

# 2005-2006 No Child Left Behind - Blue Ribbon Schools Program

## U.S. Department of Education

**Cover Sheet** Type of School: (Check all that apply)  Elementary  Middle  High  K-12  Charter

Name of Principal Mr. Robert A. Hassett  
(Specify: Ms., Miss, Mrs., Dr., Mr., Other) (As it should appear in the official records)

Official School Name Lynnfield High School  
(As it should appear in the official records)

School Mailing Address 275 Essex Street

(If address is P.O. Box, also include street address)

Lynnfield MA 01940-1789  
City State Zip Code+4 (9 digits total)

County Essex State School Code Number\* 0164-0505

Telephone ( 781 ) 334-5820 Fax ( 781 ) 334-7207

Website/URL www.lynnfield.k12.ma.us/lhs E-mail hassettr@lynnfield.k12.ma.us

I have reviewed the information in this application, including the eligibility requirements on page 2, and certify that to the best of my knowledge all information is accurate.

\_\_\_\_\_  
(Principal's Signature) Date \_\_\_\_\_

Name of Superintendent\* Dr. Richard J. Palermo  
(Specify: Ms., Miss, Mrs., Dr., Mr., Other)

District Name Lynnfield Public Schools Tel. ( 781 ) 334-5800

I have reviewed the information in this application, including the eligibility requirements on page 2, and certify that to the best of my knowledge it is accurate.

\_\_\_\_\_  
(Superintendent's Signature) Date \_\_\_\_\_

Name of School Board President/Chairperson Mrs. Dorothy Presser  
(Specify: Ms., Miss, Mrs., Dr., Mr., Other)

I have reviewed the information in this package, including the eligibility requirements on page 2, and certify that to the best of my knowledge it is accurate.

\_\_\_\_\_  
(School Board President's/Chairperson's Signature) Date \_\_\_\_\_

*\*Private Schools: If the information requested is not applicable, write N/A in the space.*

## **PART I - ELIGIBILITY CERTIFICATION**

**[Include this page in the school's application as page 2.]**

The signatures on the first page of this application certify that each of the statements below concerning the school's eligibility and compliance with U.S. Department of Education, Office for Civil Rights (OCR) requirements is true and correct.

1. The school has some configuration that includes grades K-12. (Schools with one principal, even K-12 schools, must apply as an entire school.)
2. The school has not been in school improvement status or been identified by the state as "persistently dangerous" within the last two years. To meet final eligibility, the school must meet the state's adequate yearly progress requirement in the 2005-2006 school year.
3. If the school includes grades 7 or higher, it has foreign language as a part of its core curriculum.
4. The school has been in existence for five full years, that is, from at least September 2000 and has not received the 2003, 2004, or 2005 *No Child Left Behind – Blue Ribbon Schools Award*.
5. The nominated school or district is not refusing the OCR access to information necessary to investigate a civil rights complaint or to conduct a district-wide compliance review.
6. The OCR has not issued a violation letter of findings to the school district concluding that the nominated school or the district as a whole has violated one or more of the civil rights statutes. A violation letter of findings will not be considered outstanding if the OCR has accepted a corrective action plan from the district to remedy the violation.
7. The U.S. Department of Justice does not have a pending suit alleging that the nominated school, or the school district as a whole, has violated one or more of the civil rights statutes or the Constitution's equal protection clause.
8. There are no findings of violations of the Individuals with Disabilities Education Act in a U.S. Department of Education monitoring report that apply to the school or school district in question; or if there are such findings, the state or district has corrected, or agreed to correct, the findings.

## PART II - DEMOGRAPHIC DATA

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All data are the most recent year available.

**DISTRICT** (Questions 1-2 not applicable to private schools)

1. Number of schools in the district:       2   Elementary schools  
   1   Middle schools  
   \_\_\_\_\_ Junior high schools  
   1   High schools  
   \_\_\_\_\_ Other
- 4   TOTAL
2. District Per Pupil Expenditure:      \$7989
- Average State Per Pupil Expenditure:  \$8591

**SCHOOL** (To be completed by all schools)

3. Category that best describes the area where the school is located:
- Urban or large central city  
 Suburban school with characteristics typical of an urban area  
 Suburban  
 Small city or town in a rural area  
 Rural
4.   4   Number of years the principal has been in her/his position at this school.
- \_\_\_\_\_ If fewer than three years, how long was the previous principal at this school?
5. Number of students as of October 1 enrolled at each grade level or its equivalent in applying school only:

Grade	# of Males	# of Females	Grade Total	Grade	# of Males	# of Females	Grade Total
PreK				7			
K				8			
1				9	80	80	160
2				10	77	86	163
3				11	68	63	131
4				12	55	68	123
5				Other			
6							
<b>TOTAL STUDENTS IN THE APPLYING SCHOOL →</b>							<b>577</b>

*[Throughout the document, round numbers to avoid decimals.]*

6. Racial/ethnic composition of the students in the school:
- |       |                                    |
|-------|------------------------------------|
| _____ | 93 % White                         |
| _____ | 1 % Black or African American      |
| _____ | 1 % Hispanic or Latino             |
| _____ | 4 % Asian/Pacific Islander         |
| _____ | 1 % American Indian/Alaskan Native |
|       | <b>100% Total</b>                  |

Use only the five standard categories in reporting the racial/ethnic composition of the school.

7. Student turnover, or mobility rate, during the past year:   3   %

[This rate should be calculated using the grid below. The answer to (6) is the mobility rate.]

<b>(1)</b>	<b>7</b>	Number of students who transferred <i>to</i> the school after October 1 until the end of the year.	
<b>(2)</b>	<b>9</b>	Number of students who transferred <i>from</i> the school after October 1 until the end of the year.	
<b>(3)</b>	<b>16</b>	Total of all transferred students [sum of rows (1) and (2)]	
<b>(4)</b>	<b>552</b>	Total number of students in the school as of October 1	
<b>(5)</b>		Total transferred students in row (3) divided by total students in row (4)	.0289
<b>(6)</b>		Amount in row (5) multiplied by 100	2.89

8. Limited English Proficient students in the school:   0   %  
  0   Total Number Limited English Proficient  
 Number of languages represented:   0    
 Specify languages:

9. Students eligible for free/reduced-priced meals:   2   %  
 Total number students who qualify:   10

If this method does not produce an accurate estimate of the percentage of students from low-income families or the school does not participate in the federally-supported lunch program, specify a more accurate estimate, tell why the school chose it, and explain how it arrived at this estimate.

10. Students receiving special education services: 10 %  
61 Total Number of Students Served

Indicate below the number of students with disabilities according to conditions designated in the Individuals with Disabilities Education Act. Do not add additional categories.

<u>    </u> Autism	<u>    </u> Orthopedic Impairment
<u>    </u> Deafness	<u>7</u> Other Health Impaired
<u>    </u> Deaf-Blindness	<u>40</u> Specific Learning Disability
<u>9</u> Emotional Disturbance	<u>    </u> Speech or Language Impairment
<u>    </u> Hearing Impairment	<u>1</u> Traumatic Brain Injury
<u>2</u> Mental Retardation	<u>1</u> Visual Impairment Including Blindness
<u>1</u> Multiple Disabilities	

11. Indicate number of full-time and part-time staff members in each of the categories below:

**Number of Staff**

	<u>Full-time</u>	<u>Part-Time</u>
Administrator(s)	<u>2</u>	<u>8</u>
Classroom teachers	<u>38</u>	<u>7</u>
Special resource teachers/specialists	<u>9</u>	<u>1</u>
Paraprofessionals	<u>5</u>	<u>    </u>
Support staff	<u>6</u>	<u>1</u>
Total number	<u>60</u>	<u>17</u>

12. Average school student-“classroom teacher” ratio, that is, the number of students in the school divided by the FTE of classroom teachers: 14

13. Show the attendance patterns of teachers and students as a percentage. The student dropout rate is defined by the state. The student drop-off rate is the difference between the number of entering students and the number of exiting students from the same cohort. (From the same cohort, subtract the number of exiting students from the number of entering students; divide that number by the number of entering students; multiply by 100 to get the percentage drop-off rate.) Briefly explain in 100 words or fewer any major discrepancy between the dropout rate and the drop-off rate. Only middle and high schools need to supply dropout rates and only high schools need to supply drop-off rates.

	2004-2005	2003-2004	2002-2003	2001-2002	2000-2001
Daily student attendance	95 %	95 %	96 %	95 %	95 %
Daily teacher attendance	98 %	98 %	98 %	98 %	N/A %
Teacher turnover rate	16 %	16 %	5 %	N/A %	N/A %
Student dropout rate (middle/high)	0 %	1 %	0 %	N/A %	N/A %
Student drop-off rate (high school)	2 %	2 %	3 %	3 %	N/A %

14. (**High Schools Only**) Show what the students who graduated in Spring 2004 are doing as of September 2004.

Graduating class size	<u>121</u>
Enrolled in a 4-year college or university	<u>79</u> %
Enrolled in a community college	<u>11</u> %
Enrolled in vocational training	<u>    </u> %
Found employment	<u>10</u> %
Military service	<u>    </u> %
Other (travel, staying home, etc.)	<u>    </u> %
Unknown	<u>    </u> %
<b>Total</b>	<b>100</b> %

## **PART III - SUMMARY**

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Lynnfield High School is located in a suburban community fifteen miles north of Boston. 2004 Census figures report a population of 11,640 people. The enrollment of the high school is 577 students. LHS is a Grade 9-12 high school with a demanding core curriculum of required courses. Academic graduation requirements include four years of English, three years of Mathematics, Science and Social Studies, two years of Physical Education/Health, one semester of Unified Arts, and one semester of Business/Technology.

LHS operates on a seven-day cycle with a rotating class schedule. Students enroll in a minimum of 27.5 credit hours per year combined between required courses and electives. While Mathematics, Science and Social Studies have a minimum requirement of three years, almost all LHS students take four full-year courses in those disciplines. In addition, all freshmen are assigned a foreign language and approximately 75% of students enroll in three years of a foreign language.

Students are involved in the community of Lynnfield High School. Approximately 85% of LHS students participate in athletic and/or extracurricular activities. All students are required to complete 35 hours of community service for graduation. The goal of the LHS community service program is to empower students to strengthen their character, to improve citizenship skills and to contribute to the community.

The mission of LHS is “to create a community of learners where students can gain knowledge and master skills necessary for success in life.” The LHS community of teachers, administrators, students and staff work to create an atmosphere that “encourages students to be responsible citizens, competent problem solvers, independent thinkers, and effective communicators in order to become life-long learners.” In order to accomplish this mission, LHS has seven clearly defined expectations for student learning. Rubrics are written for each expectation and these expectations

have been linked to the curriculum of each course taught at the high school.

The LHS Mission Statement also expresses the belief that “mutual respect, responsibility, and ethical behavior” are essential social elements of the high school. LHS expects that all students will develop respect for themselves and others and acquire a knowledge and understanding of a variety of cultures.

LHS enjoys strong parent and community support. The PTO is an active organization that meets on a regular basis with the principal and offers strong input and support on school programs. The Lynnfield Business Coalition works with the schools to provide students the opportunity to take part in local internships and career shadowing days. The Lynnfield Athletic Association strongly supports athletics through a variety of fundraisers to purchase letter jackets for athletes, fund club sports, and provide additional support material for teams. The Lynnfield Education Trust provides grants to teachers for research, development of classroom programs, and underwriting speakers, theatre groups and writers.

In the recent renovation of LHS, the community strongly supported the inclusion of funding to develop electronic classrooms. Each classroom in the high school contains a SmartBoard, projector, laptop computer, audio and video devices and access to a variety of teacher and student drives. In addition, mathematics and science classrooms have graphing calculators and scientific probes. Teachers and students have the use of four computer labs and three portable laptop carts. Teachers and administrators from over twenty communities have visited LHS to view and discuss the school’s use of technology in the classroom.

Student MCAS scores have remained consistently among the top scores in the state. In 2004 and 2005, 91% of LHS students scored in Advanced/Proficient in ELA and 89% scored in Advanced/Proficient in Mathematics. With 98% of seniors taking the SAT’s in 2005, LHS seniors scored 541 in Verbal (33 points above the state average) and 545 in Mathematics (25 points above the state average). In 2005, 41% of the senior class took at least one Advanced Placement examination.

## **PART IV – INDICATORS OF ACADEMIC SUCCESS**

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### **1. Assessment Results:**

Lynnfield High School students in Grade 10 are required to pass two assessments in order to graduate. These assessments are the Mathematics and English Language Arts components of the Massachusetts Comprehensive Assessment System (MCAS.) Results are reported by individual, school and district. Scores of the MCAS range from 200-280 with scores less than 220 classified as failing; 220 to 238 are classified as Needs Improvement; 240 to 258 are classified as Proficient and 260 to 280 are classified as Advanced. Lynnfield’s scores can be viewed at the Massachusetts Department of Education website under School and District Profiles ([www.doe.mass.edu](http://www.doe.mass.edu)).

There are five strands tested on the MCAS Mathematics Exam: Number Sense; Patterns, Relations and Algebra; Data Analysis; Geometry and Measurement. The test is comprised of thirty-two multiple choice questions, four short answer questions and six open response questions. Over the past four years our school scores have steadily improved and in the last two years between 88% and 90% of the students scored in the Proficient and Advanced categories. On the Spring 2005 exam, 2% failed as compared to the state average of 15%; 10% earned Needs Improvement as compared to the 24% state average; 24% earned Proficient as compared to the state average of 27% and 64% scored Advanced as compared to the state average of 34%. For the past three years, our special education students have met AYP.

In the English Language Arts frameworks, there are four strands: Language; Reading and Literature; Composition and Media. The MCAS exam consists of one Long Composition, four Open Response writing questions and thirty-six multiple choice questions. Over the past four years our school scores have been very consistent with between 88% and 93% of our students scoring in the Advanced and Proficient category each of these years. On the Spring 2005 exam, 2% failed as compared to the state average of 10%; 6% earned Needs Improvement as compared to the 25% state average; 45% earned Proficient as compared to the state average of 42% and 47% scored at the Advanced level with the state at 23%. For the past three years, our special education students have met the ELA AYP.

An analysis of test results comparing similar districts is done in many ways within the state. *The Boston Globe* has compared communities based on percentages of students scoring Proficient or Advanced and both the Mathematics and English scores of LHS have been rated in the top 10 in the state for the past two years. The Massachusetts Business Alliance for Education website Just4Kids ([www.just4kids.org](http://www.just4kids.org)) have ranked our ELA and Math scores one of the tops in the state for the past two years with Math ranking #1 in 2004 and English one of the best in 2003. These results and continued improvement earned LHS a “Compass School” designation during the 2004 school year by the Massachusetts Department of Education.

## **2. Using Assessment Results:**

Assessment results are used by the teachers and administrators at LHS to evaluate and modify curriculum and instruction on a regular basis. Each year, English and mathematics department heads closely analyze MCAS results and break down these results into a variety of aggregate categories. The software Test Wiz, provided by the Massachusetts Department of Education, is used in the analysis of MCAS results. Department heads then meet with their departments and analyze the MCAS exams question by question. Areas of improvement are targeted by the teachers and modifications in curriculum and instruction are identified to insure that any areas identified for improvement are addressed. These curriculum meetings take place throughout the year during monthly department meetings, Professional Release Days, and the Summer Institute in June. Both departments now have several years of accumulated data that are examined for trends and patterns of performance.

Over the past several years, LHS has worked across curriculums to develop school-wide and individual department rubrics. Rubrics have been written for a variety of assessments. These



rubrics are used by teachers to insure consistent grading standards across courses. Students use the rubrics to gain a clear understanding of teacher grading expectations. The English Department has written rubrics for the narrative essay, the descriptive essay, the persuasive essay, the expository essay, the analytical essay, the reaction paper to live performance and electronic media, the maintaining of student notebooks, student classroom presentations and performance in group work. Teachers employ a wide range of assessment methods including a variety of writing assignments, tests, quizzes, projects, classroom presentations, web quests, and research papers. Teachers are committed to employing a variety of assessment strategies to allow all students an opportunity to demonstrate their understanding and application of the curriculum.

### **3. Communicating Assessment Results:**

LHS communicates with students and parents on a frequent basis. Each quarter, parents receive one mid-quarter assessment and one final quarter assessment for a total of eight Academic Progress Reports each year. MCAS results are mailed home to parents, presented at a public school committee meeting, and reported in local and school newspapers. The principal communicates regularly with parents through a monthly newsletter that is available on the school's website. In the newsletter, the principal recognizes the academic, athletic and extra-curricular accomplishments of the students. Academic honor rolls are published in community newspapers and posted in the high school.

Each teacher maintains a website that includes course descriptions, course expectations, contact information and outlines. Teachers contact parents directly through phone calls and e-mail and keep parents informed of student progress.

Student accomplishments are recognized on a daily basis through school-wide announcements. Academic, athletic, extracurricular and individual successes are reported to the school over the public address system. Each month, the faculty recognizes two students through the Pioneer Pride program; students are chosen by the faculty in recognition of a positive contribution to the school community. These students' names and pictures are displayed prominently in the main lobby of the school. Each spring, the school hosts an Underclass Awards Night in which the academic accomplishments of students in all disciplines, grades and levels are recognized. Graduating seniors are similarly identified as a major part of graduation ceremonies.

Effectively communicating with parents and the community is an important goal of Lynnfield High School. The school employs a variety of means to accomplish this goal – newsletters, home mailings, websites, community newspapers, in-school public address and displays and school committee meetings. The faculty and administration at LHS are constantly looking to identify and publicly recognize the accomplishments of the students.

### **4. Sharing Success:**

Lynnfield High School's recent renovation completed during the 2002-2003 school year allowed LHS to include in the project an upgrade and expansion of its technology equipment and use. This expansion came about through the joint efforts of teachers, administrators and community members supporting the need to empower teachers with the technology needed to transform their

classrooms. Each teacher received a laptop computer and a SmartBoard and projector in the classroom as well as any other technology needed for a teacher's specific field.

During the past few years, we have had teachers, administrators, and school board members from many communities taking tours of the school and sitting in on classes. Lynnfield High School is also involved in the Salem State Collaborative. The collaborative offers professional development workshops for teachers in over twenty communities in the North Shore of Boston. Lynnfield High School is the location for many of these workshops and Lynnfield teachers are among the vast majority of the presenter pool of the collaborative. During the past three years, teachers from each academic area at LHS have offered workshops on how technology has transformed how they teach.

Five mathematics and special education teachers at Lynnfield High School have completed the nine-day Train-the-Trainer Technology Program offered by Texas Instruments. Two of these teachers are currently certified Texas Instruments Regional Trainers who are sharing what they have learned and what they have incorporated into their classrooms with mathematics and special education teachers from around the state. LHS's assessment results have been presented at the National Council of Teachers of Mathematics Annual Conventions as well as the Regional Conventions in both 2004 and 2005. Recently the Math Department Head offered a series of workshops on working with at-risk students to middle school math and special education teachers from local communities.

Additionally, Lynnfield High School has hosted meetings of the North Shore Math Supervisors and the North Shore Science Supervisors. At these meetings, our department heads offer tours of the facilities and discuss strategies that we have used to be successful on the high stakes exams that our students take. We will continue to share our experiences as we move forward.

## **PART V – CURRICULUM AND INSTRUCTION**

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### **1. Curriculum:**

Writing is the key component of the four years of English that students are required to take. Each grade level focuses on the strands of writing, literary analysis, grammar and usage, vocabulary development and standardized test preparation. Starting in Grade 9, students engage in process writing moving through descriptive, narrative and expository essays. In Grade 10, students progress to analytical essays in response to the literature. In Grade 11, students continue to develop analytical writing skills and complete a quarter-long research paper. In Grade 12, students examine a variety of genres in world literature as they develop personal interpretive skills. Frequent writing assignments, detailed rubrics and an emphasis on process writing insure that high standards are maintained throughout the department.

Students are required to take three years of science, with the vast majority taking four. Most incoming freshmen will begin with a year of Natural Science. Following this, students generally

take a course each in biology and chemistry. Alternatively, those students entering the high school on the honors track begin their studies with a rigorous course in biology followed by similarly challenging courses in chemistry and physics. All students in the upper grades have the opportunity to take multiple electives including such courses as Marine Science, Anatomy, Bioethics, Forensic Science, and Advanced Placement Biology or Chemistry. All students in science are held minimally to the standards set by the Massachusetts Department of Education, and all courses stress the importance of scientific investigation through a significant amount of laboratory work and the writing of formal laboratory reports.

The mathematics curriculum at LHS is designed to provide all students with a college-based mathematics curriculum. The courses are divided into two levels, Honors and College Preparatory. All students must complete three years of mathematics which must include Algebra 2. Over 80% of the students encounter topics covered in beginning college calculus. The classes are standards-based and discovery oriented. Students are expected to own a graphing calculator. The technology used in the curriculum has transformed how topics are introduced to students. Students have access to high power mathematics software in two computer labs in the mathematics wing.

The aim of the Social Studies program at LHS is to prepare students for informed participation in our free and democratic society. In order to realize that goal, the department offers a carefully sequenced curriculum that provides knowledge and skills in world and United States history, geography, American government, psychology, sociology, and current issues. Social Studies course offerings in Grades 9, 10, and 11 examine the legacy of the past, world geography, and the responsibilities of American citizenship in accordance with our state and federal constitutions. The elective program offers further opportunities to investigate specific disciplines within social science.

Latin, Spanish, and French programs are available to all students, each offering a sequence of study that can be followed through four or five years. All three languages may be used to satisfy entrance requirements for college. The Latin program concentrates on developing reading skills for the purposes of comprehension and analysis. The Spanish and French programs seek to develop proficiency in listening, speaking, reading, and writing. The content of each program also promotes understanding and appreciation of the culture and contributions of Spanish and French-speaking peoples.

Students at Lynnfield High School are required to complete a semester course in the Unified Arts Department for graduation. Art, Photography and Computer Design classes are all offered at introductory, advanced and portfolio levels. The primary focus of these sequential courses is to teach students the tools they need to creatively express themselves. The curriculum is centered on the ten standards in the Massachusetts Arts Curriculum Frameworks. All classes are introduced to a broad range of materials, techniques, technology, art history, art criticism and aesthetics. Students are required to critically analyze and reflect on their own work and that of others. Critiques, rubrics, self evaluations and peer evaluations are used for assessment.

## **2b. (Secondary Schools) English:**

The English curriculum is spiraled in design and builds from the previous year. Each grade and level is composed of writing, literary analysis, grammar, vocabulary and standardized test preparation. These components are focused on the writing process and strengthening thinking, analytical and research skills. Detailed curriculum maps have been written for each course and are updated annually.

Grade 9 English gives students a foundation in writing, literary analysis and grammar skills. Writing instruction stresses process. Literary analysis focuses on the use of literary terms and the study of literary genres. Grammar study emphasizes writing styles and daily usage.

In Grade 10 English, students continue to strengthen the foundations in writing, literature and grammar. As students progress to analytical essays, the writing process stresses clear thesis statements, organization and the development of ideas.

In Grade 11 English, college preparatory students are engaged in the study of American Literature. Students may elect an American Humanities interdisciplinary course that combines the study of American literature and American history and is team taught by an English and a Social Studies teacher. Students in the honors level study American and world literature. One quarter of the Junior year is devoted to the writing of a literary Research Paper required for graduation. Students examine a work of literature, do extensive research in literary criticism, and write a 2,000 word research paper.

In Grade 12 English, students undertake the study of world literature. Personal interpretive skills are emphasized in the writing of analytical essays. Advanced Placement English is offered to students through departmental approval.

Each grade level offers courses at the honors level and the college preparatory level. In Grade 9, there is an English course co-taught by an English teacher and a Special Education teacher for students who need strengthening in reading and writing skills. This course continues into Grade 10 where the Special Education teacher comes into the classroom three days each cycle.

## **3. Mathematics, Science, Art, Etc.:**

The mathematics curriculum at Lynnfield High School offers a full four-year program for students ranging from Algebra 1 to AP Calculus and AP Statistics. The mathematics curriculum is divided into two levels, honors and college preparatory with approximately 35% of the students enrolled at the honors level and the remaining students at the college prep level. The college prep program is divided into two curriculum choices, the first being a more traditional program using the University of Chicago Mathematics Program as its foundation and the other a more standards-based approach using the Math Connections program, originally devised and funded by the NSF. All students at Lynnfield High School are required to complete three years of mathematics which must include Algebra 2. Additionally, over 80% of our students will be exposed to topics in calculus by the time they graduate. On average, 98% of the students take four years of mathematics.

The department believes in a standards-based student-centered approach to learning. Skills are taught in context rather than isolation; technology is integrated into the daily routine of learning, and cooperative learning is encouraged. This approach ties in with the belief within the department that “all” students can learn mathematics if it is presented properly. Students are regularly given real-life problems and are encouraged to use multiple approaches in solving these problems.

All students are encouraged to own their own TI Graphing Calculator but calculators are provided by the school for those who cannot afford one. Mathematics software has been purchased so that every student has access either in school or at home to a graphically based software program that allows students to visualize the equations and mathematics with which they are working. Instructions on how to use this technology to visualize mathematics is embedded in the classroom instruction.

Teachers in the department are encouraged to attend professional development programs to help them incorporate new strategies and techniques into their instruction and transform how they teach mathematics to students of all ability levels.

#### **4. Instructional Methods:**

Teachers at Lynnfield High School employ a variety of instructional techniques to improve student learning. The use of technology has made significant changes in instructional practices at Lynnfield High School. The availability of SmartBoards in every classroom has encouraged the use of technology in all aspects of instruction in all academic departments. These include the use of PowerPoint presentations, interactive programs, and the ability of teachers to display student work from a “shared” school drive.

Students have a wide variety of technology to assist their learning. The library media center at Lynnfield High School has eighteen computer stations and access to a state-certified librarian with extensive knowledge of, and expertise in, online educational resources. Teachers also have the use of three computer laptop carts and three computer labs to increase students’ ability to use Internet sources. Examples of student learning opportunities include the use of “web quests” in English and Social Studies classes that require students to solve problems and progress to more advanced stages of learning. “Web quests” are available through a variety of educationally-based foundations that include sources from Public Broadcasting and National Public Radio as well as several universities and national governmental and educational organizations.

In addition to the use of technology, Lynnfield High School teachers focus much of their instruction on student-centered learning. These include the frequent use of “seminar” style discussions, especially in English and Social Studies, cooperative assignments that encourage student creativity for problem solving, and extended lab periods for all science courses. Traditional methods of teaching - discussion, lecture, modeling - have been enhanced and supplemented by the integration of technology into the daily structure of the classroom.

## 5. Professional Development:

Lynnfield High School consistently provides professional development to enhance teachers' competence in instructional and assessment strategies with a goal toward improving student achievement. Beginning teachers are provided with mentors with whom they meet regularly to discuss lesson planning and strategies to improve their work with students of all abilities. New teachers engage in frequent peer observations. The mentoring program also provides workshops for new teachers on topics that include instruction and assessment of students with Individual Education Plans, teaching students dealing with mental health issues, and using cooperative learning effectively. While these workshops are geared toward new teachers, they are open to and frequently attended by more experienced teachers as well.

The annual Summer Institute offers teachers many opportunities to advance their skills. During the past five years, teachers have been provided with a variety of workshops that have focused on instruction and assessment. These workshops have included strategies for using SmartBoard technology, effectively integrating Microsoft Office Programs for classroom use, improving students' reading skills, and several seminars to aid teachers working with students coping with Attention Deficit Disorder, Asperger's Syndrome, and other special education issues. The Summer Institute also allows teachers the opportunity to collaborate with other teachers to plan lessons and develop rubrics-based assessments. Teachers are financially compensated and submit "products" that reflect cooperative work from two to ten hours of lesson and assessment development.

Lynnfield High School continues to engage teachers in collaborative learning opportunities through the professional common planning periods. All teachers, during either their first or second semesters, meet with four or five other colleagues, usually from different academic departments, to discuss current educational issues that affect their teaching. In the past two years, these common planning periods have concentrated on the integration of curriculum and shared technology as well as engaging in peer observations and developing interdisciplinary lessons.

In addition, the Lynnfield Public School District is a member of the Salem State Collaborative for Math and Science. Teachers at Lynnfield High School have participated in courses as students and teachers focusing on TI calculator use, Intel training, and using technology to teach mathematics. Science teachers have attended the collaborative to meet state requirements for Highly Qualified in areas other than their certification. For the past three years, teachers have been offered the opportunity to take John Saphier's Skillful Teacher course.

# PART VII - ASSESSMENT RESULTS

## STATE CRITERION-REFERENCED TESTS

### MCAS RESULTS

Subject English Grade 10

Test Massachusetts Comprehensive Assessment System (MCAS)

	2004-2005	2003-2004	2002-2003	2001-2002	2000-2001
Testing month	5/05	5/04	5/03	5/02	5/01
<b>SCHOOL SCORES*</b>					
% At or Above Needs Improvement	98	99	100	99	96
% At or above Proficient	92	91	93	90	75
% At or above Advanced	47	44	42	47	28
Number of students tested	124	133	131	123	115
Percent of total students tested	100	100	100	100	98
Number of students alternatively assessed	0	0	0	0	3
Percent of students alternatively assessed	0	0	0	0	2
<b>SUBGROUP SCORES</b>					
1. Students with Disabilities					
% At or Above Needs Improvement	82	100	N/A	N/A	78
% At or Above Proficient	59	62	N/A	N/A	30
% At or Above Advanced	6	0	N/A	N/A	0
Number of students tested	17	13	N/A	N/A	23
<b>STATE SCORES</b>					
% At or Above Needs Improvement	90	90	88	86	82
% At or Above Proficient	64	63	61	59	45
% At or Above Advanced	22	19	20	19	15

**STATE CRITERION-REFERENCED TESTS**

**MCAS RESULTS**

Subject Mathematics Grade 10

Test Massachusetts Comprehensive Assessment System (MCAS)

	2004-2005	2003-2004	2002-2003	2001-2002	2000-2001
Testing month	5/05	5/04	5/03	5/02	5/01
<b>SCHOOL SCORES*</b>					
% At or Above Needs Improvement	98	99	100	95	90
% At or above Proficient	88	90	83	73	63
% At or above Advanced	64	69	51	41	30
Number of students tested	124	133	131	123	117
Percent of total students tested	100	100	100	100	99
Number of students alternatively assessed	0	0	0	0	1
Percent of students alternatively assessed	0	0	0	0	1
<b>SUBGROUP SCORES</b>					
1. Students with Disabilities					
% At or Above Needs Improvement	88	92	N/A	N/A	68
% At or Above Proficient	41	54	N/A	N/A	27
% At or Above Advanced	6	8	N/A	N/A	9
Number of students tested	17	13	N/A	N/A	22
<b>STATE SCORES</b>					
% At or Above Needs Improvement	86	85	79	75	75
% At or Above Proficient	62	57	51	44	45
% At or Above Advanced	35	29	24	20	18



## NATIONAL CRITERION-REFERENCED TESTS

### SAT RESULTS

Subject Mathematics

	2004-2005	2003-2004	2002-2003	2001-2002	2000-2001
Testing month					
<b>SCHOOL SCORES*</b>					
Total Score	545	556	537	545	537
Number of students tested	135	114	106	111	135
Percent of total students tested	98	94	99	98	94
National Mean Score	520	518	519	516	515

## NATIONAL CRITERION-REFERENCED TESTS

### SAT RESULTS

Subject Verbal

	2004-2005	2003-2004	2002-2003	2001-2002	2000-2001
Testing month					
<b>SCHOOL SCORES*</b>					
Total Score	541	546	533	541	529
Number of students tested	135	114	106	111	135
Percent of total students tested	98	94	99	98	94
National Mean Score	508	508	507	504	506