently, and demonstrate care and persistence in a variety of art projects.</li> <li>◆ Begins to understand and share opinions about artistic products and experiences.</li> </ul>
	Movement	<ul style="list-style-type: none"> <li>◆ Expresses through movement and dancing what is felt and heard in various musical tempos and styles.</li> <li>◆ Shows growth in moving in time to different patterns of beat and rhythm in music.</li> </ul>
	Dramatic Play	<ul style="list-style-type: none"> <li>◆ Participates in a variety of dramatic play activities that become more extended and complex.</li> <li>◆ Shows growing creativity and imagination in using materials and in assuming different roles in dramatic play situations.</li> </ul>

The creative arts Domain includes four elements: music, art, movement, and dramatic play. Each of these Domain Elements supports children’s imaginative thinking and self-expression and enhances their progress in other Domains. For example, children may count musical beats, experiment with mixing colors to make a new one, create dialogue for a story drama, or move like the animal characters in a story. In such activities, they are learning in several Domains and using a variety of social, cognitive, and creative processes.

The creative arts engage children’s minds and senses. They invite children to listen, observe, move, solve problems, and imagine, using multiple modes of thought and self-expression. Active involvement in the creative arts stimulates brain connections that support children’s learning. A growing body of research on the effects of early arts experiences shows their positive relationship to improved, overall academic performance. Research in the arts also demonstrates that when creativity is devel-

Individuals are creative when they take existing objects or ideas and combine them in different ways for new purposes.

oped at an early age, its benefits are continual and are transferred to many intellectual tasks (Arts Education Partnership 2000). All areas of creative arts can incorporate the diversity of children in the program. Dance, art, pantomime, and creative expression are areas where English language learners can be included without needing to rely on language skills in English. Music can be particularly effective since it can be fun for children to learn a song in either English or another language.

Music experiences for young children involve listening to, learning about, and making music. Children can listen and respond to different kinds of music by moving, dancing, painting, or talking about how it makes them feel, what instruments they hear, how it compares to other pieces they have heard, or what they do or do not like about it. They may use simple rhythm instruments to create music or to accompany live or recorded music. Children also enjoy singing favorite songs, learning new ones, and making up their own.

Art experiences allow children to convey their ideas, feelings, and knowledge in visual forms. Individually and in groups, children use materials such as crayons, paint, playdough, clay, found objects, glue, tape, and paper, along with tools such as scissors, brushes, rolling pins, cookie cutters, and more. They explore the processes of art using materials, tools, and techniques and create products such as drawings, paintings, sculptures, mobiles, and collages. Developing an appreciation for and aesthetic awareness of art is also a part of this Domain element.

Movement includes dancing to music and moving in various ways to learn what the body can do or to express an idea or feeling. Children might imagine how an animal

moves, then try to imitate it. They could focus on a specific feeling, such as joy or fear, and create movements to express the feeling. Movement facilitates spatial awareness and sensory integration, contributes to overall health and fitness, and promotes development of physical skills.

Dramatic play and drama involve make-believe. Children take on roles such as, mother, waiter, mail carrier, or doctor. They put objects to imaginative uses—for example, transforming a large box into a spaceship or cave. Dramatic play also offers a wide range of opportunities for children to use and expand their cognitive, language, literacy, and social skills (as described in other Domain sections).

To support children’s involvement in the creative arts, Head Start teachers need to focus on what it means to be creative. Individuals are creative when they take existing objects or ideas and combine them in different ways for new purposes. They use their ever-growing body of knowledge to generate new and useful solutions to everyday challenges. Early childhood teachers are creative when they invent new ways to individualize the environment, curriculum, and interactions with young learners.

In addition to understanding and recognizing the creative process—in themselves and in children—Head Start teachers can encourage learning through the creative arts by introducing children to excellent and varied examples of art forms. They can involve children in noticing, thinking about, and discussing artistic productions. Using open-ended questions, teachers invite children to examine, critique, evaluate, and develop their own aesthetic preferences. Teachers also provide raw materials, props, tools, and appropriate spaces so that children can create in their own ways. They observe and respond to children in ways that communicate acceptance for creative expression. They can plan and offer integrated experiences to take advantage of the many ways creative arts support learning in other Domains.

**STRATEGIES****To support children’s development in the creative arts**

- Maintain a supportive atmosphere in which all forms of creative expression are encouraged, accepted and valued. Participation in any art activity should always be a choice. There is no wrong answer.
- Plan a flexible environment that offers a sufficient range of materials, props, tools, and equipment for creative expression.
- Plan a variety of open-ended creative arts activities that foster children’s imaginative thinking, problem solving, and self-expression.
- Adapt materials and experiences so children with disabilities can fully engage in the creative arts.
- Model their own creative thinking and expression by making up voices and sound effects and using gestures when reading or telling stories, by using recycled items for new purposes, and by thinking out loud when solving a problem.

- Encourage children by making positive, specific comments (“I see you’ve made a pattern—green, yellow, green, yellow”), rather than offering broad general praise, such as “Good job.”
- Introduce a new character, prop, or problem into children’s play to broaden their awareness and encourage creative thinking.
- Lead children through the thinking and problem-solving process by asking open-ended questions such as, “What will you need?,” “How might you . . .?,” and “What could you do first?”
- Involve families served by inviting them to share something from their own culture in the creative arts.

### DOMAIN ELEMENT: MUSIC

Children’s experiences and associations with music begin in infancy. Some babies are comforted by the slow rhythms of lullabies, and others are excited by music with a lively beat. By the time they reach the toddler years, many children have favorite songs and musical pieces. They listen attentively, sing along with a familiar chorus, and begin making their own music by shaking a tambourine or banging on a drum. As language skills grow, toddlers begin making up their own songs. If they have had many opportunities to listen to and talk about music, they can identify the sounds made by specific instruments—trumpet, drum, or violin, for example.

Young preschoolers can recall enough of the words and tune of a simple song to sing along quite well. They learn to listen and play along with music using rhythm instruments such as sand blocks. Older preschoolers can learn about basic musical concepts such as pitch, duration, tempo, and loudness, and they can understand and use musical vocabulary. Their singing skills continue to grow, along with their ability to play rhythm instruments. An increased attention span allows preschoolers to listen to recorded music and talk about what they hear. When young children take part in developmentally appropriate music experiences as part of their daily routines and activities, they can (Isenberg & Jalongo 1997)—

- listen, identifying the sounds made by different instruments;
- respond by clapping to the beat or marching around the room quickly or slowly in response to different kinds of music;
- create (explore the sounds made by different keys on a thumb piano and make up a tune);
- understand (determine whether a piece of music has a slow or fast beat);
- make up (create a new song or a verse for a familiar song); and
- play (shake maracas to accompany a song).

STRATEGIES

To encourage musical expression and appreciation

- Incorporate the music of children’s cultures and home languages in the curriculum. Sing songs suggested by children’s families. Sing along with a recorded version of a song until everyone learns the words. Introduce real or homemade versions of instruments that are typical of children’s cultures.
- Share and discuss a variety of musical forms and styles. Sing traditional and contemporary children’s songs and folk songs from the United States and other countries. Introduce different kinds of classical music—piano sonatas, lullabies, ballets, and operas. Listen and move to jazz, reggae, and marches. Encourage children to share and compare their responses to different kinds of music—how it makes them feel, what they do or do not like about it, how it is similar to and different from other music they have heard, what instruments they hear in different pieces of music.
- Enjoy making and listening to music. Most songs for preschoolers have a range of about five notes, so they are simple to sing. Learn new ones by listening to and singing along with recordings. Share favorite kinds of music with children—let them catch the enthusiasm.
- Provide an environment that supports making music and listening to music. Include rhythm instruments, xylophones, bells, and materials for making instruments. Provide a child-friendly tape player with a variety of music tapes and headphones.
- Use music to enhance routines and activities. For example, play the same piece of music to signal it is time to clean up and go outdoors. Play music in the art area and encourage children to listen and paint according to the way the music makes them feel.
- Share a book version of a song, such as Pete Seeger’s *Abiyoyo* or Simms Taback’s *There Was an Old Lady Who Swallowed a Fly*. Make a tune to go with a book that has a rhythmic, repetitive text such as *Chicka, Chicka, Boom, Boom* by Bill Martin, Jr. and John Archambault or *Uno, Dos, Tres: One, Two, Three* by Pat Mora.

**DOMAIN ELEMENT: ART**

Children pass through several stages as they progress in drawing and painting. These stages are related to early writing skills. They begin with scribbles, random marks that go in many directions. As their fine motor skills improve, they learn to control the tools of art—crayons, markers, paintbrushes—and make circles, lines, and zigzags, sometimes covering the whole paper. Next come basic shapes such as crosses, squares, and rectangles. A child at this stage might repeat the same shapes over and over. Children then combine shapes, placing crosses inside circles or rectangles and making sun-like objects using circles and lines. Soon children use shapes and lines to make figures that represent humans, animals, and trees. As skills continue to grow, children’s artwork becomes more and more representational. They can discuss both the process used to create their artwork and what it represents. And, increasingly, they are able to plan what to create and determine what materials, tools, and techniques they need to carry out their plans.

Artistic skills are closely related to physical development. Art experiences such as fingerpainting, sculpting with soft wire, or using clay allow children to use their senses to explore the properties of the materials, build fine motor skills, and practice eye-hand coordination. Painting and drawing invite children to explore concepts—color, shape, size, cause and effect, and same and different. They can make sense of experiences by creating physical representations of events, people, and objects. By exploring a single idea in various media, such as drawing, painting, and sculpting an autumn tree, children develop focus and deepen their level of understanding. Art can help children build a sense of competence because there are no right or wrong ways to use materials, and all products are valued.

Another important part of this Domain Element is art appreciation. Preschoolers can observe, compare, and respond to the properties of artistic works. With a teacher's guidance they can discuss the artist's use of color, shapes, texture, and more. In addition, they can learn to notice and appreciate the elements of art—color, line, shape, or pattern—in everyday items, such as the colors of fall leaves, the brickwork of a nearby building, or a spider's web.



### To encourage children's development in art

- Provide a wide variety of open-ended materials and tools children can explore and use to create art.
- Include periods of time in the daily schedule when children can choose what they want to do and what materials to use.
- Offer sufficient space for creating and storing completed work and work-in-progress.
- Designate an area where children can be messy; provide clean-up items and help children to use them.
- Display children's work, with their permission, at eye-level, in a variety of places throughout the classroom.
- Encourage children to take art home to share with families.
- Encourage children to talk about their art by commenting on colors, textures, techniques, and patterns and saying, "Tell me about your...." Ask questions about the process, "How did you make these shapes?"
- Introduce new materials and techniques that children can use in their art, such as how to work with real potter's clay.
- Include various art forms, materials, and techniques representing children's cultures.
- Invite local artists to share and discuss with the children a work-in-progress or to display their work in your program.

## **DOMAIN ELEMENT: MOVEMENT**

Some children are kinesthetic learners—they learn best by moving their bodies. All children, however, can benefit from movement experiences because exploring and repeating movements support brain development and learning. Creative movement is linked to developing and refining fundamental motor skills. This is described more fully under Domain 8, Physical Health and Development. These include locomotor movements (running, jumping), gross motor manipulative movements (throwing, kicking), fine motor manipulative movements (cutting with scissors, using a crayon), stability movements (balancing, stopping) and sensory integration (sensitivity to and awareness of space and surrounding movement).

As children explore movement, cognitive, social, and emotional development is also going on, particularly when movement experiences involve children in creating, representing, and expressing their interpretations of events, ideas, and feelings. For example, children’s thinking skills are activated when teachers ask, “How can you jump and land quietly?” or “How might a family of ducks get across the street?” Both questions require children to use what they already know to come up with several possible solutions. Movement activities can foster cooperation and consideration of other people’s ideas. Think of two children standing inside a single hula hoop who must work together to get to the other side of the playground. Creative movement can help children feel more competent and capable when their ideas are accepted and valued and when experiences help them build physical skills used in other activities.

Movement experiences prompt vocabulary, language, and conceptual development. Their vocabulary expands as they learn to “turn around,” “twirl,” or “rotate.” Their understanding of concepts deepens as they learn to jump “high,” “higher,” and “highest”; to grow from “teeny,” “itsy bitsy,” or “small,” to “big,” “large,” “enormous,” “gigantic,” “tremendous,” or “humongous”; to express their interpretations of “sad,” “melancholy,” “disappointed,” “scared,” “frightened,” “petrified,” “happy,” “delighted,” “excited,” or “ecstatic.”

### **STRATEGIES**

#### **To encourage creative movement**

- Incorporate dances from children’s cultures in the curriculum. Ask families to share traditional music and dances from their cultures. Some family members might be willing to teach you and the children the dance. Once children know the basic steps, encourage variations so they can use their creativity.
- Provide an environment that supports movement. Offer open-ended props such as scarves, wrist bells, and foam balls that children can use on their own. Provide an open area where children can move to music or just explore different ways to move their bodies. When leading a small group activity, be sure to have enough materials for each child so nobody has to watch and wait.

- Use movement to enhance other routines and activities (Pica 1997) and vocabulary. For example—
  - ~ *Walk like a...* “Pretend you are walking across hot sand, or through the jungle, or up some stairs.” Or ask children to walk as if they were brave, tired, excited, or proud. This encourages them to use divergent thinking and to recognize and express their feelings.
  - ~ *What’s the opposite of ...?* Gather a small group of children in a space that provides plenty of room such as a grassy area outdoors, the gym, or the group meeting area of the classroom. Ask them to make their bodies as small as they can, then as large as they can. Have them reach for the sky, then touch the ground. They can balance on one foot, then on all fours (hands and feet). Invite the children to suggest some of their own opposites and to demonstrate them.
  - ~ *Use what you know about...* Ask the children to think about a specific animal—one they have studied. Perhaps they read some books about it or saw it on a trip to the zoo or a farm. Have them recall whatever they know about the animal, what it looks like, where it lives, what it eats, and so on. Then, ask the children to imagine how it moves and to move that way themselves.

### **DOMAIN ELEMENT: DRAMATIC PLAY**

Pretend play begins to emerge even before children are two years old. But while a toddler might pick up an empty plastic cup, lift it to her mouth, and pretend to drink from it, an older child is able to use a can or block to symbolize the cup. A preschooler’s ability to create mental images—of objects, people, actions, clothing, conversation, and more—leads to rich dramatic play. Children who are skilled in dramatic play use both their imagination and their knowledge of the world to recreate familiar experiences and create new ones. They use social and cognitive skills such as negotiating and problem solving to plan and carry out complex scenarios. Indeed, dramatic play and teacher-guided drama are attuned to the way in which young children learn. Cognition evolves from the physical exploration and understanding of a concept to its mental representation and, finally, to its verbal expression.

Dramatic play and teacher-guided drama support development across Domains. The links with language are evident. Children learn language, in part, by practicing, and drama and dramatic play provide for the use of and practice of language in a natural and spontaneous environment. Acting out a variety of roles gives young children the opportunity to experiment with various kinds and uses of language. Children must listen and talk to each other in planning their play and carrying out their roles. A drama session can be structured by a teacher to promote the specific language skills needed (Brown & Plydell 1999). As children make signs for a store, read to dolls, or write a shopping list, they step into the world of literacy. And many of their scenarios, whether child-initiated or teacher-directed, are retellings of familiar stories and recreations of known characters from literature. When counting out change or measuring the width of an imaginary river, children also see mathematics in action. In dramatic play, they have many reasons to use language, literacy, and mathematics – reasons that matter to them.

Dramatic play and teacher-guided drama promote all elements of the social and emotional Domain and help children gain greater understanding of themselves, their peers, and their families. In the symbolic world of make-believe, children often express thoughts and concerns that might otherwise go undiscovered or remain repressed. Within the world of play that they themselves control, children are able to cope with fears and matters that trouble them. Positive approaches to learning also develop as children engage in dramatic play and drama. These experiences can stir a child's curiosity, provoke questions, and develop initiative, persistence, reasoning and problem solving (outcomes in Domain 7).

Research suggests that dramatic play is good for children in all these ways, but it also tells us that many children have very limited dramatic play skills (Smilanksy & Sheftaya 1990). They have had few experiences with make-believe and lack the skills to build a play episode and keep it going. English language learners may not want to participate in dramatic play until they are more comfortable with the dominant language. To help these children become capable players and gain the many benefits of dramatic play, at times adults will need to join them in their play to model behaviors just beyond their present level.



### **To promote dramatic play**

- Dramatize stories from children's cultures. Ask families to share traditional stories from their cultures.
- Create a flexible environment that stimulates children's imaginations with appropriate and varied props, furniture, and materials and enough space and time for children to get fully involved.
- Provide props of varying realism to meet the needs of both inexperienced and capable players, including realistic props (cash register, stethoscopes, dolls, coins, and a variety of dress-up clothes) and open-ended objects (cardboard tubes, unit blocks, or pieces of cloth).
- Observe children's play to learn what they might need to enhance their play—additional props, a suggested action for one of the players, or a subtle comment to take the play to the next level.
- Observe children to determine what they might need to join in the play.
- Help children identify emotions or problems that are surfacing in their dramatic play or drama work.
- Encourage recall and sequencing skills by asking them to tell you what happened in their drama: "How did the story start?" "What happened next?"
- In teacher-guided drama, ask questions that encourage problem solving such as, "How can we get past the cave without waking up the bear?"

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- Use scaffolding to provide just the right amount of support. For example, teachers can (Davidson 1996):
    - ~ model how to pretend or act out a part through words and actions;
    - ~ model how to use a prop;
    - ~ model the type of conversation that takes place in the setting (“Dr., I have a sore arm. Can you x-ray it for me?”);
    - ~ make comments that help children notice what each other is doing;
    - ~ assume a role and join in to show children that pretend play is important and to introduce new ideas they might want to use in their play; and
    - ~ intervene in disagreements when necessary to prevent physical harm.
  - Create prop boxes focused on a specific theme such as post office, firehouse, health clinic, or pet store.
  - Structure the activities to accommodate young children’s involvement and encourage creativity when leading a story dramatization. For example,
    - ~ allow for the story plot to change as you encourage and include the children’s ideas;
    - ~ break the story plot into a series of short scenes or experiences to keep the children focused and involved.
  - Engage each child by having all of them play the same role. In Maurice Sendak’s *Where the Wild Things Are*, all children can pretend to be Max, making mischief, transforming his room, and sailing on an imaginary boat. When they arrive at the place where the wild things are, they all can switch roles and become “Wild Things” making a wild rumpus.
  - Allow children to create their own ending for a story; “How do you think the cap seller got those monkeys to give him back his cap? Show me!” This encourages creativity.
  - Consider having the children act out a story before you read the book to them.
  - Compare the children’s dramatization of a story with the illustrated book (Brown & Pleydell 1999). Discuss how they were the same and different.

Many adults wish their teachers had provided more opportunities for self-expression through music, art, movement, drama, and dramatic play. These experiences are fun and engaging ways for children to build language, numeracy, and literacy skills; to learn about their own and other cultures; and to develop social skills. They also set the stage for using the creative arts to solve problems, express ideas, and gain self-knowledge in the school years and beyond.

*THE HEAD START CHILD OUTCOMES FRAMEWORK*  
*DOMAIN 6: SOCIAL & EMOTIONAL DEVELOPMENT*

DOMAIN	DOMAIN ELEMENT	INDICATORS
SOCIAL & EMOTIONAL DEVELOPMENT	Self-Concept	◆ Begins to develop and express awareness of self in terms of specific abilities, characteristics, and preferences.
		◆ Develops growing capacity for independence in a range of activities, routines, and tasks.
		◆ Demonstrates growing confidence in a range of abilities and expresses pride in accomplishments.
	Self-Control	◆ Shows progress in expressing feelings, needs, and opinions in difficult situations and conflicts without harming themselves, others, or property.
		◆ Develops growing understanding of how their actions affect others and begins to accept the consequences of their actions.
		◆ Demonstrates increasing capacity to follow rules and routines and use materials purposefully, safely, and respectfully.
	Cooperation	◆ Increases abilities to sustain interactions with peers by helping, sharing, and discussion.
		◆ Shows increasing abilities to use compromise and discussion in working, playing, and resolving conflicts with peers.
		◆ Develops increasing abilities to give and take in interactions; to take turns in games or using materials; and to interact without being overly submissive or directive.
	Social Relationships	◆ Demonstrates increasing comfort in talking with and accepting guidance and directions from a range of familiar adults.
		◆ Shows progress in developing friendships with peers.
		◆ Progresses in responding sympathetically to peers who are in need, upset, hurt, or angry; and in expressing empathy or caring for others.
	Knowledge of Families & Communities	◆ Develops ability to identify personal characteristics, including gender and family composition.
		◆ Progresses in understanding similarities and respecting differences among people, such as genders, race, special needs, culture, language, and family structures.
		◆ Develops growing awareness of jobs and what is required to perform them.
		◆ Begins to express and understand concepts and language of geography in the contexts of the classroom, home, and community.

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elping young children acquire social competence has been the overarching goal of Head Start since its inception in 1965. Throughout its history, the Head Start program has used a broad definition of social competence. It includes the child's health and well-being, along with the knowledge and abilities that children need to succeed in school and later in life. The Head Start Child Outcomes Framework provides more specific details about what those abilities are and delineates multiple Indicators of these essential aspects of child development.

Promoting young children's social-emotional development is vital for three interrelated reasons:

- Positive social-emotional development provides a base for life-long learning.
- Social skills and emotional self-regulation are integrally related to later academic success in school.
- Prevention of future social and behavioral difficulties is more effective than later remediation.

A major developmental task of the first five years of life is the development of self-regulation in its broadest sense. In fact, "providing the experiences that allow children to take over and self-regulate in one aspect of their lives after another is a very general description of the job of parents, teachers, and protectors of children that extends throughout early childhood and into the adolescent years" (Shonkoff &

Phillips 2000, 94). This process begins in infancy as babies learn to regulate their crying, sleeping, and other behavior patterns. It extends during the preschool years to more complex self-regulation—the ability to control emotional states, to learn to delay gratification, to build relationships with other people, and to modulate other functions essential for healthy development (Shonkoff & Phillips 2000). These developmental tasks are best accomplished during the preschool years because building positive social skills and healthy emotional relationships in young children is much easier than later trying to correct behavior and adjustment problems. In fact, preschool children who show aggressive behaviors and those who are neglected or rejected by peers are likely to encounter significant difficulties in school and in life (Katz & McClellan 1997).

In the school years too, social-emotional development is linked to academic success. A recent review of research on social and emotional risk and protective factors that

Given the current knowledge base about child development and learning, it is time to discard debates about social-emotional versus cognitive development and which comes first or is more important.

predict early school problems or success found that “children who do not begin kindergarten socially and emotionally competent are often not successful in the early years of school—and can be plagued by behavioral, emotional, academic, and social development problems that follow them into adulthood” (The Child Mental Health Foundations and Agencies Network [FAN] 2000). The review describes a child who is socially and emotionally healthy and school-ready as being confident and friendly, having good peer relationships, being able to tackle and persevere at challenging tasks. The child also has effective communication skills and the ability to listen to instruction (FAN 2000). These Indicators of social competence and school readiness cut across the Domains of The Head Start Child Outcomes Framework, encompassing social-emotional development, language development, and approaches to learning, and demonstrating the interdependence and inseparability of the Domains.

Given the current knowledge base about child development and learning, it is time to discard debates about social-emotional versus cognitive development and which comes first or is more important. Clearly, children develop in both areas over the same period, and learning and development in one influences learning and development in the other.

Promoting young children’s social-emotional development is a major responsibility of any early childhood program. Because so many Head Start children experience emotional and social risk factors, the Head Start program has the added responsibility of taking steps to help children develop skills that contribute to resiliency. These steps include providing warm, positive relationships with teachers and other adults, helping children make friends with other children and developing their interests and abilities. Head Start also has a special commitment to focus on those children who exhibit the most negative social behaviors, because without early intervention, their situation will only become more challenging as they get older. Findings from Head Start’s FACES study indicate that while most children in the program make progress in improving social skills, there are still some who continue to demonstrate problem behaviors (ACYF 2001).

Social competence is a culturally defined concept. What is considered acceptable social behavior in one family, community, or cultural group may be frowned upon or prohibited in another. Given the amount of cultural diversity in Head Start programs, achieving an agreed-upon set of social behaviors or discipline practices is highly unlikely. Rather, teachers should strive to help children learn the kinds of behaviors that will help them become successful in school, particularly behaviors referred to in the Child Outcomes Framework.

In doing so, they must respect and value children’s cultures. When a learning environment validates the cultural and linguistic background of the child, it fosters a positive self-concept as well as reflects the child, family, and community. When a child’s culture is accepted and their language spoken and responded to, every child is ensured of a functional way to communicate. For English language learners, initial communication may be in their home language. If children do not have a way to express themselves, they may act in inappropriate ways.

Thus, children’s communicative competence can affect their classroom behavior. Young children are quite capable of learning different rules of behavior for different environments; early on, they learn that behavior that is acceptable at home is different from what is permitted in church or on the playground. A particular challenge for Head Start teachers is that some children from high-poverty environments have not had home experiences that encourage initiative; their verbalizations and physical explorations may have been prohibited rather than encouraged (Hart & Risley 1995). As a result, these areas of their development may lag significantly and require focused intervention in preschool.

### DOMAIN ELEMENT: SELF-CONCEPT

We often hear that one of the most important goals of the preschool years is helping children develop a positive self-concept and sense of self-esteem. Too often in practice, these goals get translated into fuzzy activities such as making “books about me” or dictating reasons why “I am special.” Self-concept is a far deeper and more important notion. Self-concept—children’s stable perceptions about themselves despite variations in their behavior—is forming rapidly during the preschool years as children gain in reasoning and the ability to make comparisons among themselves and others. Their self-esteem, which comes in part from their perception of their own worth, is also in its formative stages during these years.

Children are often overconfident about their own abilities in these years because their skills are developing rapidly. They often misjudge their capabilities in relation to others. Every child in the preschool class may state confidently, “I am the smartest” or “I am the fastest runner.” At the same time, their blossoming egos are fragile. Young children quickly become discouraged if they experience too much frustration or failure. During the preschool years, children develop a positive self-concept not by being told they are special, but by taking initiative and succeeding at challenging tasks and by receiving specific adult encouragement related to a task or accomplishment. Therefore, it is important for the teaching team to observe children and track their progress in order to provide learning experiences that are appropriately challenging and that instill genuine feelings of success.



#### STRATEGIES

#### To promote positive self-concept and self-esteem

- Make sure the learning environment is welcoming to every child and reflects his identity and culture. Use photos of children and family members, displays of children’s work, and their names for functional purposes like taking attendance, storing belongings, or assigning jobs.
- Structure the environment to offer opportunities for children to share information about themselves, their families, and experiences.

- Provide appropriate levels of challenge to work at something and feel a sense of accomplishment.
- Make the study of self and families part of in-depth projects that are integrated with other areas of learning.
- Observe each child's individual strengths and plan opportunities for each child to demonstrate her capabilities.
- Organize the environment so children can independently choose their own activities for part of each day. If children have difficulty making wise use of choice time, limit their choices at first and gradually add more offerings.
- Let children do for themselves what they are capable of doing, whether it is dressing, serving a snack, cleaning up, writing their names, solving a problem, or any of the myriad of opportunities for developing and demonstrating growing competence.
- In planning curriculum, provide opportunities for children to succeed in both practicing newly acquired skills and working on more difficult, challenging tasks.
- Acknowledge and encourage children's efforts and accomplishments using specific feedback. For example, say, "You wrote your M" or "Thank you for helping Keisha with her coat", rather than offering nonspecific praise such as, "That's really nice".
- Provide children with evidence of their increasing skills and abilities by showing them examples of their previous work and allowing them to compare it to current work. For example, "Look at this. In October, you were writing an 'A' and now you can write your whole name, AMY."

### **DOMAIN ELEMENT: SELF-CONTROL**

The preschool years are the prime time for children to acquire self-control, the ability to recognize and regulate their own emotions and behaviors. By preschool, most children have acquired sufficient language to begin using speaking and listening skills to solve social problems. However, the preschool years are also the time when children's behavior tends to become more aggressive. Issues with aggression are more likely to arise when children are living in violent circumstances.

Teachers of young children frequently report that their toughest problem is dealing with children exhibiting challenging behaviors—children who are hostile, physically aggressive, and do not follow the classroom rules. When children exhibit these behaviors, it is very easy for teachers to automatically react. The teachers' understandable impatience and frustration can undermine their ability to think strategically about how to support young children's pro-social behavior and self-control. Reacting to children's challenging behavior is not an effective way to decrease challenging behavior—in fact, in most cases it causes the behavior to get worse! So what is a teacher to do? Research has shown that teachers can structure the physical arrangement of the classroom, the schedule and transitions, the planned experiences, and the interactions they have with children to simultaneously decrease challenging behavior and increase pro-social skills such as self-control.

Without a doubt, the physical arrangement of the classroom can affect children's

behavior. When the physical arrangement of the classroom is carefully planned, it can go a long way in preventing challenging behaviors from occurring. Here are a few ways that the physical classroom can be structured to prevent challenging behaviors:

- The classroom is divided into learning centers with boundaries that are easily viewed.
- An adult can see all of the children at one time with a sweeping glance.
- In turn, the children can see the adult.
- Noisy activities are away from more quiet activities.
- Visual reminders as to where the areas are and what to do there are posted for children to read.
- Bottleneck openings to areas are avoided.
- Wide open spaces (or runways) are eliminated to decrease the likelihood of a child running from one area to the next.
- When areas are not open to children, they are visually closed with stop signs, sheets over areas, and lids over sand tables.

Having a well-designed, consistently implemented daily schedule can go a long way toward preventing challenging behaviors. When children know what to do and where to go next, they are less likely to exhibit disruptive behavior. A predictable schedule provides children with comfort in knowing what to expect next. In addition to having a schedule and following it consistently, posting the schedule in a manner that children can follow, such as using pictures and symbols, can double the impact.

Transitions can be difficult times in the day—and times when teachers remark that children exhibit a lot of challenging behavior. Transitions are difficult for a few key reasons.

- First, there are often too many of them. Teachers may schedule many unnecessary transitions, causing children to stop their activity and change every 15 minutes or so.
- Second, during most transitions, children are left waiting and waiting with nothing to do. Young children should not be expected to wait with nothing to do for long periods of time, and typically, they won't. Many young children will “entertain themselves” during these waiting times with behavior adults may find challenging.
- A third reason transitions can be difficult is that it is harder for children to read the contextual cues. During transition times, most directions are provided verbally and often children are moving in all different directions. For a new child, or a child who has a difficult time understanding language, transitions can feel chaotic.
- Finally, the fourth reason transitions can be difficult is that they are almost always adult-directed. This means that children who have a difficult time with compliance are “set up” for challenging behaviors several times throughout the day.

For all of these reasons, transitions are difficult. Yet it is still possible to structure transitions to prevent a lot of challenging behavior from occurring. Here are some ideas:

- Decrease wait time during transitions by decreasing “whole group” transitions.
- Make transitions active times by saying “Hop to your cubby like a rabbit” or “Let’s sing *Wheels on the Bus*.”
- Use a consistent cue to signal a transition such as, clapping your hands, singing a song, or ringing a bell.
- Plan learning experiences that do not require an adult to get the child started.
- Provide choices.
- Communicate clearly and directly with children about what behavior is expected. Often we present children with options when we really mean to give directions. It is better to state, “It is time to clean up” than it is to ask, “Do you want to help clean up?” However, allowing children to make real choices can help reduce challenging and protesting behavior. Rephrase directions in terms of real choices that children can make. Instead of saying, “Do you want to clean up?” ask, “Do you want to clean up the blocks or the puzzles first?” Instead of saying, “Would you like to go outside?” ask, “Should we gallop like a horse or fly like an eagle out to the playground today?” With choices like these, children are more likely to be compliant while allowing adults to maintain control. And they gain important experience in making decisions about their own actions.
- Use visuals such as pictures or symbols to show children where they are going next.
- Eliminate unnecessary transitions.

Increasing active engagement is a sure way to prevent challenging behavior. Research demonstrates that children are less likely to engage in challenging behavior when they are actively engaged in meaningful learning experiences. Imagine four-year-old Joseph sitting with 20 other classmates listening to a story read by the teacher. The teacher stops and poses a question to the group. Confidently and excitedly, Joseph raises his hand to respond. But the teacher calls on several other children first. By the time she gets to him, his excitement and enthusiasm are gone. He feels frustrated because he has forgotten the answer. Rather than listening intently to the rest of the story, he fidgets, bothering the children around him. When he is removed from the group by the teacher’s aide and made to sit apart, he mutters that he does not like this class. Listening in a large group situation and waiting patiently for a turn to speak are difficult for many preschoolers. Joseph’s behavior would have been different, and he would have learned more, if he had been part of a smaller group where he had an opportunity to express his ideas. Here are some tips to increase active engagement and decrease the likelihood of challenging behaviors:

- Plan open-ended activities.
- Plan challenging experiences.

- Rotate high-preference toys and materials so they remain novel.
- Plan different activities during circle time. Consistency is key but that does not mean the same “weather song” should be sung every day.
- Integrate child preferences into learning centers and small group activities.
- Provide modifications and adaptations for children with special needs so that they can access and participate fully in the learning experiences.

Finally, “catch children being good!” When teachers give their time and attention to children who are engaged in appropriate behaviors, the child’s appropriate behaviors increase. Providing time and attention is different from praise. Providing time and attention simply means noticing and attending to children by commenting, describing, or smiling when they are demonstrating positive behaviors, like self-control. In classrooms where teachers “catch children being good” four times more often than they react to children’s challenging behaviors, the children spend more time actively engaged in learning experiences, they demonstrate far fewer challenging behaviors, and they demonstrate more positive, pro-social behaviors.

## STRATEGIES

**To help children develop self-control**

- Provide a sufficiently engaging curriculum and variety of learning experiences to ensure that children are not bored or aimlessly wandering. Young children are very good at creating diversion when none is available. Often teachers think they cannot provide interesting learning experiences until the children are under control, when, in fact, the real problem is that the children are out-of-control because there is nothing interesting to do.
- Arrange the environment to help children do their best. For example, make sure block building has enough space and is protected from traffic; avoid arrangements that invite children to run or fight, such as long corridors or large open spaces.
- Get to know each child, establish relationships with parents, and support their strengths as well as their needs.
- Establish positive, warm, caring relationships with each child, especially those children whose behavior is difficult because they are in greatest need of positive support.
- Set clear limits for unacceptable behavior and enforce them with rational explanations in a climate of mutual respect and caring.
- Work with children to establish a few simple group rules: Take care of other people, take care of yourself, and take care of the Head Start setting. Systematically teach and reinforce these rules throughout the program year.
- Evaluate and change your own behavior if needed. Give time and attention to children when they are behaving appropriately, not just when they are causing a disturbance or breaking a rule. Especially for the few children with the most challenging behaviors, be sure to “catch them doing something right” and those desirable behaviors will increase. Behavior is maintained by the attention it receives.

- Remember to use the child’s home language as often as possible for purposes beyond giving the child directions such as sit down or be quiet.
- Do not try to reason with children who are having temper tantrums or are out of control. Protect them from hurting themselves or others and wait until they have calmed down to discuss the situation.
- Coach children to express their feelings verbally, using either home language or English, and solve social problems with others using words. For many children, this will mean not only providing the words and offering some possible solutions, but being there to assist when situations arise.
- Model self-control by using self-talk: “Oh, I can’t get this lid off the paint. I am feeling frustrated [take a deep breath]. Now I’ll try again.”

### **DOMAIN ELEMENT: COOPERATION**

Kindergarten teachers often cite children’s ability to cooperate with their teachers and other children as one of the most important elements of readiness for school. The ability to cooperate is necessary for two basic reasons: to build positive relationships and friendships and to learn from and work constructively with other people. These skills are necessary for school success and beyond. The foundation for cooperation is laid during early childhood.



#### **To help children develop cooperation**

- Provide time, materials, and support for children to engage in many kinds of play—including block play, dramatic play, simple games, and rough and tumble play.
- Take a role in children’s play as needed without becoming intrusive or taking over. Observe, provide props or a theme, and play with children who need extra help becoming successful players. Become a patient in the doctor’s office or a customer in the store. Withdraw from the play as soon as possible so it becomes the children’s own.
- Model the language of cooperation for children—“I would like to have a turn” or “May I play in your car?”
- Coach individual children who need help playing cooperatively with others. Give the child specific words to say or strategies for entering a play situation, demonstrating how to share a toy or how to take on a role.
- Engage children in group discussions and role play how to resolve conflicts or negotiate social problems before they arise.
- Read books that include conflicts or problems requiring cooperation. Ask children to predict what will happen in advance, or after reading, ask them to provide alternative solutions.
- Play turn-taking games in small groups, modeling and encouraging cooperation with others.
- Plan projects or play experiences where two or more children must collaborate together. Occasionally pair children who are less socially skilled with more popular peers.
- Select toys that encourage social interaction, such as puppets, wagons, or simple board games.

- Encourage partners or teamwork: “Look what Laura and Cesar built together.” “All four of you worked on this beautiful mural.”

### **DOMAIN ELEMENT: SOCIAL RELATIONSHIPS**

The ability to develop and maintain positive social relationships is an essential aspect of healthy human development. The preschool years provide a prime window of opportunity for their development. At this point, most children need to move beyond their families and learn to establish relationships with new, unfamiliar adults such as teachers. Likewise, this is the time when children are first learning to make real friends, although their friendships are often capricious and short-lived. Because social relationships seem to come naturally for many children, we may not realize that, as in every area of their development, adult support is needed.

While establishing positive social relationships is an important outcome of preschool, perhaps more important is preventing social isolation. Research shows that it is possible to predict as early as preschool those children who will have later social and academic problems, because they are already either ignored or rejected by other children (see Katz & McClellan 1997 for a review). Teachers must pay attention to each child’s social development, and especially work to support children who are struggling with relationships even though these are often the most difficult children for teachers to build a relationship with.

Research shows that children with disabilities may need help from adults in forming friendships with typically developing peers (Odom 2001). But research also shows that such relationships benefit both children with special needs and their typically developing peers, so such adult intervention is essential (Guralnik 1990).



#### **To develop positive social relationships**

- Build relationships with parents so that children feel safe, secure, and comfortable with their teachers.
- Build a caring community within the program so that children come to know and feel comfortable with administrators, other teachers, staff, and parents.
- Provide opportunities for children to work and play together. Successful relationships need both time and content—something to do or think about together.
- Draw children’s attention to the feelings or experiences of others by saying, “Look at her face. Can you tell how she feels?”. Help them to develop empathy by reminding them of their own similar feelings or experiences: “You know what it feels like when someone says you can’t play.”
- Model caring, positive regard for others. When a child is absent, remind the others of the friend who is missed. If absences are prolonged, have children make cards or gifts to convey feelings of regard.
- Help children who are having difficulty making friendships with others by planning cooperative activities like buddy painting or collages. Teach these children how to initiate and sustain peer interactions.

- Intervene when children are repeatedly rejected by others. Coach these children with specific strategies for entering play. Asking, “Can I play?” is not as effective as watching, getting close, and playing with the same thing or bringing a toy over to a peer. Help children identify common ground or shared preferences with others as ways to begin relationships. “Your mom said you have a new book about fish. Why don’t you bring it to school? I know the other children would like to see it!”
- Teach alternatives to tattling, teasing, and other socially unacceptable behavior.

### **DOMAIN ELEMENT: KNOWLEDGE OF FAMILIES AND COMMUNITIES**

For older children, social studies is the integrated study of several related disciplines including history, economics, geography, and other social sciences. But for young children, these topics are best learned through their personal experiences and in the context of their developing social skills and knowledge. The Child Outcomes Framework describes the study of families and communities as incorporating information from the various social studies disciplines such as learning the geography of school and community, or studying jobs as an early form of economics. These studies provide excellent content for preschool curriculum because they are naturally of interest to children while also expanding their knowledge of the world around them.



#### **To help children acquire knowledge of families and communities**

- Involve children’s families in every aspect of the program so that children can learn about and compare each other’s personal characteristics, experiences, and cultures.
- Demonstrate respect for various cultures and languages, making sure that children’s home languages and cultures are reflected in books, signs, and learning experiences.
- Write class books about the children’s families, their homes, their mealtimes, their pets, and other aspects of their lives. Discuss what is the same and different about the children’s families.
- Engage children in long-term projects or in-depth studies of their communities. Begin with children describing what they already know and then identifying what questions they have and ways to find answers.
- Take trips, invite visitors, make observations, gather and record data about what they learn.
- Use various media such as blocks, clay, drawings, or photos to represent and map the classroom, Head Start center, neighborhood, or community.

In short, the preschool years are critical for social-emotional development. Head Start staff intentionally support children as they develop a strong sense of self, make friends, and learn about the social world. As they grow in these areas, children are building a foundation for success in school and for life-long learning.



*THE HEAD START CHILD OUTCOMES FRAMEWORK*  
*DOMAIN 7: APPROACHES TO LEARNING*

DOMAIN	DOMAIN ELEMENT	INDICATORS
APPROACHES TO LEARNING	Initiative & Curiosity	◆ Chooses to participate in an increasing variety of tasks and activities.
		◆ Develops increased ability to make independent choices.
		◆ Approaches tasks and activities with increased flexibility, imagination, and inventiveness.
		◆ Grows in eagerness to learn about and discuss a growing range of topics, ideas, and tasks.
	Engagement & Persistence	◆ Grows in abilities to persist in and complete a variety of tasks, activities, projects, and experiences.
		◆ Demonstrates increasing ability to set goals and develop and follow through on plans.
		◆ Shows growing capacity to maintain concentration over time on a task, question, set of directions or interactions, despite distractions and interruptions.
	Reasoning & Problem Solving	◆ Develops increasing ability to find more than one solution to a question, task, or problem.
		◆ Grows in recognizing and solving problems through active exploration, including trial and error, and interactions and discussions with peers and adults.
◆ Develops increasing abilities to classify, compare and contrast objects, events, and experiences.		

In the early 1990s, the National Education Goals Panel provided a multi-dimensional definition of school readiness. That definition introduced and gave particular emphasis to approaches to learning as a distinct dimension of readiness. This term refers to aspects of children's characteristic responses to learning situations, such as the child's curiosity, flexibility, or persistence.

Research on school readiness indicates that children's approaches to learning are powerful predictors of their later success in school (The Child Mental Health Foundations and Agencies Network [FAN] 2000). We also know that there is considerable variation among children on these characteristics, some of which is due to personality, but most of which is subject to change depending on children's experiences and early interventions. For example, shyness, which is considered a personality trait, may inhibit initiative and curiosity, but need not hinder success in school if teachers do not equate shyness with low intelligence and if they support shy children in classroom

interactions. Children's approaches to learning contribute to their success in school and interact with their development and learning in all other Domains. For example, curiosity is a prerequisite of the scientist, and reasoning and problem solving are as necessary for social relationships as they are for mathematics.

Progress for English language learners will vary as well. How linguistically diverse children approach learning will differ and affect how quickly they progress in learning English and/or their home language. A child who is more willing to take risks with language may develop more rapidly than a child who is hesitant in attempting to speak English.

School readiness includes the ability to tackle and persist at challenging or frustrating tasks, follow directions, take risks and make mistakes, and work as part of the group.

### DOMAIN ELEMENT: INITIATIVE & CURIOSITY

Decades ago, Erik Erikson (1963) described the primary struggle of the preschool years as initiative versus guilt. Most children of this age are naturally curious and eager to learn, but they can become easily discouraged if their initiatives are regularly ignored or punished. In *Eager to Learn: Educating Our Preschoolers* (Bowman, Donovan, & Burns 2001), a distinguished panel of scholars concludes that preschool curriculum is most effective when it takes advantage of children's own interests and curiosity to help them

acquire the skills and knowledge needed for success in school. During the early years of life, children's initiative and curiosity lead them to explore and experiment in ways that literally contribute to brain development.



### **To encourage initiative and curiosity**

- Encourage children's natural inclination to ask questions and to wonder. Help them refine their questions and think of ways they might get answers.
- Provide meaningful, realistic choices of play and work experiences.
- Help children who have difficulty making choices by limiting choices or helping them think through their options.
- Engage children in science and math experiences that start with asking questions, forming hypotheses or making guesses, collecting data, and drawing conclusions.
- Read or write stories in which children change or make up their own endings.
- Play games that build on and extend children's curiosity, such as, "I Spy" or "Mystery Bag."
- Be flexible enough to change plans if children initiate a more interesting idea or experience.

### **DOMAIN ELEMENT: ENGAGEMENT & PERSISTENCE**

Success in school requires that children engage and persist in tasks and activities that are often not of intrinsic interest to them. School readiness includes the ability to tackle and persist at challenging or frustrating tasks, to follow directions, to take risks and make mistakes, and to work as part of the group. Yet, kindergarten teachers report that many children lack these abilities. These capacities develop over time and build from children's ability to engage and persist in those activities that are of greatest interest to them, such as self-chosen play or interesting projects, and their feelings of joy or pride in their accomplishments.

Teachers' comments to children can encourage them to persist and to take pride in their work. Research shows that if children can attribute their successes, even at a young age, to their efforts, rather than to their intelligence or luck, they will be more engaged and motivated (Dweck 1999).

## STRATEGIES

**To promote engagement and persistence**

- Play games in which children must listen carefully and follow more than one direction, such as “Simon says, stand on one foot and touch your nose.”
- Assign children important, necessary tasks that involve following multiple-step directions: “Take your coat off, hang it in the cubby, and pick out a book to enjoy.”
- When children quit or give up too easily, gently encourage them by saying, “Try one more time” or “Think of something else you could try.”
- Gradually lengthen the time children are expected to remain engaged in activities or experiences; for instance, read longer stories to extend children’s attention span.
- Engage children in prior planning of their own and remind them of their plans as needed: “What was it you planned to do today? Are you finished?”
- Provide ways for children to revisit and reflect on their experiences and learning.
- Make frequent comments about children’s efforts: “Look how hard you’ve been trying to put that puzzle together. You’re almost finished.” “You didn’t give up until you got just the right color. You must be very proud.”
- Help children identify successful strategies for problem-solving: “It really helps when you look for the very first letter of your name to find your cubby.” “Let’s repeat the directions together, so everyone will know what to do next.”
- Offer praise that is specific and meaningful to what a child (or children) have actually done: “You really had to push hard to turn the pedals.” “You all spoke in such a kind, gentle way when Jose hurt his foot.” Avoid vague words like “Nice” and exaggerated praise, such as “You’re the best painter in the whole world.”

**DOMAIN ELEMENT: REASONING & PROBLEM SOLVING**

The ability to reason and solve problems cuts across all Domains of The Head Start Child Outcomes Framework. These are skills that serve children well throughout school and life. The Framework gives reasoning and problem solving special emphasis as a Domain Element of Approaches to Learning, but children develop and use their reasoning and problem-solving abilities across every aspect of the curriculum and in all their daily interactions. Science and mathematics provide concrete opportunities for children to question, experiment, reason, and solve problems, but so do reading and writing, the arts, and interpersonal problem solving. In good children’s literature, characters inevitably encounter problems that can be solved in multiple ways. Reading aloud to children from a variety of materials exposes them to a multitude of problem-solving strategies and ways of thinking. Children’s social experiences inevitably result in conflicts that require thinking through and discussing possible solutions, trying them out, and negotiating to solve problems. All of these experiences draw on children’s increasingly sophisticated language skills.

**STRATEGIES**

**To develop reasoning and problem solving**

- Engage children in generating multiple solutions to questions or problems: “It is raining and we can’t go outside. What could we do instead?”
- When exploring or experimenting with a science or math topic, engage children in the scientific method of asking questions, generating hypotheses, gathering data, predicting what will happen, and observing consequences.
- Play games that involve classifying, comparing, and contrasting, such as Dominoes, Lotto, and other matching and sorting games.
- Ask children to classify objects using more than one attribute (“Find the large, blue square; find the small, red circle.”).
- Help children verbalize their reasoning, thinking out loud about how to solve a problem or answer a question. Write down children’s recommended ways of solving problems as well as their solutions to problems. Try them out.
- Model open-mindedness and creativity. Demonstrate that there may be more than one way to do things or to solve problems.
- Encourage children to think of as many solutions as they can to interpersonal problem situations. Ask them to think about what would happen next if they used a certain solution or to anticipate the consequences of an action.
- Read and act out stories in which characters reason and solve challenging problems.
- See the Mathematics Domain for other examples.

In conclusion, teachers build children’s approaches to learning throughout the program day and across all kinds of planned and spontaneous experiences. It is important for teachers to be intentional about supporting these critical dimensions of children’s development, which foster positive attitudes and behaviors, and to give extra support and guidance to children who need it.



*THE HEAD START CHILD OUTCOMES FRAMEWORK*  
*DOMAIN 8: PHYSICAL HEALTH & DEVELOPMENT*

DOMAIN	DOMAIN ELEMENT	INDICATORS
PHYSICAL HEALTH & DEVELOPMENT	Gross Motor Skills	<ul style="list-style-type: none"> <li>◆ Shows increasing levels of proficiency, control, and balance in walking, climbing, running, jumping, hopping, skipping, marching, and galloping.</li> <li>◆ Demonstrates increasing abilities to coordinate movements in throwing, catching, kicking, bouncing balls, and using the slide and swing.</li> </ul>
	Fine Motor Skills	<ul style="list-style-type: none"> <li>◆ Develops growing strength, dexterity, and control needed to use tools such as scissors, paper punch, stapler, and hammer.</li> <li>◆ Grows in hand-eye coordination in building with blocks, putting together puzzles, reproducing shapes and patterns, stringing beads, and using scissors.</li> <li>◆ Progresses in abilities to use writing, drawing, and art tools, including pencils, markers, chalk, paint brushes, and various types of technology.</li> </ul>
	Health Status & Practices	◆ Progresses in physical growth, strength, stamina, and flexibility.
		◆ Participates actively in games, outdoor play, and other forms of exercise that enhance physical fitness.
		◆ Shows growing independence in hygiene, nutrition, and personal care when eating, dressing, washing hands, brushing teeth, and toileting.
	◆ Builds awareness and ability to follow basic health and safety rules such as fire safety, traffic and pedestrian safety, and responding appropriately to potentially harmful objects, substances, and activities.	

**T**hroughout its history, Head Start has placed major emphasis on promoting children's health, both physical and mental, as a significant determinant of school readiness. The Head Start Program Performance Standards (2002) include a comprehensive set of requirements for programs regarding children's health and physical well-being. These include, but are not limited to, sensory and developmental screening and procedures for ongoing assessment of progress. Head Start programs ensure that children have a medical home, a primary health provider, and continuity of care. Head Start programs also ensure that children receive regular dental check-ups and good nutrition. The provision of these comprehensive services continues as a hallmark of the Head Start program and is one of its success stories.

The provision of these comprehensive services continues as a hallmark of the Head Start program and is one of its success stories.

The Domain of Physical Health & Development in the Child Outcomes

Framework is designed to augment the larger work of providing health services in Head Start. The Framework describes the outcomes for children's learning and development that are most clearly the responsibility of teachers and other members of the educational staff. Although teachers work collaboratively with health personnel, they also have a responsibility to infuse health knowledge and physical development goals in the curriculum.

The Physical Health & Development Domain of the Framework includes three Elements: gross motor skills, fine motor skills, and health status and practices. Each of these elements supports children's overall health and physical fitness and can enhance a child's progress in other Domains. For example, gross motor skills lead to growing confidence and pride in accomplishments (social and emotional development, self-concept). Children use their fine motor skills to experiment with writing tools and materials (literacy, early writing). Good health and physical fitness, extremely important in their own right, also contribute to learning and development in all Domains during early childhood and beyond.

Gross motor skills involve moving the whole body and using larger muscles of the body such as those in the arms and legs. They include skills such as gaining control of the head, neck, and torso to achieve a standing or sitting position. They also include locomotor skills such as walking, throwing, and stretching. Children develop many gross motor skills as they move and explore freely in a safe, supportive environment. When they can coordinate their movements children are ready to learn how to pedal a tricycle;

turn somersaults; and catch, throw, and kick balls. At times children require instruction to learn these skills. To become proficient, most children need numerous opportunities to practice using their skills.

Fine motor skills involve use of the small muscles found in individual body parts, especially those in the hands and feet. Children use their fine motor skills to grasp, hold, and manipulate small objects and tools. As they gain eye-hand coordination, they learn to direct the movements of their fingers, hands, and wrists to perform more complex tasks. With access to appropriate materials and activities, children can practice and refine both their fine and gross motor skills during a variety of experiences and while performing self-help routines. For example, children might draw and write with markers, manipulate a computer mouse, use eating utensils, put on and take off dress-up clothes, and use a magnifying glass to examine an insect.

In Head Start, children's health has always been a priority. The third element of the Physical Health & Development Domain, health status and practices, refers to children's overall physical condition—growth, strength, stamina, and flexibility. A child's physical condition is dependent on a number of factors, including heredity, gender, and access to good nutrition and health care. Also key is participation in fitness-enhancing activities such as playing tag, climbing a ladder, jumping on a mattress, swinging from a rope, and chasing bubbles. Physical fitness can enhance young children's ability to learn and protect them from health conditions such as heart disease, obesity, diabetes, and other chronic ailments. When children feel fit and healthy, they are likely to gain self-esteem, have less stress, enjoy playing, and eagerly take on new challenges.

Health status and practices also include children's growing independence in carrying out personal routines, their awareness of health and safety concerns, and their ability to follow rules and take steps to keep themselves safe and healthy. Such awareness and independence grow when children participate in group and individual routines such as setting the table for meals and washing their hands. Children can learn about health and safety concerns and practices in the context of daily life at home, at Head Start, and through connections with their medical home.

Head Start plays an active role in supporting the three related Elements in this Domain. Classroom teachers, family child care teachers, and home visitors need to be familiar with the typical sequence and processes through which children develop and refine fine and gross motor skills and with the components of physical fitness. They must also know about sanitary practices that promote good hygiene, the nutritional needs of young children, and safety practices that prevent or reduce injuries. Staff should integrate opportunities for children to use fine and gross motor skills, enhance health and physical fitness, and learn about health and safety concepts and practices throughout the curriculum.

## STRATEGIES

**To promote overall physical development and health**

- Create safe indoor and outdoor learning environments that invite children to move their bodies, explore their surroundings, and practice fine and gross motor skills.
- Provide materials and equipment that allow children to practice fine and gross motor skills and challenge them to gain new ones.
- Involve families by sharing information about physical health and development and suggested home activities.
- Serve as enthusiastic role models for practices that support health and physical fitness.
- Participate with children as they engage in physical activities and daily routines.
- Allow and encourage children to do things for themselves whenever it is feasible and safe to do so.
- Talk about what we are doing and why it supports our own and the children's fitness, nutrition, health, and safety.
- Use a variety of teaching strategies, including demonstration and direct instruction when appropriate, to help children become proficient in use of physical skills.

**Stages of Physical Growth and Development**

As in other Domains, each child's physical growth and development are highly individualized and dependent on characteristics and influences such as heredity, environmental factors, nutrition, age, gender, disabilities, and access to health care. Nevertheless, several general principles govern the direction and sequence of physical development:

- The *direction* of muscle development is from head to toe. Children learn to lift their heads before they can raise their torsos, use their arms, and stand with and without support.
- The *sequence* of muscle development begins with those closest to the center of the body and progresses to those in the extremities—hands and feet. Most children learn to crawl before they can pick up objects using the thumb and forefinger (pincer grasp). Thus, children refine their gross motor movements, such as those used to walk or throw, before they can control the small motor skills used to zip a jacket or turn pages in a book.

Young children enjoy moving, exploring, and being able to do things for themselves. With access to appropriate materials and equipment, opportunities to practice fine and gross motor skills, and skilled adult guidance, children can expand their physical abilities.

### **DOMAIN ELEMENT: GROSS MOTOR SKILLS**

From birth to about two years of age, children learn primarily through their senses and motor actions. Infants are born with reflexive, involuntary movements. Some reflexes, such as blinking and swallowing, serve to protect the child. Others, for example, kicking legs alternately, are precursors of later motor skills (in this case, walking). As infants grow and mature, the higher brain centers of the nervous system begin to govern their movements. They learn to control voluntary movements such as grasping and mouthing a toy and pulling up to standing.

The fundamental movements children develop and refine during the preschool years include—

- *locomotor movements*, such as walking, running, leaping, jumping, hopping, through which the body proceeds in a horizontal or vertical direction from one place to another;
- *gross motor movements*, such as throwing, catching, kicking, through which the body gives or receives force from objects;
- *fine motor manipulative movements*, such as tying shoes, coloring, cutting with scissors, which emphasize control, precision, and accuracy; and
- *stability movements*, such as balancing, dodging, starting, stopping, in which the body remains in place but moves around its horizontal or vertical axis.

Maturation plays a major role in a child's physical development during the first two years. To develop fundamental movement skills, however, children usually require more than access to a supportive environment and adults (Gallahue & Ozman 1995). Young children can learn to throw or kick a ball at a beginning level. To become proficient—and be able to use the skill throughout life—they need both instruction and opportunity to practice (NASPE 2002). Young children who become proficient in fundamental movement skills are more likely to engage in sports and other fitness activities throughout childhood and when they are adults. Their natural interest in physical skills and activities is enhanced so they can become adults who live long, active lives. It is important for Head Start teachers to give children developmentally appropriate instruction and opportunities to practice motor skills. To do this effectively, staff need to observe and keep track of children's progress in order to know how and when to offer encouragement and guidance, and new challenges and opportunities for additional practice.

Perceptual-motor development is an important part of learning fundamental movement skills. Perceptual-motor skills include large motor skills, fine motor skills, simple auditory, visual, and tactile-kinesthetic skills, and body awareness skills. Children develop and use simple auditory, visual, and tactile-kinesthetic skills while using their senses to collect, monitor, interpret, and respond to information from an environment filled with a variety of—

- interesting sounds and rhythms to hear;
- pictures, displays, and other things to look at; and
- textures and objects to feel.

Body awareness skills grow as children learn about the parts of their bodies, how much space their bodies take up, and how to control their bodies as they move from one place to another (NASPE 2002).



### To support development of gross motor skills

- Follow a daily schedule that allows children to spend ample time each day in structured and unstructured physical activity. Such a schedule allows children to alternate using their gross motor skills in physical activities with opportunities to rest and recover energy. Engaging in physical activity for one or more hours a day can also help children maintain healthy weight levels (NASPE 2002).
- Plan structured physical activities that introduce a variety of movement skills individually, with a partner, and then in a small group (NASPE 2002). Offer balls of different sizes and materials, such as rubber, foam, inflatable plastic to roll, kick, throw, or catch; plan balancing activities; and introduce tumbling.
- Provide sufficient space, toys, and equipment for child-initiated physical activities outdoors. Wheeled toys, slides, climbers, and other playground equipment sized for preschoolers can encourage children to pedal, climb, push, pull, balance, swing, hang, and slide. Cardboard boxes, tunnels, balance beams, jump ropes, plus a variety of balls and bats provide additional movement options (NASPE 2002).
- Offer sufficient indoor space for gross motor activities so children can move without getting in each other's way. Some examples follow (Koralek 1994):
  - ~ Hallways are ideal for riding tricycles, rolling balls, tossing bean bags into baskets, playing relay games, building with large blocks, marching to music, and bowling (use plastic containers as pins).
  - ~ A classroom loft lets children climb up stairs or a rope ladder, slide down a pole, swing (hang the swing on hooks when not in use), or jump off a low platform.
  - ~ Provide room for music and movement activities; put mats on the floor for tumbling; play cooperative games using hula hoops, streamers, parachutes, and beach balls.
  - ~ Participate in physical activities with children. This simple strategy allows adults to model movement skills, offer individualized assistance, learn how children approach and respond to physical challenges, and encourage children to practice and refine their skills. It also helps staff reduce stress and stay fit.
- Plan activities that promote perceptual-motor development (Poest et al. 1990):
  - ~ Time awareness/coordination: Use nursery rhymes, chants, songs, and marches to help children learn to move to a steady beat.
  - ~ Body and visual awareness: Ask children to imitate body movements. Move as slowly as needed for children to achieve success. At first, model the movement and use verbal instructions. Later, just model or just give verbal directions. Gradually make the task more challenging by changing the speed, tempo, rhythm, or directions.

~ Provide opportunities for children to experience obstacle courses in order to understand their bodies in space and direction. Give guidance on how to move through each part of the course so children can build understanding of directions in space such as over, under, around, and through.

### **DOMAIN ELEMENT: FINE MOTOR SKILLS**

Strength, control, and coordination of hand, finger, and wrist movements are part of fine motor development. Strength is needed to cut with scissors; control allows for buttoning and zipping; coordination is used to put together puzzles and thread beads on laces. Development of fine motor skills also relies on sensory awareness. Children use their senses to collect information about objects in the environment and use this information to coordinate movements. Fine motor skills allow children to explore how things work, get dressed, use writing tools, put puzzles together, arrange blocks in sequence, prepare snacks and meals, and engage in many more activities that require hand, finger, and wrist movements. Eye-hand coordination is needed for many fine motor tasks.

Children use their fine motor skills in relation to several other Domains. For example, they—

- build their understanding of *math concepts* by sorting and manipulating objects, including geometric shapes; by making patterns with stringing beads; and by using measuring tools;
- experiment and make *scientific discoveries* by handling collections, filling and emptying containers at the sand or water table, exploring a new software program, and holding and looking through a magnifying glass;
- explore *language and literacy* by handling books and using writing tools; and
- express *creativity* while using rhythm instruments, cutting and gluing paper scraps, doing fingerplays, and using dramatic play props and dress-up clothes.

Head Start settings include children with a wide range of fine motor abilities. This is due, in part, to children's individual timing for development and, in part, to the range of experiences children have before coming to Head Start. Some children can hold and scribble with crayons, while others can copy a few letters. Some tear paper while others use scissors with ease. Some might roll and poke holes in playdough. More experienced children use props such as rolling pins and plastic knives. Some have never used a computer mouse. Others use a mouse with ease. To promote each child's fine motor development, Head Start offers materials and activities that support and challenge a range of skills.

## STRATEGIES

**To support development of fine motor skills**

- Provide materials for a range of fine motor ability levels, including table blocks in several sizes, puzzles of varying complexity, computer software with several levels of complexity, small and large beads with thick and thin laces, and hand puppets and finger puppets.
- Offer and adapt activities to allow children to participate with success. When making bread, children can shape the dough into round loaves or braided ones; while making a group collage, children can tear or cut pieces of paper to add to the creation; while making puppets to re-enact a story, children can choose which materials to use and what to do with them.
- Plan an approach that allows children to be actively involved in routines. Make sure the schedule provides enough time for children’s participation. Children can fold napkins; put on and take off coats, hats, and boots; mix paint and wash paintbrushes; and pour from small pitchers.
- Focus on the use of multiple senses in planning learning experiences for children. During meals and food preparation activities, talk about the way foods look, smell, and taste; on a walk, point out sights, sounds, and textures; listen to the sounds of different rhythm instruments with eyes closed.
- Observe children using fine motor skills and intervene, when needed, with an appropriate teaching behavior such as modeling how to hold a crayon or giving instruction on how to use scissors safely.
- Continue to assess children’s progress in fine motor abilities and offer materials, equipment, and opportunities that allow the child to practice. When the child seems ready to move on, offer challenges that will help the child progress without getting frustrated.

**DOMAIN ELEMENT: HEALTH STATUS & PRACTICES**

As noted earlier, children’s physical growth, strength, stamina, and flexibility depend in part on individual characteristics and influences. Children who receive good nutrition and medical and dental checkups and who exercise are more likely to be physically fit and in good health than those who lack these essential resources. Head Start plays a role in enhancing children’s overall health status and allowing them to be successful now and in the future.

Physical fitness is defined as “a condition where the body is in a state of well-being and readily able to meet the physical challenges of everyday life” (NASPE 2002). Four separate components contribute to physical fitness:

- The *cardio-respiratory (aerobic) system* includes the heart, lungs, and blood. When working well, this system provides the stamina needed to actively participate for a long period of time.
- *Muscular strength and endurance* allow for effective use of muscles. Strength allows a young child to use force to perform a task such as kicking a ball or hammering a nail. Endurance is the ability to keep moving without stopping due to fatigue.
- *Flexibility* is the ability to bend and stretch easily. It helps to prevent muscle and tendon injuries.
- *Body composition* refers to weight and body fat. Excess fat puts stress on the ligaments, tendons, bones, and tissues that support the body’s weight.

Head Start offers an environment and experiences that contribute to children's physical fitness. In addition, staff encourage healthy eating, exercising, and movement habits that support lifelong fitness. They plan family events that incorporate active, cooperative games children and adults can play together. Effective practices for supporting development of gross motor skills can also promote physical fitness. Here are some additional guidelines (Werner et al. 1996):

- Allow children to choose what to do and when to move on to something else. One way to do this is by creating several play stations: Roll a ball at a target, toss a ball into a hoop on the floor, throw a ball at a target, jump through hoops placed on the floor, jump over boxes on the floor.
- Create simple, open-ended fitness activities that allow every child, regardless of skill-level, to be successful. For example, jog around the playground every day when the class first goes outdoors.
- Provide demonstrations that support visual learners. Give step-by-step directions while modeling how to throw or kick a ball or jump with two feet.
- Keep directions simple; use key words along with modeling. For example, say “Up” and raise arms; say “Down” and touch the ground; say “Around” while turning completely around.
- Offer variety and change activities often. Young children tend to have short attention spans so they may lose interest if they have to do the same thing for too long.
- Allow maximum practice opportunity. Provide enough equipment for everyone and play games in which everyone is actively involved at all times rather than having to wait for a turn to participate.
- Encourage frequent active play. Motivate children to engage in vigorous activities by showing enthusiasm, making it fun, and volunteering to do something active with them.
- Most preschool children are eager to perform *personal care* routines such as dressing and brushing teeth on their own. Head Start teachers can support children's growing independence as they plan the environment, provide materials, develop a schedule, and respond to individuals.
- Preschool children rely on adults to keep them safe and healthy; however, most are ready to begin learning how to follow basic health and safety rules and practices that promote physical and emotional well-being and prevent or reduce accidents. Health and safety education is effective when delivered through informal, “teachable moments,” and through planned activities. Learning opportunities arise as children learn to buckle their seat belts in the van that takes them to and from the program; look both ways to cross the street while walking to a nearby playground; help wipe the tables after lunch; and sneeze into their elbows to avoid the spread of germs. Planned activities related to health and safety can support progress in other Domains including science, mathematics, literacy, creative arts, and social-emotional development.

## STRATEGIES

**To promote physical health and well-being**

- Provide individual storage areas, such as cubbies and low hooks, so children can store their clothing and personal items.
- Place tissues, soap, paper towels, and other personal hygiene items within children's reach so they can care for their own needs without adult assistance.
- Include sufficient time in the daily schedule for children to do things for themselves without feeling rushed.
- Provide a child with just enough help, rather than stepping in and taking over. For example, hold the bowl while a child uses a large spoon to serve himself; untie a child's laces so she can remove her shoes on her own.

## STRATEGIES

**To teach children health and safety practices**

- Provide play materials related to health and safety. For example, include safety road signs for block play; books about healthy foods, and walking safely in traffic; props for doctor and dentist offices; empty containers of healthy foods such as oatmeal, fruits, and vegetables; items for washing dolls and doll clothes such as soap, sponges, a clothesline and clothespins, and a small basin; and doll highchairs with safety belts.
- Involve children in setting basic health and safety rules. Talk about why a rule is needed, what might happen if children forget to follow the rule, and how the rule will keep them safe and healthy. Use visual and verbal reminders to help children remember the rule.
- Model health and safety practices and give step-by-step explanations of what and why the practices are necessary and effective.
- Review and discuss safety rules and practices, when necessary, especially before experiences such as a cooking activity or a neighborhood walk. Discuss the use of safe practices in context, such as when stopping at the corner to watch for traffic before crossing the street.
- Conduct regular fire and emergency drills. After the drill, discuss what happened and why it would keep children safe in an actual fire or emergency.

Head Start ensures that children have opportunities to build fine and gross motor skills and are encouraged to stay healthy and fit. Physical skills allow children to learn in other Domains and to enjoy moving their bodies and playing games, now and in the future. Children with well-developed motor skills feel proud of their accomplishments. Their sense of competence serves as a strong foundation for additional learning. Furthermore, English language learners may show competence in physical skills which can help them feel more confident about their other activities and skills.

## VI. ADAPTATIONS FOR INDIVIDUAL CHILDREN

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A central principle of Head Start has always been to recognize each child as an individual with unique combinations of strengths and limitations, gifts and needs. As required in the Head Start Program Performance Standards(2002), programs respond to and support the individual abilities, interests, temperaments, developmental rates, and learning styles of young children. The foundation is a quality early childhood program that ensures the participation of all children.

The Head Start Child Outcomes Framework identifies the long-term goals for all enrolled children to achieve by the time they are ready to enter kindergarten. However, there are many ways to achieve these outcomes. Different curricula identify a wide variety of experiences through which children can learn as they progress toward meeting the long-term goals identified in the Framework. Some children might progress more quickly than others, but the long-term outcomes are the same for all Head Start children.

Additionally, because children develop in their own unique ways, it is up to teachers and home visitors, with input from parents and specialists, to identify the short-term goals, individual experiences, and paths on which children will travel to achieve those long-term outcomes. The short-term goals or “next steps” are identified through the teaching team’s observation and knowledge of each child so that just the right amount of familiarity and challenge are presented. As they select materials and activities, provide support and extended conversation appropriate to each child, and periodically assess the child’s progress, teaching staff are “individualizing” the curriculum. That is, they are making adaptations based on children’s individual needs.

The knowledge and experience of the teaching team enable them to tailor any given activity into the specific experiences needed for individual children. Thus, a single activity may provide appropriate experiences for different children, depending on which aspects of the activity the staff and child focus on. It is this carefully chosen ‘focus’ of the activity which illustrates the intentionality required in the teaching process, and creates the ‘experience.’ Take the activity of finger-painting as an example. With a toddler, the teacher or home visitor may focus on the feeling of the paint or the different parts of the hand being used. The adult may suggest the child mix the colors and “see what happens next.” With an older child who has used fingerpaints many times, the focus may be on making straight or curved lines. But for another child who rarely uses this material, gentle encouragement and describing “how it feels” may be appropriate. And with one pre-school youngster, the teacher may discuss what scene the child has depicted on the paper and with another child, the similarity of some elements on the paper to letters or words. The critical point is that the focus of the activity—the essence of the experience—is defined not by the whim of the staff, but through careful observation of each individual child and knowledge of the developmental progression: what is the next step for this child on the path to achieving positive outcomes.

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For many years, Head Start has been known for its “inclusive” policies. That is, children with disabilities have been enrolled, and an educational program has been provided to meet their individual needs. Head Start, like other early childhood programs, also includes children whose learning and development far exceed expectations for their ages. They, too, may require adaptations in the Head Start curriculum. All exceptional children,<sup>1</sup> whether those with disabilities or those showing precocious development, are fully included in the Head Start child outcomes. Programs will need to gather data on their progress. Because it is often challenging to meet the needs of exceptional children in Head Start classrooms, effective strategies for individualizing the program are provided in this chapter. Many of these strategies are also relevant to English language learners and to children who are making limited progress. In fact, they are familiar to many early childhood educators as well-known developmentally appropriate practices that emphasize active learning and supportive relationships with adults and peers.

Children are individuals, so staff need to adapt learning experiences and teaching strategies to individual skills and interests.

### ADAPTATIONS FOR CHILDREN WHO ARE ADVANCED IN DEVELOPMENT

Some preschoolers stand out because they tend to be fast learners and have precocious abilities and talents. At a young age, they appear to be adept problem-solvers, capable of abstract thinking, and intensely curious (Smutney, Walker, & Meckstroth 1997). In elementary school, they may be assessed as “gifted” by professionals who then plan appropriate educational interventions.

Sometimes, preschoolers’ extraordinary abilities may be noticed in one Domain, such as creative arts, literacy, or mathematics. Other children may demonstrate unusual or accelerated knowledge or skills in multiple Domains. Yet they may still need a great deal of support in other areas of development where they seem to lag behind their age mates or even have an identified disability that requires an IEP. In all cases, Head Start has a responsibility to motivate and sustain their growing knowledge, interests, and skills during the Head Start experience so they go to school ready for even more.

Individualizing the Head Start curriculum for children who display advanced development involves thoughtfully and intentionally implementing good early childhood practices. That is, teachers and home visitors need to provide an environment that invites inquiry, supplies a range of complex materials, encourages the pursuit of children’s interests, promotes choice and independent decision-making, stimulates extended child-adult

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<sup>1</sup> The Council for Exceptional Children, a professional organization for special educators, uses the term “exceptional” to refer to children with disabilities as well as children who are advanced in development (2002).

conversations, and nurtures creative self-expression. Young children, no matter how advanced in development, require active involvement with learning materials and opportunities for self-expression. Many strategies for extending the thinking and learning of young children are described throughout this *Guide* and are effective with children who display advanced cognitive or other skills.

However, specific modifications and adaptations are sometimes needed to meet their unique needs. For example, teachers and home visitors can:

- Enrich the learning environment with varied resources, including books with extensive written text, unusual hands-on materials, and guest speakers.
- Brainstorm ideas, such as “What would happen if...” “What else do you need to know?” Likely, the child will generate ideas the adult has not thought of.
- Give space and time for children to explore their interests in depth. If a child has a superior knowledge of outer space, encourage him to represent his learning by constructing a space ship out of cardboard boxes with many realistic details involving pipes, gears, and dials. Encourage him to engage in research by writing (or dictating) a letter to the planetarium or to an aerospace company asking for information or resources. This project may go on for weeks as the child continues to pose questions and search for answers.

As Head Start staff plan curriculum experiences, it is always important to observe individual children and build on their strengths. Some children may have surpassed specific learning outcomes in the Framework by the time they come to Head Start. If a preschooler is already reading at the first grade level, then encourage reading of more complex texts and help build comprehension skills. It is not necessary, and in fact, will be frustrating and boring, for the child to participate in group activities where the focus is on learning the alphabet. Likewise, if a Head Start child can do addition and subtraction problems in her head, she has already mastered the basic numeracy skills that her classmates are learning. To meet the needs of children with such extraordinary abilities, it may be necessary to draw upon the resources of other educational specialists, such as librarians and museum educators, and to reach out into the community at large.

### **ADAPTATIONS FOR CHILDREN WITH DISABILITIES**

The Head Start Program Performance Standards (2002) require that Head Start staff screen for possible developmental concerns that might require professional evaluation and intervention. When a child is identified by professionals as having a disability, which may include physical, cognitive, or social-emotional conditions as well as developmental delays, an Individualized Education Program (IEP) is prepared that specifies goals and objectives. The IEP is comprehensive and may overlap with the categories of Domains. Teachers are especially concerned about supporting the learning and development of children with identified disabilities or special needs. Meeting the needs of individual children, especially those with IEPs, requires regular contact among professionals and close communication with parents.

Descriptions and examples of seven research-based types of modifications and adaptations that were developed for children with disabilities follow (Wolery & Wilburs 1994; Hemmeter et al. 2001; Sandall, Schwartz, & Joseph 2001; Sandall et al. 2002). These strategies center on ways to alter the environment, adapt materials, modify an activity, build on a child's preferences, use peer support, offer invisible support in the course of everyday events, and provide adult support in activities. These modifications offer Head Start teaching teams many different—and appropriate ways—to support the development and learning of individual children. Many of the teaching strategies described earlier in the *Guide* under the different Domains also promote individualization and support the development of children with disabilities.

**Environmental Support:** Altering the physical and social environment and the timing of activities to promote a child's participation, engagement, and learning. If a child—

- Has difficulty putting toys and equipment away during clean up—use pictures or symbols on shelves and containers. Make clean up a matching game.
- Has difficulty playing near peers—plan cooperative small group activities with engaging and highly motivating materials so that the child is in proximity with peers while engaging in fun activities such as creating murals and building cooperative block structures.
- Has no play partners—build friendships by seating the same peer next to the child every day at a planned activity such as small group or circle time.
- Does not participate in learning centers during free choice time—create a picture schedule for the child. The picture schedule can have pictures or symbols representing the various learning centers organized in a certain order; 1. art, 2. dramatic play, 3. blocks. The child should be taught to refer to her schedule each time she finishes one activity and goes onto the next. She can also refer to her schedule when it is time for her to join an adult in a center in order to learn how to play there.
- Has difficulty making transitions—just before the transition provide the child with a picture or symbol representing the area or activity that the child should go to next. The child could even take the picture or symbol card with him to the next area.
- Quickly finishes with an activity and then has difficulty waiting for the next activity—open one or two quiet centers (such as the book area or computer) after the activity and allow her to leave the activity and go to one of the open quiet areas.

**Materials Modification:** Modifying materials so that the child can participate as independently as possible. If a child—

- Has difficulty standing at an art easel—lower the easel, give the child a chair, or use a table easel.
- Cannot reach the pedals of a tricycle with her feet—tape wooden blocks on to the pedals.

- Cannot reach the ground sitting in a regular child-size chair—place a stool under the table so that he can rest his feet on it and stabilize his body. This stability helps children more easily use their fine motor skills.
- Encounters difficulty using two hands to act on materials—stabilize materials using tape, velcro, nonskid backing (such as bath mat appliques), and clamps.
- Has difficulty with a skill or response required by a toy—modify the response. For example, if a child has difficulty turning the pages of a book, glue small pieces of sponge or styrofoam to each page; this will separate each page, making it simpler to turn the page.
- Does not choose the art center because actions such as gluing and pasting are still too difficult or unsettling—use contact paper or other sticky paper as the backing for collages. The child only has to put things on the paper.
- Has a hard time grasping markers and paint brushes—add a piece of foam around the markers and paint brushes to make them easier to hold.
- Has difficulty cutting on a line—broaden the line with a thick marker. Or, go over the line with glue—allowing enough time before art for the glue to dry. This raised surface will allow the child to get extra sensory feedback while her scissors rub against the dry glue.
- Shows minimal interest in the wooden blocks—wrap some of the blocks with colorful, shiny paper.
- Is not yet interested in books—include photograph albums with pictures of the children. Make photograph albums of field trips, class activities, and the child’s special interests.

**Modifying the Activity:** Simplifying a complicated task by breaking it into smaller parts or reducing the number of steps. If a child—

- Is easily distracted when playing with manipulative toys such as puzzles, beads, and such—hand the pieces to the child one by one. Gradually increase the number of pieces the child has at one time.
- Is overwhelmed by activities such as cooking projects, craft projects, and table games, and is rarely successful—break down the activity into its parts. Describe the steps in clear terms, “First we do (x) then we do (y).” Draw pictures of steps to make it even clearer.
- Has difficulty understanding stories—use objects or flannel board pieces that represent characters or objects in the story. The child may make connections between the physical objects.
- Has a long walk from the car or bus to the classroom, and then dawdles, complains, and sometimes stops and drops to the floor—put photos, posters, or other interesting displays at strategic points along the way. Encourage the child to go to the next spot and describe the achievement, “You got to the baby elephant picture—can you find the baby lion?”

- Has difficulty with projects that have multiple steps—prepare the activity with the individual child in mind. Some children may do the entire project. Others may receive projects that have been started and then they finish the last two or three steps. Consider extending the project over several days if children’s interest will be maintained.

**Using Child Preferences:** Identifying and integrating the child’s preferences for materials or activities so that the child takes advantage of available opportunities. If a child—

- Has tantrums and tries to leave large group times such as morning circle—let the child hold a favorite, quiet toy such as a teddy bear or blanket. Divide the children into smaller groups so that it is easier for individual children to stay focused and participate.
- Has difficulty making transitions from one area or activity to the next—allow him to carry a favorite toy from one activity to the next. Alert the child that transition time is approaching and describe what will happen next.
- Does not come readily to circle time or other large group activities—begin large group time with a favorite activity such as blowing bubbles or singing that child’s favorite song.
- Has difficulty engaging in new activities or learning centers or stays with one activity only—incorporate the child’s favorite toy into the learning center that she rarely goes to. For example, if the child loves cars but never goes to the water table area, create a “car wash” in that area.

**Peer Support:** Utilizing peers to increase a child’s participation. If a child—

- Does not know how to select an activity or game from the computer menu—pair the child with another child who is familiar with operating the computer. Let the peer show the other how to select an activity from the computer menu.
- Is watching two children play and seems to want to join them—ask the two children to invite the other to join them. Give them some tips, verbal and non-verbal, on how the third child might be included.
- Does not know when and where to line up during the transition to the playground—pair the child with another child who knows the routine and follows directions. Ask the children to find their partner and hold their partner’s hand when lining up.
- Is learning to use English words or sign language to request food items at snack or mealtime—have another child hold the requested food (such as a plate of crackers). The target child will need to communicate with the friend which will stimulate language production.

**Invisible Support:** Purposefully arranging naturally occurring events within an activity. If a child—

- Is just learning to pour from a pitcher—let other children pour first so that the pitcher is not too full or just fill the pitcher halfway.
- Is a reluctant talker during group activities—give the child a turn to talk after another child who is particularly talkative. This gives the reluctant child ideas about what to say.
- Needs more practice on a particular gross motor skill such as walking on the balance beam—incorporate this skill into an obstacle course. Put a popular, fun, or noisy activity after the more difficult one. For example, let the children hit a gong after they walk across the balance beam.
- Has difficulty staying focused during small group activities—have him sit in such a way that distractions are minimized, such as away from the window or door or next to quieter children.

**Adult Support:** An adult intervening or joining the activity to support the child’s level of participation. If a child—

- Repeats the same play actions over and over without making any changes, use adult support. For example, a child at the sand table dumps and fills and dumps and fills without seeming to pay attention to the effects of his actions. Show the child another way to dump and fill by making small alterations in the way that the child currently plays, such as holding the container at various heights or dumping the sand through a funnel or short tube.
- Is not interested in books—have staff or a family member record a story and then encourage him to listen to the book on tape in the book area. The parents could also say a special hello to the child on the tape. If the child looks at the book while listening to the tape, the parent can include cues for when to turn the page or make special comments that connect the pictures or the story line to the child’s life experiences. “Remember when we saw a truck like that on our street?” “Do you think the boy in the story likes ice cream as much as you do?”

Head Start Program Performance Standards (2002) require individuation for each child to benefit from the program. The first step in meeting all children's individual needs is a developmentally appropriate curriculum. When modifications and adaptations are made for exceptional children, they often represent well-known early childhood teaching practices. As the teaching team identifies appropriate short-term goals for individual children and makes the necessary adaptations to the educational program, they will be helping children progress toward the long-term goals—that is, the child outcomes specified in the Framework.

*Photo (from top, clockwise) courtesy of National HS T/TA Resource Center; photos by W. Siegel, Leslie, Knott, Letcher, Perry HS; W. Siegel, Parents and Children Together/HS.*



The *Head Start Leaders Guide to Positive Child Outcomes* describes goals for children's learning and developmental progress and ways that teachers and home visitors can help them make progress toward these goals in the context of a well-planned curriculum and ongoing assessment. Although the Child Outcomes Framework provides clear specifications for positive child outcomes, Head Start programs will create their own paths to achieve them. Typically, people create a path by finding the most effective, expedient route that respects and conforms to the contours of the natural environment. Yet many naturally developed, but different, paths can lead to the same place. In the same way, Head Start programs will use various curriculum and teaching strategies depending on the needs of the children and families they serve and on the local schools the children will be entering. But having a consistent set of research-based child outcomes to guide programs will help ensure that every child leaves the Head Start program better prepared to succeed in school and later in life.

The previous sections of this *Guide* offer a vision for education leaders as they begin their journey to positive child outcomes in Head Start. Having envisioned what a program would look like—from the Big Picture in Head Start, through each of the Domains of the Framework and suggested practices, to strategies for adapting to individual differences and children with special needs—education leaders and staff must start with a plan of action that fits the needs and strengths of their contexts. This section offers suggestions about where to begin.

Education leaders have pivotal roles to play in improving quality and accountability in Head Start. Of course, they do not work alone. Many improvements require administrative support and guidance and, most likely, reallocation of resources for needs such as professional development in specific outcome Domains or additional classroom materials and equipment. Head Start programs typically use a team approach, including specialists in disabilities, health, families, and other areas who work with education managers, Early Literacy Mentor-Coaches (ELMCs), and teachers. Services for Head Start children also may be delivered in diverse settings, requiring collaboration among the various professionals involved. The first step in the action plan is to make sure that all key leaders, whatever their actual job titles, are on the same page, and that the program's management systems are in place to support this important effort.

Once the key leaders agree on the overall goals and needs, then education managers working with the teaching staff decide the next steps. Each program is different in terms of where it begins, its current strengths and needs, the community context, and other variables. Despite these differences in context, education leaders have similar responsibilities across programs.

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The suggested next steps are organized around four key roles of the education leader:

**Use the Child Outcomes Framework to enhance curriculum.**

- Evaluate your current curriculum to see how it aligns with the Head Start Child Outcomes Framework. Decide which outcome Domains and Indicators are currently well-addressed and which need more focus.
- Be certain to pay attention to the mandated Domain Elements and Indicators and to the definition of curriculum in the Head Start Program Performance Standards (1304.3[5] Curriculum). Review the *Head Start Bulletin* on Curriculum, March 2000, Issue #67 (available at [www.headstartinfo.org/publications/publicat.htm](http://www.headstartinfo.org/publications/publicat.htm) or order from HSIPC at 703-683-5767).
- When necessary, make changes in your curriculum, involving staff and parents in this process.

Although the Outcomes Framework provides clear specifications for positive child outcomes, Head Start programs will create their own paths to achieve them.

**Provide feedback to staff based on classroom observation, supervision, and mentoring.**

- Help teaching staff focus on how the requirements fit into what they are already doing, rather than seeing everything as “more work” or a complete change.
- Help teaching staff become familiar with the Child Outcomes Framework. You can make an enlarged copy of the Framework and put it up in the classrooms. Frequently refer to the Framework until it becomes part of everyday communication in the program.
- Meet regularly with teaching staff to orient them to the requirements for improving quality and accountability.
- Respond to questions about the Child Outcomes Framework, drawing on the information under Frequently Asked Questions on pages 15-17 of this *Guide*.

**Work with teaching staff to use time well for staff planning and collecting and analyzing assessment information.**

- Engage staff in visualization exercises. Have them think of individual children and use the Framework to reflect on each child’s current competencies. Stress what children already know and can do while identifying ways to support their continued development and learning.
- Evaluate your current ongoing assessment tools to see how closely they align with both your curriculum and the Child Outcomes Framework. Pay special attention to the mandated Domain Elements and Indicators.

- Use multiple sources of ongoing assessment such as observation, interview, and samples of children’s work as well as tools for assessing children’s progress. Be sure to assess children at least three times during the program year—at the beginning, midway, and at the end. Review the April 2001 issue of the *Head Start Bulletin* on Screening and Assessment in Head Start for ideas (available from HSIPC at [www.headstartinfo.org/publications/publicat.htm](http://www.headstartinfo.org/publications/publicat.htm) or toll free 1-866-763-6481).
- Using information from assessment of individual children’s progress, make decisions about other teaching strategies or learning experiences to include, referring to those suggested in this *Guide*.
- Introduce parents to the Child Outcomes Framework and the requirements for improving quality and accountability. Discuss with them how their children will benefit. Involve parents in making decisions about how to use the Framework and requirements to increase the value of Head Start for their children.

**Use professional development resources of the agency to increase staff knowledge and skills in implementing recommended curriculum, teaching strategies, and ongoing assessment procedures.**

- Distribute copies of the Child Outcomes Framework. Together, review its organization and content—become familiar with it.
- Use the Big Picture description and charts on pages 19-27 as starting points for discussion with staff about what aspects of the education program need greater emphasis. Help staff see that the fundamentals of Head Start remain the same, but that exciting changes will make the program even better!
- Engage teachers in small groups to discuss curriculum learning experiences and teaching strategies they currently use in each Domain. Identify areas where changes need to be made in order to support positive child outcomes.
- Review the effective practices suggested in this *Guide* and brainstorm others. Ask which ones are currently well-addressed and which need more focus. Pay special attention to the mandated Domain Elements and Indicators.
- With teaching staff, brainstorm ways to provide more time and resources, including classroom volunteers, for small group work and intentional teaching.
- Identify initial and ongoing professional development needs—your own and those of all teaching staff and home visitors.
- Provide professional development opportunities such as college-level courses, continuing education units, or in-service training with improved compensation for increased teacher qualifications.

Since 1965, Head Start has led the early childhood community as the nation’s laboratory in child development and early education. With the increased emphasis on quality and accountability, and with a clear vision of desired outcomes for children’s learning and development, Head Start continues its leadership role.

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<p style="text-align: center;"><b>ACF</b></p> <p style="text-align: center;">Administration For Children And Families</p>	<p>U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES</p> <p>Administration on Children, Youth and Families</p>	
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	<p>4. Key Word: Child Outcomes, Performance Measures, Program Self-Assessment</p>	

## INFORMATION MEMORANDUM

**TO:** Head Start Grantees and Delegate Agencies

**SUBJECT:** Using Child Outcomes in Program Self-Assessment

**INFORMATION:** The purpose of this Memorandum is to inform Head Start grantees and delegate agencies about:

- Steps for incorporating data on child outcomes in their program’s self-assessment.
- Recommendations for local grantee planning to implement these steps.
- Forthcoming resources on outcomes-based program self-assessment.

This Memorandum builds on the initial guidance we provided earlier this year (ACYF-IM-00-03, January 31, 2000) on legislative changes concerning program outcomes. These changes include the establishment of additional results-based education performance standards and performance measures and the requirements that the standards and measures be adaptable for use by programs in their self-assessments and reviewed when programs are monitored.

In our earlier guidance, we explained that the requirements for incorporating data on child outcomes in program self-assessment apply to Head Start services to three- to five-year-old children and not to children birth to three served in Early Head Start or Migrant Head Start programs. Of course, Early Head Start and Migrant Head Start programs are responsible for implementing Program Performance Standards, including initial screening and ongoing assessment of all children as well as annual program self-assessment.

## Steps for Incorporating Child Outcome Data in Program Self-Assessment

### Goals and Objectives

1. Grantees should focus on the goal of enhancing program self-assessment and continuous program improvement by incorporating data on child outcomes. Programs should center planning on improving and connecting current systems, tools, and procedures for (a) ongoing assessment of children and (b) annual program self-assessment.
2. The objectives of this initiative are to:
  - Improve the content, quality, consistency and credibility of ongoing assessment of children.
  - Design an approach to analyze data on children's progress and accomplishments.
  - Incorporate child outcome data into program self-assessment and continuous program improvement.

### Improve the Content, Quality, Consistency and Credibility of Ongoing Assessment of Children

3. Attached, as Attachment A, is The Head Start Child Outcomes Framework. Grantees should ensure that their system for ongoing assessment of children includes collection of some data in each of the eight Domains of children's learning and development. The Domain areas, based on the Head Start Program Performance Standards, are:
  - Language Development
  - Literacy
  - Mathematics
  - Science
  - Creative Arts
  - Social & Emotional Development
  - Approaches Toward Learning
  - Physical Health and Development

In addition, because they are legislatively mandated, programs must gather and analyze data on certain specific Domain Elements or Indicators of progress in language, literacy and numeracy skills. These required elements are shown in bold print in the Domain Elements or Indicator columns.

Grantees may also choose to track progress in additional areas of child, family and program outcomes, as defined in the Head Start Program Performance Standards or based on local program goals and priorities. They may also review other state or community initiatives on early childhood program outcomes, so that planning addresses the implications of these efforts for partnerships with other funding sources and agencies.

4. Grantees should review their system for ongoing child assessment and consider improvements to ensure that it provides objective, accurate, consistent and credible information on children's progress over the course of their participation in Head Start, including:
  - Ensuring that assessment tools are appropriate for Head Start children in terms of age-appropriateness, language and culture.
  - Providing adequate oversight and supervision to ensure the quality, accuracy, consistency and credibility of child outcome data.
  - Improving initial and ongoing training for personnel who administer assessments, record and analyze data on children's performance and progress.
5. Grantees should fully include children with identified disabilities in the child outcome assessment system, with appropriate accommodation of the assessment tool and process to their special needs. Programs may elect to incorporate in their child outcomes system additional information on the progress of children with disabilities, based on goals and measures of progress in children's Individual Education Plans (IEP).

### **Design an Approach to Analyze Data on Children's Progress and Accomplishments**

6. Grantees must develop a system to analyze data on child outcomes that centers on patterns of progress for groups of children over time as they receive services through the program year. At a minimum, data analysis should compare progress beginning when children enter Head Start, at a mid-point in the program year, and when they complete the program year. Data analysis could also be designed to answer questions such as the following:
  - What are the patterns of progress and accomplishments for groups of children in different Domains and indicators of learning and development?
  - What are the patterns of outcomes for children in different program options, forms of service, and service areas?
  - What are the patterns of outcome data for different groups of children, such as (a) those that begin Head Start at different levels of functioning and (b) children that receive one or two years of Head Start services?
  - What are the trends in outcome data from year to year, in terms of stability and change in patterns of progress and levels of accomplishment?

In most programs, analysis of child outcomes should be based on data from all children enrolled. Grantees that serve very large numbers of children may consider, with the assistance of appropriate research or evaluation experts, approaches to analyzing outcome data from a sample of children selected to be representative of the full population of children served.

### **Incorporate Child Outcome Data in Program Self-Assessment and Continuous Program Improvement**

7. Data analysis on patterns of child outcomes should be incorporated into the overall program self-assessment system and in reporting to agency management teams, Policy Committees and Policy

Councils and governing bodies. Data on outcomes should be considered in conjunction with overall program self-assessment findings in planning for program improvements, such as enhanced staff training, mentoring and supervision; improvements in curriculum; reallocation of program resources; involvement of volunteers and community partners; or new efforts to support families in enhancing children's learning and development. Agencies may also consider other opportunities to use data on child outcomes in working with community partners, such as planning for transitions of children from Head Start into elementary schools.

### **Recommendations for Program Planning**

Our planned timelines for programs to include child outcome data in their self-assessments and for monitoring these activities are explained in Attachment B. In developing plans, grantees are encouraged to consider the following recommendations:

- Assess implications of this new effort for management and staff responsibilities, workload and capabilities.
- Develop and implement plans to enhance the skills and knowledge of staff members and managers through Head Start Training & Technical Assistance providers, consultants, higher education institutions or research organizations.
- In conjunction with reviewing the content areas of ongoing child assessment, carry out a similar review of program curriculum, materials, and learning environments to ensure that they provide suitably, well-balanced and engaging opportunities to foster children's learning and development in each of the Domain areas of the Outcomes Framework.
- Develop appropriate amendments to existing written plans for implementing services in Early Childhood Development and Health Services, Family and Community Partnerships, and Program Design and Management to reflect this initiative and its connections with existing program systems.

We look forward to working with you in this important effort to improve services for Head Start children.

A handwritten signature in cursive script, appearing to read "Douglas Klafehn", with a small mark to the left that looks like "(for)".

Helen H. Taylor  
Associate Commissioner  
Head Start Bureau

## *TIMELINES FOR IMPLEMENTATION AND PROGRAM MONITORING*

**September 2000–  
August 2001** Grantees begin planning, capacity-building, and implementing the inclusion of child outcome data in program self-assessment. At a minimum, each grantee should carry out a pilot effort to analyze data on patterns of progress for a group of children, and consider child outcome data in program self-assessment and continuous program improvement. In addition, agencies should review and implement improvements in their ongoing child assessment system in the areas of content, quality, consistency, and credibility.

ACF develops and field tests procedures for monitoring outcomes-based program self-assessment in a limited set of programs.

**Program Year  
2001–2002** Grantees fully implement child outcomes-based program self-assessment system and create baseline information on patterns of children’s progress and accomplishments during the program year.

ACF carries out first full cycle of program monitoring on grantee systems and implementation efforts. Monitoring teams will review outcome data to establish a baseline of expectations on patterns and forms of evidence of children’s progress and accomplishments.

**Program Year  
2002–2003** Grantees continue and improve implementation efforts, including comparison of patterns of data on children’s progress and accomplishments from program years 2001-2002 and 2002-2003.

ACF conducts second full cycle of program monitoring to examine grantee implementation efforts and review of evidence of program effectiveness via data on patterns of children’s progress and accomplishments.

<p style="text-align: center;"><b>ACF</b></p> <p style="text-align: center;">Administration For Children And Families</p>	<p>U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES</p> <p>Administration on Children, Youth and Families</p>	
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	<p>4. Key Word: Head Start National Reporting System on Child Outcomes</p>	

## INFORMATION MEMORANDUM

**TO:** Head Start and Early Head Grantees and Delegate Agencies

**SUBJECT:** Implementation of the Head Start National Reporting System on Child Outcomes

**INFORMATION:**

This Information Memorandum (IM) provides information and directions to Head Start agencies preparing for the national reporting system for all 4- and 5-year-old children in 2003-4. The IM includes the following sections:

- Overview of the National Reporting System (NRS)
- Selecting Participants for NRS Training-of-Trainers
- Selecting Staff Members to Implement the NRS
- Training Staff at the Program Level
- Implementing NRS Child Assessment
- Financial Support for NRS Activities

This IM is being sent now to give programs information needed to plan and prepare for important implementation steps within the context of local timelines, budgets, staff assignments and management systems.

We are currently completing the final steps in developing the National Reporting System. With the assistance of the NRS Technical Work Group we are reviewing data from the NRS field test in 36 local Head Start programs. On April 11, 2003, we published an announcement in the Federal Register to request public comments on the proposed NRS information collection plan. The public comment period closed on June 10, 2003. We are currently considering the comments and making appropriate changes before seeking final approval from the Office of Management and Budget (OMB) to proceed with the NRS.

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It is important to note that, in accordance with the Paperwork Reduction of 1995 (Public Law 104-13), our agency may not conduct or sponsor a collection of information until we obtain OMB approval. Therefore, you may not begin to assess children until you receive assessment instruments from us with a currently valid OMB control number. After obtaining OMB approval, we will send you an official notification of the specific expectations and requirements for the first year of this important work.

## Overview of the National Reporting System (NRS)

The National Reporting System is designed on the basis of President Bush's Good Start, Grow Smart, Early Childhood Initiative and provisions of the Head Start Act (Sections 641A.(a)(1)(B), 641A.(b)(4), 641A.(c)(2)(D), 648.(c)(1)(B), 649.(b)(4)) to create a new national data base on the progress and accomplishments of 4- and 5-year-old Head Start children on specific child outcomes. Programs will administer a common NRS assessment to all 4- and 5-year-old children at the beginning and end of the program year in order to determine some of the skills with which they enter Head Start, their levels of achievement when they leave Head Start and the progress they make during the Head Start year.

The assessment information collected through the NRS will be used to strengthen Head Start program effectiveness in these ways:

- Each local Head Start program will receive information from the NRS to supplement and enhance their local aggregation of child outcome data and local program self-assessment efforts and results.
- The Head Start Bureau and ACF Regional Offices will incorporate NRS information to plan future training and technical assistance efforts.
- Future Head Start program monitoring reviews will incorporate consideration of child outcomes information from the NRS.

It is equally important to stress that the NRS assessment and reporting system is not intended to be used to assess the school readiness of individual children, nor to replace locally-designed ongoing child assessment efforts, carried out for the purposes of curriculum planning, individualization and communication with parents.

As outlined in Attachment A, the NRS child assessment items are from currently available instruments designed and validated for use with preschool aged children and presently in use in a variety of large-scale studies of Head Start children. Based on the field test of the NRS this spring in 36 diverse Head Start programs with more than 1400 children, we estimate the one-on-one assessment will take approximately 15 minutes per child. Children who demonstrate language proficiency in both English and Spanish will be assessed in both languages, which will take approximately 30 minutes per child, in two separate sessions.

The NRS child assessment will provide information on the following five learning indicators as mandated by Congress in the Head Start Act in 1998:

- Understanding and using language to communicate for various purposes.
- Using increasingly complex and varied vocabulary.
- In the case of children whose native language is other than English, progressing toward acquisition of the English language.
- Identifying at least 10 letters of the alphabet.
- Numeracy awareness.

The NRS child assessment instruments, training, and materials will be available in both English and Spanish language versions this year.

Programs are expected to include all 4- and 5-year old children who will be entering kindergarten following their 2003-4 Head Start year. This will include 4- and 5-year-old children with identified disabilities, 4- and 5-year olds served through all of the various Head Start program design options, and all 4- and 5-year-old children who speak either English or Spanish, or both. Children who speak other languages will only participate in two initial sections of the assessment designed to document their progress in acquiring English.

Programs will also be responsible for entering background information on children, teachers, classrooms, centers and programs in the NRS web-based computer information system, as described in Attachment B. The computer system will generate an individualized computer-scalable assessment form for each child which staff members will use to record children's responses. These forms will be mailed for scanning into the NRS database and to generate reports. The background information will also be used to analyze the NRS reports in order to understand different forms of Head Start services in promoting the progress of groups of children with a variety of characteristics. Security features will protect the confidentiality of children and all data. Programs with limited computer capability or no Internet access will be able to enter background descriptors on paper forms.

### Selecting Participants for NRS Training-of-Trainers

As described in Attachment C, each Head Start program is requested to designate one or more representatives (based upon the number of 4- and 5-five-year-olds enrolled) to participate in the NRS Training-of-Trainers this summer. American Indian and Alaska Native program representatives will attend the Training-of-Trainers session in the ACF region in which their program is geographically located. (Programs funded by the Migrant and Seasonal Programs Branch will participate in the Training-of-Trainers in early spring, 2004.) During this training participants will learn and be certified to train and certify local staff for implementing the NRS. A team that includes Head Start Bureau, ACF regional office, and contractual specialists will conduct each two and one half-day Training-of-Trainers session.

The training design includes:

- Presentations on the NRS system and materials.
- Preparation on the English and Spanish language versions of the NRS materials, and role-playing and practice with preschool children.

- Preparation and practice in observing and providing feedback to others learning about the NRS.
- Training and practice on data entry and operations of the computer-based information system.
- Sessions on training and certifying local staff.

The Training of Trainers design culminates in a certification process based on observational ratings by expert trainers of the performance of participants in administering the child assessment. Additional learning, practice and coaching is planned each evening to support all participants successfully completing certification for the NRS. Participants will also receive training materials to support local staff.

Based on the training design and capacity of the Training of Trainers training teams, each grantee and delegate agency with up to 400 children age 4 or 5 is requested to send one participant to the Training of Trainers. Programs with more than 400 children age 4 or 5 are requested to send an additional participant for each group of up to 400 children age 4 or 5.

Programs should identify their training representative(s) to participate in Training-of-Trainers based on their capacity to successfully train local staff and, in conjunction with the support of the local management team, to monitor and support high quality implementation of the NRS. Programs may consider individuals such as Education or Disabilities Coordinators, Early Literacy Mentor Coaches, Center Directors, or Managers with lead responsibilities in the areas of assessing and analyzing information on child outcomes or programs may utilize a consultant for this assignment. Prior experience, training, and demonstrated effectiveness in the areas of early childhood assessment and staff development are important criteria in selecting participants.

Programs serving children whose primary language is Spanish should strongly consider sending a trainer who is fully bilingual, so that they can become well prepared to train local staff members on both the English and Spanish language versions of the NRS child assessment. A limited number of additional Training of Trainers slots will be available for programs that serve 400 or fewer 4- and 5-year-old children and that need to send two training participants in order to assure local training in both the English and Spanish language versions.

## Selecting Staff to Implement the NRS

Programs need to carefully determine the most appropriate staff and, when necessary, consultant team to implement the NRS. Key criteria in this decision should be the skills and experience of the individuals in assessing young children and accurately documenting children's responses to questions and tasks.

Programs serving children whose primary language is Spanish and/or children who speak both Spanish and English will need to identify and train people who can effectively administer both the English and Spanish language versions of the NRS.

Several approaches to staffing for the NRS field-testing were used by local programs. Programs may consider possible implications of staffing based on some of the options:

- Classroom teachers have well-established relationships with children which will support children's cooperation and motivation during the assessment. Having teachers do the

assessments can give them additional information that will help them better understand children's characteristics, strengths and needs. Teachers also have the benefit of prior training and experience in a variety of early childhood assessments.

- Other staff, managers, specialists, or consultants may also conduct the NRS assessment. In this approach, teachers do not have to leave their classrooms and be replaced by substitutes. One version of this approach involves training a limited number of individuals who can arrange their schedules to assess children in a number of different classrooms. These individuals would gain the benefit of more practice and experience with the NRS items, perhaps leading to more consistent documentation.

## Training Staff at the Program Level

Training-of-Trainers participants will return to their programs to train and certify local staff to deliver the child assessment items in a consistent, accurate and objective manner and to enter information into the computer-based information system. Training-of-Trainers participants are encouraged to prepare and certify one or more local co-trainers to assist in implementing local staff training and certification. Local training on the NRS is estimated to require from 6-8 hours for presentations, demonstration, role-playing and dialogue to clarify and explain. In addition, time should be provided for staff to conduct practice sessions with children and for the trainers to observe and certify the staff. Planning for local training would also include recruitment of children to participate in sessions for the purposes of staff practice and certification. These should not be children who will be participating in the local NRS assessment and reporting effort in 2003-2004. Training for staff assigned to enter data in the computer-based information system is estimated at 1-2 hours per person.

To maintain a high level of consistency in implementation in NRS data quality, a follow-up, refresher training will be held in the spring of 2004, prior to data collection.

## Implementing NRS Child Assessment

Each program will need to identify space to conduct the assessments; replacements and possible substitutes for staff while they are conducting assessments; and schedule a time for the assessments. Assessments should be done in a space that is comfortable for the assessor and the child and that minimizes distractions. Children will be assessed one at a time. All NRS activities should be scheduled to minimize disruption of other program activities.

Because the purpose of the National Reporting System is to document the progress of children as they receive Head Start services, the first assessments should be scheduled soon after children begin program services, so that changes in children's performance documented from fall to spring reflect the benefits of as much program service as possible.

The local NRS team is encouraged to create an ongoing monitoring effort to track the progress of NRS implementation and to identify and respond to any problems concerning consistency and quality control in the administration of all local NRS activities.

## Financial Support for NRS Activities

As noted in the April 18, 2003 FY 2003 Funding Guidance (Program Instruction ACYF-PI-03-01), we are awarding \$16 million in quality improvement funds to support the costs of preparation and implementation of the National Reporting System. Each Head Start and Early Head Start grantee may apply for a one quarter of one percent increase (.0025) in its base funding for this purpose. We understand that your ACF Regional Office has informed you of the exact dollar amount for which you may apply.

These funds should be sufficient to cover the costs of implementing the reporting system, including the following:

- Travel expenses for one or more staff to attend Training-of-Trainers sessions.
- Staff salaries and expenses related to local staff training on the NRS assessment and computer-based management system, if the training is not within work hours that are already budgeted.
- Costs to support the fall and spring implementation, such as hiring of substitute teachers, when necessary.
- Costs related to the timely entry of information into the NRS data management computer system.

We look forward to working with you in this significant effort which will help us ensure that Head Start is successful in preparing children for school.



Windy M. Hill  
Associate Commissioner  
Head Start Bureau

ATTACHMENT A - Description of the NRS Child Assessment  
ATTACHMENT B - Description of the NRS Computer-Based Reporting System  
(ATTACHMENT C - Schedule and Registration Information for NRS Training-of-Trainers is not included in *The Head Start Path to Positive Child Outcomes*)

## ATTACHMENT A

### Description of the NRS Child Assessment Items

In the design of the NRS field test, the Head Start Bureau convened a Technical Work Group of experts to review the selection of tasks to be included in the child assessment and available early childhood assessment instruments and findings, including tools utilized in Family and Child Experiences Survey (FACES) 2000 and National Head Start Impact Study (NHSIS).

The selection of tasks to be included in the individual child assessment was guided by the following criteria. Tasks in the assessment are intended to appraise skills that:

- Congress and the President expect children to learn in Head Start, as indicated by their being among the mandated achievement goals contained in legislation that reauthorizes the Head Start program in 1998;
- Are critical stepping-stones on the path to achievement in elementary school, especially in the areas of reading and mathematics;
- Can be readily enhanced by activities in Head Start;
- Head Start parents want their children to learn;
- A majority of U.S. children from non-low-income families have mastered by the time they begin kindergarten; and
- Can be reliably measured in a relatively brief child assessment that is conducted by a Head Start teacher or other local staff member.

Based on the Technical Work Group's review, the Head Start Bureau approved a field test version of five components. Most of the child-items in the NRS have been used extensively in FACES, the National Head Start Impact Study, or the Head Start Quality Research Center studies, involving more than 7000 Head Start children, as well as in other major studies of low-income preschoolers. The results of these assessments in FACES research over the past seven years have proven to be highly stable from cohort to cohort, not only in terms of the levels of progress with which children enter or leave the Head Start program, but also in terms of their growth over time. Findings from these studies also demonstrate that the assessment works well with children from diverse backgrounds. The items utilized in the NRS field test includes the following components:

- **Comprehension of Spoken English** to address the Head Start goal areas of "Develops ability to understand and use language," "Uses increasingly complex and varied vocabulary," and "Progresses in understanding and speaking English (for non-English speakers)." This task is composed of the Oral Language Development Scale (OLDS) of the PreLAS 2000, asking the child to follow simple one-step commands in spoken English, as in the game "Simon Says." The second part asks the child to name or explain the function of objects in a series of ten pictures.

For children who are English-language learners, these tasks assess the child's ability to follow simple spoken instructions and give the English names of familiar objects. This serves as a screener for identifying children who should be assessed in Spanish rather than in English. For other children, this serves as a "warm-up" establishing rapport with the child and helping children feel comfortable with the one-on-one situation. The estimated time for this task is 3 minutes.

- **Vocabulary** addresses the Head Start goal area of “understands increasingly complex and varied vocabulary.” The vocabulary task has been adapted from the Third Edition of the Peabody Picture Vocabulary Test (PPVT-III), which has been used successfully in two cohorts of FACES and which has shown that children in Head Start make meaningful gains toward national norms over the course of the program year and during kindergarten. For the sake of simplicity of administration, each child receives 24 items representing an appropriate range of items for the Head Start child. This task assesses understanding of words representing parts of the human body or their functions, activities of daily living, emotions and feelings, work/career-related activities, and plants, animals and their habitats. The estimated time for this is 5 minutes.
- **Letter Naming** addresses the Head Start goal area of “Identifies at least 10 letters of the alphabet, especially those in own name.” The Letter Naming task is a test developed for use in the Head Start Quality Research Centers (QRC) curricular intervention studies. Children are shown all 26 letters of the alphabet, divided into three groups of 8, 9, and 9 letters, and arranged in approximate order of item difficulty. They are asked to identify the letters they know by name. The QRC data show that this task has excellent validity and reliability. The estimated time for this task is 3 minutes.
- **Early Math** addresses the Head Start goal area of “Numbers and operations.” The Early Math skills task is a new task adapted from the Math assessment used in the Early Childhood Longitudinal Study of a kindergarten cohort (ECLS-K). It is composed of items similar to but not identical with items that proved to be in the easier difficulty range in the ECLS-K data, ones that most children in that study had mastered by the beginning of kindergarten.

Items address a range of relevant mathematical skills including number recognition of one-digit numerals, basic geometric shapes, matching number names with objects, counting, simple addition and subtraction, making judgements about the relative size of objects, and interpreting simple measurements and graphic representations. The estimated time for this is 3 minutes.

(A fifth component related to the goal of improving phonological awareness was included in the NRS field test. However, based on the results of the field test and the recommendation of the NRS Technical Work Group, we have decided not to include it in the NRS this year.)

Children whose home language is Spanish and who are English-language learners will be given a Spanish version of the NRS items. The Spanish version will include Tio Simon and La Casita from the PreLAS, the Spanish version of the vocabulary task, which has been adapted from the Test de Vocabulario en Imagenes Peabody, and a Spanish translation of the Early Math tasks. The assessment will also include a Spanish version of the Letter Naming Task, containing the complete Spanish language alphabet. Spoken English will be assessed with the Pre-LAS “Simon Says” and “Art Show” tasks.

## **ATTACHMENT B**

### **Description of the NRS Computer-Based Information System**

The NRS will collect program-, center-, classroom-, teacher-, and child-level descriptive data through a computer-based reporting system. The descriptive information will facilitate tracking of assessment completion by program, a variety of analyses of the child assessment data and a variety of reports on the progress of groups of children.

**Program Information** - Information captured at the program-level includes program name, director name and email, agency description, number of delegates, number of centers, and contact information for the NRS lead contact person. Much of this data will be automatically transferred from the Program Information Report (PIR) database to reduce burden of data entry on Head Start staff.

**Center Information** - Center-level data include similar fields, such as center name and address, phone and fax numbers, email address, enrollment start and end date, and the child outcomes contact person at the center. This information is needed for data tracking, analysis and to target training and technical assistance to specific programs.

**Classroom Information** - Data to be collected include description of class (e.g., morning, afternoon, full day); teacher stability/turnover during the year; total enrollment; and number of additional staff.

**Teacher Information** - Background information on Head Start teachers, such as educational attainment and years of teaching experience, will be collected, to allow analyses of relationships between teacher characteristics and child outcomes.

**Child Information** - Child-level data include age, child entry date into the classroom, number of years in Head Start, disability, other languages spoken at home, rating of English proficiency, child ethnicity, and child race. These data will be used in analysis and as a context for interpreting the NRS child assessment information.



