

WESTON PUBLIC SCHOOLS

**EDUCATIONAL RECORDS
BUREAU (ERB)**

and

**THE MASSACHUSETTS
COMPREHENSIVE ASSESSMENT
SYSTEM (MCAS)**

REPORT 2007

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Introduction

As noted last year in this report, classroom teachers utilize two types of assessments: formative, which is ongoing, and summative, which are end-of-unit or standardized tests. While formative testing results in timely feedback, summative testing, such as MCAS and ERB examinations, does not provide data that can be effectively used by classroom teachers, given the timing and quality (2006, Rothman). In a presentation made during our November 7th district-wide professional development program, fifth grade team leader Barbara Stevens referenced an observation by Kim Marshall that MCAS scores are “autopsy data.” While teachers chuckled at that reference, they do understand that the tests remain important in several ways: 1) the data is disaggregated allowing us to monitor progress made with targeted groups; 2) the tests are linked to our curriculum and learning standards providing important item analysis feedback to curriculum leaders and teachers; and 3) students must pass the high stakes 10th grade exam to graduate from high school. However, state testing programs, mandated under NCLB, have come under increased scrutiny nationally, especially with the discussions surrounding the re-authorization of that law. Critics fear that the tests have become an end unto themselves, actually interfering with learning and education. Recently an editorial appeared in the *New York Times* in which the writer questioned whether state tests actually measure student progress or merely give a “false impression of success.” The Massachusetts state exam is one of the most rigorous in the nation, but it is not without critics as well. A recent study by the Thomas B. Fordham Institute concluded that Massachusetts’ standards are “well above average in terms of difficulty” as compared to the 25 other states that were studied. However, there is a disparity in difficulty from grade to grade in math and the reading standards overall are less rigorous in comparison to math (see **Appendix D** for the Fordham summary).

MCAS testing for all students begins in March, with the long composition in Grades 4 & 7, and ends in June with the High School Science examinations. In between those months, students in Grades 3, 4, 5, 6, 7, 8 and 10 spend hours in April and May on Mathematics and English Language Arts tests. Science and History assessments are sprinkled throughout the grades. Teachers resent the loss of teaching time and are concerned about the added stress the exams have placed on our students as young as age 8.

Historically, however, Weston has embraced the importance of standardized tests, while acknowledging that the results are only one measure of student success or curriculum effectiveness. The district mission is to “encourage and facilitate the growth, abilities and talents of students, so they will live healthy lives characterized by reflection, responsibility, wonder, daring, and enthusiasm for life-long learning.” (Weston Public Schools, Program of Studies, 2007-2008, p. 24). That said, there is definite value to monitoring longitudinal testing data, if placed in the proper context. Weston has compiled data from tests results from the Education Record Board (ERB) for twenty-one years and the Massachusetts Comprehensive Assessment System (MCAS) since 2001. The School Committee policy (File IL) on testing programs states that standardized testing is to be conducted in the Weston schools for the following reasons:

- To obtain a third-party, objective measure of each student’s achievement
- To gauge the individual student’s gains from year to year
- To assess the strengths and weaknesses of individual students and determine needs

- To compare, generally, the standing of Weston children with that of students in other regions of the country
- To analyze, in a general way, the effects of the instructional program

This report reviews the spring 2007 ERB and MCAS data for students in Grades 3 through 10. In general, they continue their strong performance as measured by scaled scores and in comparisons to their peers. Some fluctuation is to be expected given changes in the student cohort from year to year and variations in tests.

ERB CTP4 Test Results

Overview

Over the last twenty-one years, the Weston Public Schools has utilized the CTP testing program of the Educational Records Bureau (ERB) to assess our continued ability to maintain high standards for our students as well as monitor individual student progress. The school administration made the decision several years ago to reduce the number of ERB examinations taken because of the increasing amount of time required for MCAS examinations. The modified testing program has maintained the longstanding practice of longitudinal ERB data collection as a means for comparing trends in Grades 3-7. While the focus is on Reading and Mathematics in Grades 3-7, a broader array of testing is conducted in Grade 6, which provides Middle School teachers with additional data to help students in their transition from elementary school. John Gibbons has requested that beginning in 2008 the hours of testing at Grade 6 be reduced as well to be in line with other grades. Given the increase in MCAS testing and the limited use of that data, teachers would prefer that students only take the Reading Comprehension and Mathematics portions of the ERB. This proposed change will be discussed in future meetings of the Administrative Council. The following CTP4 examinations were administered in the spring of 2007:

Grade 3	Mathematics 1 & 2 Reading Comprehension	Grade 6	Verbal Reasoning Vocabulary Reading Comprehension Writing Mechanics Writing Concepts & Skills Quantitative Reasoning Mathematics 1 & 2
Grade 4	Reading Comprehension Vocabulary Mathematics 1 & 2		
Grade 5	Reading Comprehension Vocabulary Mathematics 1 & 2	Grade 7	Reading Comprehension Quantitative Reasoning Mathematics 1 & 2

Analysis

The Quantitative and Verbal Reasoning subtests measure problem solving ability; all others are achievement tests. The components of the ERB testing results we use are described below:

1. Item Analysis

The ERB statistical report contains a national, suburban, and independent school analysis of the average percent of items correct for each subtest and within multiple categories. Analyzing our subtest results helps us diagnose specific curriculum strengths and weaknesses. As has been traditionally done, our item analysis test results have been compared with those of suburban and independent school populations only. These are reported in **Appendix A**.

2. Scaled and Percentile Scores

For each ERB test, the number of questions a student answers correctly (raw score) is converted to a standardized scale (scale score) in order to make it possible to compare the student's score with the results of students in the norm population. Scale scores also allow us to compare each student's or group performance over time.

The ERB program also converts scale scores to percentile ranks or percentile scores. This term refers to the percentage of students in a norm population whose scores fall at or below a given score. Thus, a percentile score indicates a student's ranking in relation to the rest of the norm population and provides each student with percentile subtest scores that depict where each student's scores rank within her/his school population and within national, suburban, and independent school populations. Last year the ERB changed its traditional reporting practice and no longer included the school norm results on the Individual Parent Reports that are mailed home. The information, however, is sent to the schools, but in a format that does not easily allow for individual reports. Therefore this information will be shared at parent conferences or through the guidance counselors.

The results of the 2007 ERB examinations in Grades 3 through 7 indicate a strong performance by students throughout our district. In general, the scaled reading scores (see **Appendix A**) were consistent with previous district scores. Furthermore, comparisons of Weston reading scores at 10%, 25%, 50% and 90% percentile with average scaled scores from the Suburban and Independent schools (see **Figure 1**), indicate that Weston student scores were equal to or higher in all grades. As a result of an error in completing information on the examination forms, 22 students were scored separately in Grade 7. The Middle School will monitor the process carefully this year to be sure that all students are grouped together as in the past.

ERB 2007
Reading Comprehension Scaled Scores

Figure 1

Grade	50% Percentile			90% Percentile		
	Weston	Suburban	Indep.	Weston	Suburban	Indep.
3	337	330	333	359	354	356
4	340	337	339	362	360	360
5	351	345	348	374	367	370
6	350	346	350	380	376	379
7	357	352	355	378	372	374
7*	343	352	355	362	372	374

***non-standard**

Weston scaled scores in Mathematics were generally consistent or slightly higher than previous scores (see **Appendix B**). For example, the average score at Grade 3 over the last eight years at 90% was 335 as compared to this year's score of 336. The average score at the 75th percentile in Grade 4 over the last 7 years was 334 as compared to this year's 338. At the 50th percentile in Grade 5, the average score over the last 6 years was 340 as compared to 344 this year. At the 25th percentile in Grade 6, the average score for the past 5 years was 333, which was exactly the average in 2007. Continuing a trend, the Grade 5 students scored from 7 to 14 points higher on the scaled scores than their Independent school counterparts. For example, at the 90th percentile, the Weston score was 379 and the Independent was 365. In comparing the Weston 2007 average scaled scores in Mathematics with those of the Suburban and Independent schools, Weston continues to score higher at each grade level in both the 50% and 90% percentile markers (see **Figure 2**). This is not the case with the small subset of Weston students in Grade 7. However, with the larger group, this is the fourth year in a row that such a gap exists between the Weston scores and the other two subsets.

In reviewing results in Grades 6 and 7, our students performed exceptionally well in questions measuring knowledge and skills in statistics and procedural knowledge. Both classes struggled with problem solving. In Grade 6, students answered 56% of those questions correctly, as compared to the Independent School average of 49%. In Grade 7, students answered 60% of those questions correctly, as compared to 50% in the Independent schools.

**ERB 2007
Mathematics 1 & 2 Scaled Scores**

Figure 2

Grade	50% Percentile			90% Percentile		
	Weston	Suburban	Indep.	Weston	Suburban	Indep.
3	305	297	300	336	330	332
4	316	308	311	348	341	340
5	344	333	336	379	366	365
6	350	337	341	379	370	371
7	386	365	368	423	405	404
7*	333	365	368	410	405	404

***non-standard**

MCAS Results

As referenced in the introduction to this report, the amount of testing now required by the Department of Education has grown significantly since 2001. Students in Grades 3, 4, 5, 6, 7, 8 and 10 all take examinations in English Language Arts and Mathematics. In addition, students in Grades 5, 8 and 9 or 10 are tested in Science, in which a passing grade is also required for high school graduation. In addition this past year, students in Grades 8 and 10 took a preliminary version of the History examination that will be added to the program in 2008. The tests themselves are not timed, but a rough estimate of the number of school hours allotted for these assessments ranges from four hours in Grade 3 to twelve hours in Grade 8. Due to the high stakes nature of the high school tests, students often have difficulty focusing on other schoolwork during MCAS weeks. The younger students are often filled with anxiety during the testing period. Despite these challenges, our students continue to do well on the MCAS tests as described below and as indicated in **Appendix C**. In this round of testing, Weston Public Schools met the AYP target for scoring in aggregate and for all subgroups, except for African American students. Their combined AYP score was only 1.8 points from meeting the target.

High School

In the tenth grade, 95% of the students scored in the combined Advanced and Proficient categories in English Language Arts and 89% in Mathematics. The percentage of students

scoring in the Needs Improvement category in Mathematics increased from 3% in 2006 to 9% in 2007 and accounts for the 6% drop in the combined Advanced and Proficient score. The results compare favorably with the combined Advanced and Proficient results in ELA in neighboring communities: Wayland (92%), Wellesley (95%), Lexington (92%), Dover-Sherborn (97%), Concord-Carlisle (95%), and Newton (88%). While the percentage of Weston Grade 10 students scoring in the Advanced category was higher in 2007 (51%) than in 2006 (35%) and in 2005 (47%), neighboring communities had percentages in Advanced that ranged from 49% (Wayland) to 54% (Dover-Sherborn), with the average percentage of the six communities being 50%. This was a significant increase over last year's average of 35%. The Bromfield School in Harvard had the highest percentage of students in the Advanced category (65%). Four percent of Weston High School 10th graders scored in the Needs Improvement category and one did not pass the alternate exam. Weston students averaged an 86% of correct responses on the multiple-choice questions, but averaged only 69% on the open-response. The state average for multiple-choice is 75% and open-response is 59%.

In Mathematics, Weston students continue to score well with 65% in the Advanced category, but that percentage was down from 2006 (76%) in the Advanced range (260-280). This year five students received perfect scores of 280 and another ten received scores of 278. The 89% combined Advanced/Proficient scores compare somewhat less favorably with many of the following communities: Wayland (95%), Wellesley (92%), Concord-Carlisle (89%), Dover-Sherborn (98%), Lexington (91%), Acton-Boxborough (93%), and Newton (88%). Two students failed the exam, and there were 14 students in the Needs Improvement category. Overall students averaged 73% correct responses in the multiple-choice section, 66% in the short answer and 78% in the open-response. The later was 22 percentage points higher than the state average.

There were no student scores released for the Science/Technology examinations in Grades 9 & 10 this year, though members of the Science Department have been analyzing school results. They will use this information to help students prepare for the 2008 examination.

This fall 58 Weston High School students, or 36% of the class, were awarded a John and Abigail Adams Scholarship, based on students' performance on the Grade 10 MCAS English and Math exams. To qualify for this award, students must score Advanced on one exam and either Proficient or Advanced on the second exam, as well as score within the top 25 percent of all students within their district.

"This recognition is well deserved," said Acting Education Commissioner Jeffrey Nellhaus. "This scholarship has been a tremendous incentive for our high school students to show their best work on MCAS. It will help ease the cost of college for these recipients and allow them to continue their academic growth after high school."

Adams Scholarship recipients receive free tuition at any of Massachusetts' public colleges and universities. The tuition waiver remains in effect for eight consecutive semesters or four years. Recipients must begin to use the waiver in the first fall semester following their high school graduation, and must maintain a GPA of 3.0 or better throughout the time of the waiver.

Middle School

In English Language Arts, Middle School students performed very well. In the second year of the Grade 6 ELA test results, 90% of Weston students performed in the combined Advanced and Proficient category. This was in comparison to the combined scores in neighboring communities: Wayland (85%), Wellesley (93%), Concord (89%), Lexington (91%), Acton (93%) and Newton (82%). That same statistic was 93% in Grade 7, as compared to Wayland (96%), Wellesley (95%), Concord (91%), Lexington (92%), Acton-Boxborough (89%) and Newton (86%). In Grade 8, the combined score was 95%, which ranked very high among all districts. However, that was based on 79% of the students being Proficient and only 16% scoring in the Advanced category. This is in contrast to the following Advanced percentages in neighboring communities: Lexington (41%), Wayland (37%), Wellesley (35%) and Acton-Boxborough (32%). The Middle School staff has begun to analyze these results and will be holding additional meetings to address any concerns they uncover in terms of teaching and learning. In light of the Fordham Institute Study, this is particularly troublesome. Their findings indicated that the Grade 8 English Language Arts exam is less rigorous than the test at other levels.

In Grade 6 the combined Advanced and Proficient score was 75%, which was the same or very close to the percentage in the following comparable communities: Concord, Dover-Sherborn, Wayland, and Newton. Wellesley and Lexington both had a combined score of 83% and Acton had a score of 88%. In Grade 7 Mathematics, 70% of students scored in the Advanced and Proficient categories, which was exactly how the cohort scored as 6th graders. Students in neighboring communities scored as follows: Wayland (83%), Wellesley (78%), Concord (73%), Lexington (78%), Acton/Boxborough (78%), and Newton (72%). In Grade 8, 74% of students scored in the Advanced and Proficient categories, which was lower than all of the comparable communities, except Concord (72%) and Wellesley (74%). The other scores ranged from Acton-Boxborough (80%) to Dover-Sherborn (83%). Students in Grade 8 struggled with the same subcategories as in Grade 6: geometry (65% correct), data analysis (69% correct), and open-response questions (69%). This year Weston has Title I funding that is being used to support students in Mathematics as well as study skills.

The Grade 8 Science and Technology combined Advanced and Proficient score was 66% this year. However, there was an eleven-point drop in the Advanced category, although that score was higher than most other comparable communities: Wayland (12%), Wellesley (1%), Concord (12%), Lexington (14%), Acton Boxborough (11%), and Dover-Sherborn (6%).

Field School

Students in Grades 4 & 5 were assessed in Math and English Language Arts and fifth graders also took the Science and Technology tests. In Grades 4 and 5, 85% of students scored in the combined Advanced and Proficient categories in ELA. This compares to the combined Grade 4 scores in neighboring districts of: Wayland (70%), Wellesley (83%), Concord (80%), Lexington (81%), Acton (85%), Dover (75%), and Newton (78%). The Grade 5 score of 85% compares to neighboring districts as follows: Wayland (82%), Wellesley (85%), Dover (85%), Lexington (86%), Acton (88%), and Newton (84%). This year 15% of all students in Grade 4 scored in either the Needs Improvement or Warning range, a drop of 5% from last year's cohort.

As third graders, none of these students scored in the Warning category. Students continue to struggle with the open-response questions. They scored a 60% in that category as opposed to scoring 89% on the multiple-choice section. The particular area of weakness is topic development in which students attained only an average score of 70%. In response to these issues, Lynda Steinberg stated, “The moving target for us is still Open-response, which is the place where I can see potential for significant improvement (as well as with targeted groups of students, such as SPED). We are already quite strong in writing at grade 4 when compared to like EDCO districts, and similar in Multiple-choice.”

In Mathematics, 77% of the Grade 4 and 78% of the Grade 5 students scored in the combined Advanced and Proficient category, scores that were higher than many neighboring communities. In fact the fourth graders had the 7th highest percentage (42%) in the Advanced category in the state. Grade 4 students scored well in all three categories of questioning with average scores of 82%(multiple-choice), 79% (open-response) and 77% (short answer). In Grade 5 students excelled in answering questions in the sub-category of Patterns, Relations, and Algebra with a correct percentage average of 85%. Overall they did very well in answering multiple-choice questions (83% correct) as well as short answer (75%) and open-response (71%).

Scores in Science and Technology were very similar to the numbers in 2006. The combined Advanced and Proficient score was 66%, which was lower than the following communities: Wayland (72%), Wellesley (70%), Dover (71%) and Newton (74%), Lexington (77%) and Acton (80%). Students seemed to have the greatest challenge in answering questions in the Earth and Space Science category, averaging only 68% correct. While they averaged an 80% correct response on multiple-choice questions overall, they averaged only 55% on the open-response questions. Pat Jacobs, Elementary Science Curriculum Specialist, believes that the recently introduced units on scientific inquiry will help students score higher on the open-response questions this year.

Woodland and Country

In English Language Arts, the third grade score (83% Advanced or Proficient) was three percentage points lower than last year and 2% scored in the Warning range. Out of a possible 10 points in questions addressing Language, Weston students on average scored 8.7 and out of a possible 86 points in Reading and Literature, Weston students averaged 71.1. On multiple-choice questions, they averaged 89% correct and on open-response 65%. There were 27 students from this grade who received early intervention in reading as first and/or second graders, in Reading Recovery and Auxiliary Reading Program. Of those 14 scored in the Proficient range, 11 scored in the Needs Improvement category, and one received a Warning score. Nine of the students in the Needs Improvement and Warning categories receive special education services. Two students have moved from the district prior to the MCAS.

This was the second year that students were assessed in Mathematics and 78% of them scored in the Advanced and Proficient range, with 28% in the Advanced (or Proficient +) category. There was an increase from 2006 in the number of students in the Warning category from 3% to 6%. On the whole, students did exceptionally well on questions in three areas:

Patterns, Relations, and Algebra (90% correct), Measurement (85%) and Data Analysis, Statistics and Probability (91% correct). Students who have received early intervention in mathematics are in the current grade 3 and will take the exam in 2008.

Observations

In analyzing these results, there are a number of general observations that can be made:

- Our students continue their strong performance on both ERB and MCAS tests
- Open-response questions continue to be a challenge for students at most levels, particularly in Science
- Weston has met AYP (annual yearly progress as specified in NCLB) in aggregate and with all sub groups except African American students
- A high percentage of students with disabilities score in the Needs Improvement and/or Warning categories
- African American students are under represented in the Advanced and over represented in the Needs Improvement categories
- Title I programs support students who scored in the Needs Improvement or Warning category at Field and Middle during the school day.
- Teachers and Curriculum leaders want to work more directly with MCAS and ERB data and so the district is investigating ways to make a variety of assessment data available.

References

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