



***TRITON REGIONAL SCHOOL DISTRICT***

***DISTRICT REPORT  
OF THE  
2007 MCAS RESULTS  
FOR  
GRADES 3-8 AND 10***

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## 2007 MCAS RESULTS OVERVIEW

The Massachusetts Comprehensive Assessment System (MCAS) tests were established under the 1993 Massachusetts Education Reform Act and have been administered since 1998. The tests also fulfill the requirement to assess students in both English Language Arts and Mathematics in grades 3-8 and grade 10 as stated under the federal *No Child Left Behind Act* (NCLB) of 2002.

### 2007 Tests Administered

The table details the 2007 tests and question tryouts administered at each grade level. No school, or district results are reported for pilot tests.

<b>GRADE</b>	<b>TEST</b>
<b>3</b>	<ul style="list-style-type: none"><li>• Reading</li><li>• Mathematics</li></ul>
<b>4</b>	<ul style="list-style-type: none"><li>• English Language Arts</li><li>• Mathematics</li></ul>
<b>5</b>	<ul style="list-style-type: none"><li>• English Language Arts</li><li>• Mathematics</li><li>• Science and Technology/Engineering</li><li>• U.S. History Pilot Test</li></ul>
<b>6</b>	<ul style="list-style-type: none"><li>• English Language Arts</li><li>• Mathematics</li></ul>
<b>7</b>	<ul style="list-style-type: none"><li>• English Language Arts</li><li>• Mathematics</li><li>• U. S. History Pilot Test</li></ul>
<b>8</b>	<ul style="list-style-type: none"><li>• English Language Arts</li><li>• Mathematics</li><li>• Science and Technology/Engineering</li></ul>
<b>10</b>	<ul style="list-style-type: none"><li>• English Language Arts</li><li>• Mathematics</li></ul>
<b>9/10</b>	<ul style="list-style-type: none"><li>• Science and Technology/Engineering Pilot Tests</li></ul>
<b>10/11</b>	<ul style="list-style-type: none"><li>• U. S. History Pilot Test</li></ul>

### Performance Level Definitions

Results for students in grades 4 through 10 are reported according to four performance levels. Each performance level is linked to a scaled score from 200 to 280 as follows:

Advanced (A)	Students at this level demonstrate a comprehensive and in-depth understanding of challenging subject matter and provide sophisticated solutions to complex problems.	260-280
Proficient (P)	Students at this level demonstrate a solid understanding of challenging subject matter and solve a wide variety of problems.	240-258
Needs Improvement (NI)	Students at this level demonstrate a partial understanding of subject matter and solve some simple problems.	220-238
Warning/Failing (W)	Students at this level demonstrate a minimal understanding of subject matter and do not solve simple problems.	200-218

Grade 3 student results are also reported using four performance levels. Instead of advanced, the highest level is:

Above Proficient (P+)	Students at this level demonstrate mastery of challenging subject matter and construct solutions to challenging problems.
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### Composite Performance Index

Under *No Child Left Behind*, all students are expected to reach the level of **Proficient** by 2014. The **Composite Performance Index (CPI)** is a 100 point index that assigns points to each student participating in MCAS and MCAS-Alt tests based on their performance. A group CPI is calculated for each subject and student group at each grade level. This information helps schools and districts determine how a group is progressing toward proficiency each year.

MCAS Performance Level	Scaled Score	CPI Points
Advanced	260-280	100
Proficient	240-258	100
Needs Improvement (High)	230-238	75
Needs Improvement (Low)	220-238	50
Warning/Failure (High)	210-218	25
Warning/Failure (Low)	200-208	0

**Composite Performance Index, continued**

MCAS-Alt Performance Level	CPI Points	Corresponding MCAS Performance Level
Advanced	100	Advanced
Proficient	100	Proficient
Needs Improvement	100	Needs Improvement
Progressing	100	Warning
Emerging	75	Warning
Awareness	50	Warning
Incomplete	25	Warning

**Performance Ratings**

Performance ratings are based on aggregate student performance for both the English Language Arts and Mathematics tests. These ratings are descriptive terms used to track progress toward meeting the NCLB goal of all students achieving proficiency in these subjects by 2014. The performance ratings correspond to a school's or district's aggregate CPI each year.

Rating	Aggregate CPI
Very High	90-100
High	80-89.9
Moderate	70-79.9
Low	60-69.9
Very Low	40-59.9
Critically Low	0-39.9

**Adequate Yearly Progress (AYP) Standings**

AYP determinations are made annually for both English Language Arts and Mathematics. For each subject there are multiple AYP determinations, for students as a whole and for student subgroups. AYP determinations are calculated for student subgroups if the group consists of 40 students or more and the number of subgroup members is at least 5% of the students included in the school's assessment results. The subgroups reported out for the Triton District are students with disabilities, economically disadvantaged students, and white students. Students are counted in each student group to which they belong; as such, one student can be represented in multiple groups.

*(School Leaders' Guide to 2007 AYP Reports, MA DOE)*

The summary of 2007 AYP Data for the Triton District and individual schools is as follows:

School/District	Subject	NCLB Accountability Status	Performance Rating	Improvement Rating
Triton District	English Language Arts	No Status	High	On Target
	Mathematics	No Status	High	On Target
Triton High School	English Language Arts	No Status	Very High	On Target
	Mathematics	No Status	Very High	On Target
Triton Middle School	English Language Arts	No Status	Very High	On Target
	Mathematics	Improvement Year 1: Subgroup	Moderate	On Target
Newbury Elementary School	English Language Arts	No Status	High	No Change
	Mathematics	No Status	High	No Change
Pine Grove School	English Language Arts	No Status	Very High	On Target
	Mathematics	No Status	High	On Target
Salisbury Elementary School	English Language Arts	Improvement Year 1: Subgroup	High	On Target
	Mathematics	No Status	Moderate	On Target

## GRADE 10 MCAS ANALYSIS—SPRING 2007

### English Language Arts and Mathematics

Students in the class of 2009 are required to earn a competency determination as well as meet local graduation requirements in order to earn a high school diploma. To earn a competency determination a student must pass both the grade 10 English Language Arts and Mathematics tests by earning a scaled score of 220 – Needs Improvement or above. In 2007, 93% of all grade 10 Triton Regional High School students passed the test on the first try.

#### Five-Year Comparison of Grade 10 MCAS Results

Grade 10 English Language Arts										
Year	Percent of Students								Number of Triton Students	Triton CPI
	Advanced		Proficient		Needs Improvement		Warning/Failure			
	School	State	School	State	School	State	School	State		
2007	19	22	57	49	22	24	2	6	204	90.9
2006	18	16	53	53	22	24	6	7	233	87.0
2005	24	23	48	42	25	25	3	10	242	90.1
2004	20	19	49	43	26	27	5	11	242	89.3
2003	27	20	48	41	23	28	3	12	226	90.1

Grade 10 Mathematics										
Year	Percent of Students								Number of Triton Students	Triton CPI
	Advanced		Proficient		Needs Improvement		Warning/Failure			
	School	State	School	State	School	State	School	State		
2007	46	42	30	27	22	22	2	9	204	90.6
2006	43	40	30	27	20	21	7	12	226	87.4
2005	38	35	36	27	19	24	7	15	243	88.7
2004	37	29	32	28	23	28	8	15	243	85.3
2003	29	24	33	27	30	28	8	21	226	84.0

**General Performance Level Analysis**

**English Language Arts:**

- Fewer students scored at the warning level and there has been a steady increase of students scoring at the proficient and advanced levels.
- In 2007, fewer Triton students scored at the advanced level as compared to the state.
- While the CPI has increased over last year by 3.9 points and is at the highest level from 2003 to 2007, a five-year comparison of the CPI shows erratic improvement.

**Mathematics:**

- In 2007, 17% more students scored in the advanced category as compared to 2003. This increase is also reflected at the state level. The percent of students who scored at the failure level has steadily decreased over the last 5 years by 6%.
- The CPI has increased over last year by 3.2 points as the percentage of students in the advanced and proficient categories steadily increases.

**District Improvement Plan Targets**

**Percent of Students Scoring in Proficient and Advanced by Student Subgroups**

Subject	Aggregate		Students with Disabilities		Low Income		Male		Female	
	ELA	Math	ELA	Math	ELA	Math	ELA	Math	ELA	Math
2006 Baseline	67	68	15	16	47	42	57	58	78	80
2007 District	74	73	45	42	42	42	67	68	82	78
2007 State	71	69	30	31	48	47	66	69	76	70
2008 Target	72	73	27	28	55	50	63	64	81	83

**English Language Arts:**

- Showed improvement in the aggregate, students with disabilities, gender male, gender female.
- Exceeded 2008 improvement targets in the aggregate, students with disabilities, gender male, and gender female.
- Scored below the 2006 baseline in low income subgroup.
- Exceeded the 2007 state average in the aggregate, students with disabilities, gender male, and gender female.
- Scored below the 2007 state average in low income subgroup.

**Mathematics:**

- Showed improvement in the aggregate, students with disabilities, and gender male.
- Exceeded 2008 improvement targets in students with disabilities and gender male
- Scored below the 2006 baseline in gender female.
- Scored at or above the 2007 state average in the aggregate, students with disabilities, and gender female.
- Scored below the 2007 state average in low income and gender male.

## Test Item Analysis

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### Item Type:

**English Language Arts:** The three types of items and their point values include multiple-choice (1), open-response (4), and the writing prompt (topic development (12) plus conventions (8) = 20). Students obtained the highest percent of points (80%) on multiple-choice and the least on open-response (62%). The composition score totaled 76% of possible points. When we examine this score further, students attained 93% of possible points on the conventions portion of the test as compared to 63% of the points in topic development. Student performance exceeded the state average for all points attained on all item types in English Language Arts.

**Mathematics:** The three types of items and their point values include multiple-choice (1), short-answer (1), and open-response (4). Student performance showed slight variability between the percent of points attained for each item type: multiple-choice = 63%, short-answer = 63%, and open response = 60%. Student performance exceeded the state average for all points attained on all item types in mathematics.

### Areas of Strength:

#### **English Language Arts:**

- Student performance was stronger on the language strand as compared to the literature strand.
- Students demonstrated proficiency on Standard 15: Style/Language with particular attention to the use of imagery.
- Students demonstrated proficiency with the structure and elements of Standard 16: Myth and Standard 11: Theme.
- Student performance on the writing prompt in the area of conventions was strong with 93% of possible points attained.

#### **Mathematics:**

- Overall, student performance was the strongest on the geometry strand where students scored 2-8 points above the state average for all standards.
- Students demonstrated proficiency on all short-answer items. This item type requires students to perform calculations on a variety of problems.
- Within each of the other strands there were areas of strengths such as polynomials and symbol manipulation in the patterns, relations, and algebra strand as well as perimeter/circumference/area in the measurement strand.

**Areas of Improvement**

- An asterisk (\*) denotes lower than state average.
- Over 25% of our students responded incorrectly to the following multiple choice test items:

<b>English Language Arts</b>		
<b>Item Number</b>	<b>Standard</b>	<b>Description</b>
6	S8	Understanding Text. What is excerpt mainly about
11	S12	Fiction. Most likely meaning: house had a “chronology to it”
16	S14	Poetry. What is the main purpose of “perfect silence”
20*	S12	Fiction. Author’s point of view helps reader do what
23	S12	Fiction. What does it mean that man questions, not Griet
26	S12	Fiction. Father has what consolation in Griet’s job
28	S15	Style/Language. Most likely purpose of beginning
33	S8	Understanding Text. What is article’s main conclusion
40*	S4	Vocabulary. ID best synonym: halcyon-serene

<b>Mathematics</b>		
<b>Item Number</b>	<b>Standard</b>	<b>Description</b>
3	D-1	Determine the median for a set of data in a stem and leaf plot
4	P-3	Multiply polynomials to determine equivalent expression
7*	N-2	Compare the value of Pi with the value of a square root
9*	N-3	Determine the closest value for the solution of a cube root
10*	D-2	Match a scatter plot to the equation of trend line
11	P-5	Determine the solutions of a quadratic equation
13	P-4	Factor a polynomial expression
23	D-1	Determine the mean and median for tabular data
25*	P-7	Model linear data and find average value
26*	D-1	Calculate the mean for a set of data in frequency table
27	G-6	Determine height of an equilateral triangle given the sides

**Areas of Improvement—Mathematics, *continued***

28*	M-3	Compare the change in volumes of two cylinders
30	P-7	Model and solve a quadratic function
34*	M-2	Calculate the volume of a sphere given its radius
37*	P-2	Recall the slope of a horizontal line on coordinate plan
39	P-6	Solve a linear inequality in one variable
40	D-4	Find probability of a single random event

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**Target Actions Based on Analysis**

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**English Language Arts:**

- Use previously released MCAS open-response test items as practice for constructing multi-step answers to these questions.
- Practice using evidence from the reading selection as part of the response.
- Employ the regular use of writing prompts to focus on topic development. Use the scoring prompts available from the DOE website to provide exemplars for students.
- Continue work on comprehension strategies such as making inferences and drawing conclusions.
- Expand work on understanding the structure and elements of poetry analysis.

**Mathematics:**

- Continue the use of open-response test items to allow students to practice communicating their thinking and reasoning associated with problem-solving.
- In the area of patterns, relations, and algebra provide more opportunities to students to construct a table to represent given data and to practice the representation of a line (slope).
- In the area of data, statistics and probability, continue to work on descriptive statistics with a focus on calculating the mean for a set of data in a frequency table.
- In the area of measurement, practice how a change in volume can impact a change in other variables as well as how to calculate volume.
- Review curriculum to identify and address performance differences within a strand and power standards.
- Promote pedagogy designed to enhance conceptual learning.

## GRADE 8 MCAS ANALYSIS—SPRING 2007

### English Language Arts, Mathematics, Science and Technology/Engineering

All students were tested in three content areas. Mathematics and Science and Technology/Engineering tests have been administered over the five-year comparison range. The English Language Arts test was added in 2006 so there is now two-years of data for review.

#### **Five-Year Comparison of Grade 8 Mathematics and Science Technology/Engineering MCAS Results**

<b>Grade 8 Mathematics</b>										
<b>Year</b>	<b>Percent of Students</b>								<b>Number of Triton Students</b>	<b>Triton CPI</b>
	<b>Advanced</b>		<b>Proficient</b>		<b>Needs Improvement</b>		<b>Warning/Failure</b>			
	<b>School</b>	<b>State</b>	<b>School</b>	<b>State</b>	<b>School</b>	<b>State</b>	<b>School</b>	<b>State</b>		
<b>2007</b>	18	17	32	28	35	30	15	25	237	75.5
<b>2006</b>	16	12	29	28	35	31	20	29	287	71.3
<b>2005</b>	12	13	33	26	32	30	23	31	269	69.8
<b>2004</b>	13	13	32	26	35	32	21	29	269	68.9
<b>2003</b>	9	12	27	25	37	30	27	33	308	66.5

<b>Grade 8 Science and Technology/Engineering</b>										
<b>Year</b>	<b>Percent of Students</b>								<b>Number of Triton Students</b>	<b>Triton CPI</b>
	<b>Advanced</b>		<b>Proficient</b>		<b>Needs Improvement</b>		<b>Warning/Failure</b>			
	<b>School</b>	<b>State</b>	<b>School</b>	<b>State</b>	<b>School</b>	<b>State</b>	<b>School</b>	<b>State</b>		
<b>2007</b>	2	3	34	30	49	44	15	24	237	70.6
<b>2006</b>	5	4	41	28	39	43	16	25	287	74.3
<b>2005</b>	2	4	29	29	49	41	20	26	269	65.9
<b>2004</b>	9	5	37	28	35	35	19	31	268	71.7
<b>2003</b>	7	4	32	28	41	38	20	30	308	67.4

**Two-Year Comparison of Grade 8 English Language Arts MCAS Results**

Grade 8 English Language Arts										
Year	Percent of Students								Number of Triton Students	Triton CPI
	Advanced		Proficient		Needs Improvement		Warning/Failure			
	School	State	School	State	School	State	School	State		
2007	4	12	76	63	18	18	2	6	237	92.6
2006	8	12	71	62	17	19	4	7	287	90.0

**General Performance Level Analysis**

**English Language Arts:**

- A minimum of three years of data is required to conduct trend analysis.
- In both 2006 and 2007, fewer students scored in both the warning and advanced levels as compared to the state.
- The CPI increased from one-year to the next showing progress toward having all students score in the advanced or proficient range. It will be important to monitor this progress over time.

**Mathematics:**

- From 2004 to 2006, a combined 45% of students consistently scored in the proficient and advanced categories. The 2007 scores show an increase of 5% resulting in 50% of students scoring proficient or advanced.
- The percent of students in the warning category has declined over the last three years.
- The CPI has steadily increased each year. The greatest increase in points (4.2) from one-year to the next is the difference between 2006 and 2007 and is considered statistically significant.

**Science and Technology/Engineering;**

- While the percent of students in the warning category has decreased over the last three years, student performance remains unstable in the upper categories.
- The percent of students who scored in proficient and advanced dropped by 10% from 2006 to 2007.
- This drop is reflected in the CPI with a difference of 4.3 points from 2006 to 2007 and is considered statistically significant.

**District Improvement Plan Targets**

**Percent of Students Scoring in Proficient and Advanced by Student Subgroups**

Subject	Aggregate		Students with Disabilities		Low Income		Male		Female	
	ELA	Math	ELA	Math	ELA	Math	ELA	Math	ELA	Math
2006 Baseline	79	45	27	3	49	23	73	44	84	47
2007 District	79	48	47	19	75	36	73	46	86	51
2007 State	75	45	36	10	54	21	71	44	80	46
2008 Target	82	53	37	17	56	34	77	52	86	55

**English Language Arts:**

- Showed improvement in students with disabilities, low income, and gender female.
- Exceeded the 2008 improvement targets in students with disabilities, low income, and gender female.
- Scored above the 2006 baseline in all groups.
- Exceeded the 2007 state average in all groups.

**Mathematics:**

- Showed improvement in all groups.
- Exceeded 2008 improvement targets in students with disabilities and low income.
- Scored above the 2006 baseline in all groups.
- Exceeded the 2007 state average in all groups.

**Test Item Analysis**

**Item Type:**

**English Language Arts:** The two types of items and their point values include multiple-choice (1) and open-response (4). Students scored 81% of the possible points for multiple-choice items and exceeded the state by 4 points. On the open-response items, students scored 52% of possible points. This is lower than the state by 7 points.

**Mathematics:** The three types of items and their point values include multiple-choice (1), short-answer (1), and open-response (4). Student performance on all item types exceeded the state with the greatest difference of 9 points in favor of Triton on short-answer items. Students performed the highest on multiple-choice (69%) and the lowest on open-response (58%).

**Areas of Strength:**

**English Language Arts:**

- All questions in the language strand focused on Standard 4: Vocabulary. Students demonstrated an overall proficiency with identifying context clues for primary definitions of vocabulary.
- Students demonstrated proficiency with the structure and elements of Standard 12: Fiction and Standard 13: Nonfiction.
- Student performance was strong on Standard 15: Style/Language with a focus on simile and metaphor.

**Mathematics:**

- The greatest number of math items (11) focused on the patterns, relations, and algebra strand. Student performance was 4 points higher than the state and students demonstrated proficiency recognizing and interpreting patterns as well as solving simple equations.

**Test Item Analysis—Areas of Strength, *continued***

**Science and Technology/Engineering:**

- Student performance was strongest on the technology/engineering items as well as on life science items.

**Areas of Improvement**

- An asterisk (\*) denotes lower than the state average
- Over 25 % of our students responded incorrectly to the following multiple choice test items:

<b>English Language Arts</b>		
<b>Item Number</b>	<b>Standard</b>	<b>Description</b>
14	S4	Vocabulary. ID meaning: station-social position or rank
18	S16	Myth. Gilgamesh. What he hopes will result in killing Humbaba
25	S12	Fiction. Ladder. Which best describes grandfather in paragraph 17
31	S8	Understanding Text. Trash. What is reason workers developed slang
34	S13	Non-fiction. Trash. How workers feel they are viewed by public
35*	S4	Vocabulary. Trash. Identify: vibrant lexicon-lively vocabulary
40	S8	Understanding Text. Corn. Point made about Granny in last sentence

<b>Mathematics</b>		
<b>Item Number</b>	<b>Standard</b>	<b>Description</b>
2	N-2	Between which two consecutive integers does a square root lie
4	N-4	Which is the scientific notation for a number
5	N-6	Evaluate an expression containing absolute values
6*	G-4	Estimate the diagonal length of a rectangle
10*	P-7	Which graph represents the given linear equation
12*	N-8	Which expression is equivalent to the given expression
14*	P-3	Simplify a given expression having negative signs
15*	N-9	Determine an equivalent expression when dividing by a fraction
17	P-10	Which graph has specified intercept and slope
18*	N-7	Evaluate a numerical expression having a square root

**Areas of Improvement—Mathematics, *continued***

27*	P-5	Determine the slope of the line represented by the equation
30	D-2	Determine quantities from a circle graph of percents
33*	D-2	Which represents the median of data in a box-and-whisker plot
35	D-3	Which set of numbers has the given mean and range
36	D-4	Determine the probability of drawing two tiles in sequence
38	D-3	Determine the median of data in a chart

<b>Science and Technology/Engineering</b>		
<b>Item Number</b>	<b>Standard</b>	<b>Description</b>
3*	Physical S4	ID model of chemical reaction that represents conservation of mass
5	Earth S3	Recognize convection in earth's mantle that transfers heat to crust
7	Earth S7	ID glacial deposit as best indicator of climate change in MA
8	Life S10	ID genetic variety as primary advantage of sexual reproduction vs. asexual reproduction
10	Physical S10	ID pipe freezing and cracking as physical not chemical change
11	Earth S2	Recognize inner core as Earth layer of greatest density
12*	Physical S8	ID sugar dissolving in water as a mixture
14*	Physical S9	ID 0 degrees as freeze temperature for mixture of boiling and ice water
15	Physical S8	Recognize that air can be separated into several elements
21	Earth S12	Recognize that solar system, galaxy, universe are small to large
22	Physical S11	Recognize it will take 20 seconds to go 10m at .5m/second
23*	Earth S6	ID site deep underground as place to form metamorphic rock
25*	Earth S9	ID diagram showing earth-moon-sun during lunar eclipse
26	Life S8	ID 23 pairs of chromosomes as those in human liver cell
29*	Physical S10	Recognize that new material is formed during chemical change
32*	Life S13	ID food as what algae gives fungi in symbiotic relationship
33	Tech S4-1	ID low cost as best advantage of mass production over custom
34	Physical S13	ID positions of pendulum having same potential energy
35	Tech S7-2	ID reason companies irradiate fruits/veggies before sale

## **Target Actions Based on Analysis**

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### **English Language Arts:**

- Use released MCAS open-response test items as practice for constructing a multi-step reader's response to a selection. Practice using evidence from the reading selection as part of the response. This is a particular area of concern.
- Develop and utilize common writing assessments and writing rubrics. Use the writing and scoring prompts available from the DOE website to provide exemplars for students.
- Develop and utilize writing prompts that focus on persuasive writing.
- Continue work on comprehension strategies in both fiction and non-fiction with a particular emphasis on making inferences and drawing conclusions.

### **Mathematics:**

- Continue to work on open-response items that provide practice for students to communicate their mathematical thinking and reasoning.
- In the area of number sense, continue practice with equivalent expressions, fractions, distributive property, and the order of operations.
- In the area of patterns, relations, and algebra, provide additional practice on interpreting linear equations, determining the slope of a line, and proportional relationships.
- In the area of data, statistics, and probability, continue to work on determining mean and median.
- Develop and implement benchmarks, common assessments, and scoring rubrics.

### **Science and Technology/Engineering:**

- The grade 8 Science and Technology/Engineering MCAS test is cumulative from grades 6-8. The four domains of science that are assessed include Earth and Space Science, Life Science, Physical Science, and Technology/Engineering. The questions in each domain were spread out fairly evenly on the 2007 test. Students demonstrated the highest level of proficiency in life science and the lowest level of proficiency in physical science. This pattern of performance has remained relatively consistent over the last 5 years. Instruction in grades 6-8 is domain specific. That means physical science is taught in grade 6, earth and space science is taught in grade 7, and life science is taught in grade 8. Student performance on the MCAS reflects this model of instruction. Students perform at high levels on life science or content effectively spiraled over the years.
- The district curriculum review committee has conducted an analysis of high performing middle schools on the MCAS over the last 3 years to examine their course of study. Teachers in grades 6-8 recently came together to review the research and to discuss what implications the findings may have on the way we provide science instruction to students in grades 6-8.
- Next steps toward improvement will consider either a reorganization of the grades 6-8 scope and sequence to a fully integrated model or some modification of the current model that addresses improved student achievement

## GRADE 7 MCAS ANALYSIS—SPRING 2007

### English Language Arts and Mathematics

All students were tested in two content areas. The English Language Arts test has been administered over the five-year comparison range. The mathematics test was added in 2006 so there is now two years of data for review. In 2007 students also participated in a question tryout for the History and Social Science test but there are no school, district, or state results available for review.

#### Five-Year Comparison of Grade 7 English Language Arts MCAS Results

Grade 7 English Language Arts										
Year	Percent of Students								Number of Triton Students	Triton CPI
	Advanced		Proficient		Needs Improvement		Warning/Failure			
	School	State	School	State	School	State	School	State		
2007	7	9	69	60	20	23	4	8	255	90.4
2006	1	10	63	55	30	26	6	9	253	85.4
2005	11	10	65	56	20	27	4	7	301	89.7
2004	6	9	64	59	24	25	5	7	274	87.0
2003	4	8	59	57	33	28	4	7	278	86.0

#### Two-Year Comparison of Grade 7 Mathematics MCAS Results

Grade 7 Mathematics										
Year	Percent of Students								Number of Triton Students	Triton CPI
	Advanced		Proficient		Needs Improvement		Warning/Failure			
	School	State	School	State	School	State	School	State		
2007	19	15	33	31	32	30	16	24	254	76.9
2006	13	12	36	28	31	33	19	28	254	73.3

**General Performance Level Analysis**

**English Language Arts:**

- With the exception of 2006, student performance has steadily improved over the five-year period so that 76% of students are performing at either the proficient or advanced levels in English language arts.
- Similarly, the CPI has steadily increased over the five-year range.
- The percent of students scoring at the advanced level has been below the statewide average with the exception of the 2005 results.
- The percent of students scoring in the warning category has remained the same except for 2006 where there was a slight increase. This increase was mirrored at the state level.

**Mathematics:**

- A minimum of three years of data is required to conduct trend analysis.
- In both 2006 and 2007, more students scored in both the proficient and advanced categories as compared to the state.
- Similarly, fewer students than the state scored in the warning category for each of those years.
- The CPI increased from one year to the next showing progress toward having all students score in the advanced or proficient range.

**District Improvement Plan Targets**

**Percent of Students Scoring in Proficient and Advanced by Student Subgroups**

Subject	Aggregate		Students with Disabilities		Low Income		Male		Female	
	ELA	Math	ELA	Math	ELA	Math	ELA	Math	ELA	Math
2006 Baseline	64	48	26	16	56	33	54	44	75	52
2007 District	76	52	26	3	40	35	67	50	84	53
2007 State	69	46	28	12	42	22	64	45	75	46
2008 Target	69	55	37	28	62	43	61	52	79	59

**English Language Arts:**

- Showed improvement in the aggregate, gender male, and gender female.
- Exceeded the 2008 improvement targets in the aggregate, gender male and gender female.
- Scored below the 2006 baseline in low income.
- Scored below the 2007 state average in students with disabilities and low income.
- Scored above the 2007 state average in the aggregate, gender male and gender female.

**Mathematics:**

- Showed improvement in the aggregate, low income, gender male and gender female.
- Scored below the 2006 baseline in students with disabilities.
- Scored above the 2007 state average in the aggregate, low income, gender male and gender female.
- Scored below the 2007 state average in students with disabilities.

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## Test Item Analysis

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### **Item Type:**

**English Language Arts:** The three types of items and their point values include multiple-choice (1), open-response (4), and the writing prompt (topic development (12) plus conventions (8) = 20). Students obtained the highest percentage points on multiple-choice (84%) and the least on open response (54%). Both of these percents exceeded the state average. The composition score totaled 66% and is lower than the state average of 67%. Within the composition score there is a 21 point difference between conventions (79%) and topic development (58%).

**Mathematics:** The three types of items and their point values include multiple choice (1), short-answer (1), and open-response (4). Student performance on multiple-choice items mirrors short-answer items with both at 73% of possible points. The percent of points for the open-response item is higher in mathematics (65%) as compared to English language arts (54%) and exceeded the state average by 6 points. Student performance exceeded the state average for all points attained on all item types in mathematics.

### **Areas of Strength:**

#### **English Language Arts:**

- Standard 8: Understanding text. Student demonstrated their ability to identify basic facts and ideas.
- Standard 12: Fiction. Students demonstrated their ability to read and comprehend fiction selections.
- Standard 13: Nonfiction. The greatest number of literature items (10) focused on this standard. Students scored 93% or higher on 6 out of the 10 items.
- Standard 4: Vocabulary. Students were able to identify context clues for primary definitions of vocabulary.
- Within the conventions sub-score on composition, students demonstrated strength with sentence structure.

#### **Mathematics:**

- Overall student performance was the strongest on data, statistics, and probability. Students demonstrated proficiency with reading and interpreting information on charts and graphs as well as calculating the mean of a set of numbers.
- Students exceeded the state average on all open-response items in all strands assessed. Keep up the focus in this content area and great job!

**Areas of Improvement**

- An asterisk (\*) denotes lower than state average.
- Over 25% of our students responded incorrectly to the following multiple choice items:

<b>English Language Arts</b>		
<b>Item Number</b>	<b>Standard</b>	<b>Description</b>
12*	S14	Poetry. Rainy. What is purpose of using word “You” in line 4
37	S16	Myth. Adam. What causes Lyapo to be brought before king

<b>Mathematics</b>		
<b>Item Number</b>	<b>Standard</b>	<b>Description</b>
3	N-3	Represent a large number using scientific notation
4*	G-6	Determine the reflection of a figure across an axis
5	M-1	Convert a number of gallons per second into gallons per minute
10	N-7	Select the closest estimate of the percent of a total
12	N-8	Estimate population density from area and populations
14	N-1	Translate a decimal number into a fraction
17	N-6	Use the inverse relationship to determine an equivalent expression
25	D-1	Determine number of data values from percents in a circle graph
26*	P-5	Determine from graph how much value y changes as value x changes
31*	P-3	Create a symbolic expression representing a fractional relationship
32	P-1	Compare two activity schedules to find common occurrence
33	N-2	Given a rate in MPH, determine distance traveled in minutes
34	D-3	Interpret tree diagram to determine the probability of compound event
36	P-4	Interpret model to find value of one symbolic variable in terms of another
37*	M-3	Calculate the area of a trapezoid
38*	P-6	Which proportion models production time given a rate

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### **Target Actions Based on Analysis**

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#### **English Language Arts:**

- Use previously released MCAS open-response test items as practice for constructing multi-step reader's response to a selection. The use of evidence from the text enhances the quality of the response along with descriptive writing. Students also need to identify, understand, and distinguish between the various styles of writing.
- Focus on topic development by developing topic sentences and/or thesis statements with supporting details.
- Develop and utilize common writing assessments and scoring rubrics.
- Continue to work on comprehension strategies in poetry with particular emphasis on making inferences.
- Continue to work on the structure and elements of poetry such as identifying topic and theme.

#### **Mathematics:**

- In the area of number sense, expand focus on decimals, fractions, and percents.
- In the area of geometry, continue practice with transformation/reflections of figures.
- In the area of patterns, relations, and algebra, students should continue to identify, describe, and analyze linear relationships between two variables.
- In the area of measurement, student should demonstrate an understanding of calculating the area of a trapezoid.
- Develop and implement benchmarks, common assessments, and scoring rubrics.

## GRADE 6 MCAS ANALYSIS—SPRING 2007

### English Language Arts and Mathematics:

All students were tested in two content areas. The Mathematics test has been administered over the five-year comparison range. The English Language Arts test was added in 2006 so there is now two years of data for review.

#### Five-Year Comparison of Grade 6 Mathematics MCAS Results

Grade 6 Mathematics										
Year	Percent of Students								Number of Triton Students	Triton CPI
	Advanced		Proficient		Needs Improvement		Warning/Failure			
	School	State	School	State	School	State	School	State		
2007	17	20	45	32	27	28	11	20	221	84.0
2006	16	17	39	29	31	29	15	25	275	78.7
2005	28	17	42	29	24	30	6	23	272	87.3
2004	30	17	30	25	28	32	12	25	302	81.8
2003	18	16	35	26	33	32	14	26	286	77.1

#### Two-Year Comparison of Grade 6 English Language Arts MCAS Results

Grade 6 English Language Arts										
Year	Percent of Students								Number of Triton Students	Triton CPI
	Advanced		Proficient		Needs Improvement		Warning/Failure			
	School	State	School	State	School	State	School	State		
2007	11	9	65	58	21	25	3	7	221	92.5
2006	13	10	66	54	17	28	3	8	274	92.4

**General Performance Level Analysis**

**English Language Arts:**

- A minimum of three years of data is required to conduct trend analysis.
- In both 2006 and 2007, student performance was very high.
- Student performance exceeded the state in each category with 76% of students scoring at the proficient or advanced levels in 2007.
- The CPI remained constant for both years.

**Mathematics:**

- With the exception of 2005, student performance has steadily improved over the five year period so that 62% of students are performing at either the proficient or advanced levels of mathematics.
- The percent of students scoring at the warning level has fluctuated from one year to the next over the last five years. The percent increase in 2006 was reflected in an increase at the state level.
- In 2006 and 2007 fewer students scored in the advanced category as compared to the state.
- The CPI has fluctuated over the last five years showing steady growth from 2003 to 2005, a dip in 2006, and then a 5.3 point increase in 2007.

**District Improvement Plan Targets**

**Percent of Students Scoring in Proficient and Advanced by Student Subgroups**

Subject	Aggregate		Students with Disabilities		Low Income		Male		Female	
	ELA	Math	ELA	Math	ELA	Math	ELA	Math	ELA	Math
2006 Baseline	79	55	42	17	54	39	77	56	82	54
2007 District	76	62	35	22	66	59	66	60	86	64
2007 State	67	52	27	16	42	29	62	52	73	53
2008 Target	82	61	50	29	61	48	80	62	85	61

**English Language Arts:**

- Showed improvement in low income and gender female.
- Exceeded 2008 improvement targets in low income and gender female.
- Scored lower than the 2006 baseline in students with disabilities and gender male.
- Scored above the 2007 state average in all groups.

**Mathematics:**

- Showed improvement in all groups.
- Exceeded 2008 improvement targets in the aggregate, low income, and gender female.
- Scored above the 2006 baseline in all groups.
- Exceeded the 2007 state average for all groups.

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## Test Item Analysis

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### **Item Type:**

**English Language Arts:** The two types of items and their point values include multiple-choice (1) and open-response (4). Students scored 83% of the possible points for multiple-choice items and exceeded the state by 8 points. Students scored 57% of possible points on the open-response items and close to the state average of 55%. There is a 26 point difference between student performance on these two item types.

**Mathematics:** The three types of items and their point values include multiple-choice (1), short-answer (1), and open-response (4). Student performance on all item types exceeded the state with the greatest difference of 9 points in favor of Triton on short-answer items. Students performed the highest on multiple-choice (78%) and the lowest on open-response (68%). The percent of points for the open-response items is higher in Math (68%) as compared to English language arts (57%) and exceeded the state average by 7 points.

### **Areas of Strength:**

#### **English Language Arts:**

- Student performance exceeded the state average on all items, both multiple-choice and open-response.
- All questions in the language strand (5) focused on Standard 4: Vocabulary and students demonstrated a high level of proficiency in this area.
- The greatest number of literature items (8) focused on Standard 13: Non-Fiction. Students demonstrated proficiency with the structure, elements, and meaning of non-fiction.

#### **Mathematics:**

- Overall, student performance was the strongest on the patterns, relations, and algebra strand. Student performance was 8 points higher than the state and students demonstrated proficiency with recognizing, interpreting, and extending patterns.
- Students also demonstrated proficiency on the measurement strand, particularly on the open-response item where students were asked to determine measured and real distances from a scale map. Students earned an average of 3.58 out of 4 points on this item.

**Areas of Improvement**

- An asterisk (\*) denotes lower than state average.
- Over 25% of our students responded incorrectly to the following multiple choice items:

<b>English Language Arts</b>		
<b>Item Number</b>	<b>Standard</b>	<b>Description</b>
16	S14	Poetry. Gumbie. What is cat's work
17	S15	Style/Language. Gumbie. Which best describes attitude toward cat
23	S12	Fiction. Women. Why Meg speaks with "mock scolding voice"
31	S4	Vocabulary. Business. Identify term: financial details-money
38	S17	Drama. Mars. Who are "VOICES" in lines 25-33
40	S17	Drama. Mars. What does Announcer Two indicate in lines 76-78

<b>Mathematics</b>		
<b>Item Number</b>	<b>Standard</b>	<b>Description</b>
4*	N-9	For one value in a table, determine the percent of total value
6	M-7	Determine the sum of measures of interior angles for a pentagon
7*	N-13	Determine how much more one decimal is than another
15	N-14	Which mixed number is the total of three numbers
16*	P-7	Which table shows a constant rate of change in values
24	P-4	Which expression represents the data relationship in a table
25*	D-2	Interpret line plot to find value
33*	N-11	Evaluate an expression containing grouping symbols
35	G-7	Which figure has both line and rotational symmetry
37*	N-6	Which number represents a point on a number line

### **Target Actions Based on Analysis**

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#### **English Language Arts:**

- Continue to focus on the practice of open-response test items. Use released MCAS test items and their scoring rubrics as well as examples of student work at each rubric point value to teach students what is expected at the highest levels of proficiency.
- Continue to work on poetry analysis and understanding character traits as well as voice.
- Continue to reinforce strategies for reading assessment that includes skimming for information, re-reading, process of elimination, and making connections.
- Develop and utilize common assessments and scoring rubrics.

#### **Mathematics:**

- In the area of number sense, increase focus on decimals and percents as well as prime factors.
- In the area of patterns, relations, and algebra, provide additional practice on patterns, tables, and variables.
- In the area of geometry, increase the focus on three dimensional figures and associated terminology such as rotational symmetry. Identify fractions on a number line and calculate the distance between two points.
- In the area of measurement, practice finding the sum of angles in simple polygons.
- In the area of data, statistics, and probability, construct and interpret line plots, work with and explain median and mode.
- Continue the work on the development of benchmarks, common assessments, and scoring rubrics.

## GRADE 5 MCAS ANALYSIS—SPRING 2007

### English Language Arts, Mathematics, Science and Technology/Engineering

All students were tested in three content areas. The fifth grade science test has been administered since 2003. Both the English Language Arts and the Mathematics tests were added in 2006 so there are two years of data for review.

#### Two-Year Comparison of Grade 5 English Language Arts and Mathematics MCAS Results

Grade 5 English Language Arts										
Year	Percent of Students								Number of Triton Students	Triton CPI
	Advanced		Proficient		Needs Improvement		Warning/Failure			
	School	State	School	State	School	State	School	State		
2007	15	15	59	48	24	28	3	9	231	91.0
2006	23	15	49	44	23	31	5	9	244	90.6

Grade 5 Mathematics										
Year	Percent of Students								Number of Triton Students	Triton CPI
	Advanced		Proficient		Needs Improvement		Warning/Failure			
	School	State	School	State	School	State	School	State		
2007	20	19	41	32	31	31	8	18	232	83.0
2006	18	17	34	26	33	34	14	23	243	79.0

**Five-Year Comparison of Grade 5 Science and Technology/Engineering MCAS Results**

<b>Grade 5 Science and Technology/Engineering</b>										
<b>Year</b>	<b>Percent of Students</b>								<b>Number of Triton Students</b>	<b>Triton CPI</b>
	<b>Advanced</b>		<b>Proficient</b>		<b>Needs Improvement</b>		<b>Warning/Failure</b>			
	<b>School</b>	<b>State</b>	<b>School</b>	<b>State</b>	<b>School</b>	<b>State</b>	<b>School</b>	<b>State</b>		
<b>2007</b>	19	14	44	37	31	37	6	12	232	86.3
<b>2006</b>	19	17	38	33	37	39	6	11	240	84.1
<b>2005</b>	13	16	40	35	44	38	4	12	278	82.2
<b>2004</b>	26	20	42	35	29	33	4	13	282	87.3
<b>2003</b>	21	18	38	33	35	34	6	15	310	84.2

**General Performance Level Analysis**

**A minimum of three years of data is required to conduct trend analysis.**

**English Language Arts:**

- In both 2006 and 2007 student performance was very high.
- While fewer Triton students scored in the advanced level in 2007 as compared to 2006, the combined percent of students who scored in proficient and advanced increased in 2007 to 74% as compared to 72% in 2006.
- Fewer students scored in the warning category in 2007 and the percent of students in this category for both 2006 and 2007 was lower than the state average.
- The CPI showed a slight increase in 2007.

**Mathematics:**

- Student performance met or exceeded state averages in each category for both years.
- The percent of students who scored in both the proficient and advanced categories increased in 2007 to 61% from 52% in 2006.
- The CPI increased 4 points from 2006 to 2007.

**Science and Technology/Engineering;**

- Since 2005, student performance has steadily improved so that both the percent of students in proficient and advanced as well as the CPI has increase each year.
- Currently 63% of Triton students score in the top two categories.
- The percent of students scoring in the warning category has remained constant.

**District Improvement Plan Targets**

**Percent of Students Scoring in Proficient and Advanced by Student Subgroups**

Subject	Aggregate		Students with Disabilities		Low Income		Male		Female	
	ELA	Math	ELA	Math	ELA	Math	ELA	Math	ELA	Math
2006 Baseline	72	52	31	9	52	39	64	51	80	54
2007 District	74	61	29	17	64	36	74	63	75	58
2007 State	63	51	25	17	38	29	59	53	67	50
2008 Target	76	59	41	22	59	48	69	58	83	61

**English Language Arts:**

- Showed improvement in the aggregate, low income, and gender male.
- Exceeded 2008 improvement targets in low income and gender male.
- Scored lower than the 2006 baseline in students with disabilities and gender female.
- Scored above the state average in all groups.

**Mathematics:**

- Showed improvement in the aggregate, students with disabilities, gender male and gender female.
- Exceeded 2008 improvement targets in the aggregate and gender male.
- Scored lower than the 2006 baseline in low income.
- Scored at or above 2007 state average in all groups.

**Test Item Analysis**

**Item Type:**

**English Language Arts:** The two types of items and their point values include multiple-choice (1) and open-response (4). Students scored 82% of the possible points for multiple-choice items and exceeded the state by 5 points. Students scored 57% of possible points on the open-response items and are close to the state average of 55%. There is a 25 point difference between student performance on these two item types.

**Mathematics:** The three types of items and their point values include multiple-choice (1), short-answer (1), and open-response (4). Students performed the highest on multiple-choice items (78%) and exceeded the state by 5 points. Student scored 70% of points on short-answer items and 61% of points on open response. The percent of points for the open-response item is higher in math (61%) as compared to English language arts (57%). Student performance on all item types exceeded the state.

**Science and Technology/Engineering:** The two types of items and their point values include multiple-choice (1) and open-response (4). Students scored 77% of the possible points for multiple-choice items and exceeded the state by 3 points. Students scored 56% of possible points on the open-response items and exceeded the state by 4 points. There is a 21 point difference between student performance on these two item types.

**Areas of Strength:**

**English Language Arts:**

- All questions in the language strand focused on Standard 4: Vocabulary. Students demonstrated an overall proficiency in this area.
- Students demonstrated proficiency with the structure and elements of Standard 12: Fiction, Standard 13: Non-fiction, and Stand 16: Myth.

**Mathematics:**

- Overall student performance was the strongest on the data analysis, statistics, and probability strand. Student performance was 9 points higher than the state and students demonstrated proficiency with reading, interpreting, and explaining data as well as calculating the mean and median of a set of data. In particular, students demonstrated proficiency on the open-response item where students were asked to interpret and explain values represented on a bar graph. Students earned an average of 3.53 out of 4 points on this item.
- Students also demonstrated proficiency on the patterns, relations, and algebra strand with determining the number rule for a data pattern.

**Science and Technology/Engineering:**

- Student performance was the strongest on the life science strand where students attained 73% of possible points and scored 7 points higher than the state average.

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**Areas of Improvement**

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- An asterisk (\*) denotes lower than the state average.
- Over 25 % of our students responded incorrectly to the following multiple choice test items:

<b>English Language Arts</b>		
<b>Item Number</b>	<b>Standard</b>	<b>Description</b>
17	S4	Vocabulary. Anansi. Meaning of work: ravenous—very hungry
30*	S13	Non-fiction. Glory. What does paragraph 16 best show about Old Glory
33*	S8	Understanding Text. Glory. Word best describing Driver’s actions

**Areas of Improvement, continued**

<b>Mathematics</b>		
<b>Item Number</b>	<b>Standard</b>	<b>Description</b>
3*	G-5	Which figure is a reflection of another across a line
5	M-5	Determine the measure of an angle, two being equal, the third given
15	P-5	Extend value for 75% of task to determine value for total task
22	N-3	Determine decimal equivalent of expression in expanded notation
23*	N-12	Divide a 4-digit whole number by a double digit divisor
25*	P-3	Given 1 true equation with missing values, which other is true
26	D-1	Determine the mean of a data set
33	N-6	Determine number best represented by position on a number line
34	N-8	Determine which is a prime number
35	N-13	Determine mixed number equivalent to sum of two mixed numbers
36	D-2	Determine maximum of data values in a double bar graph
37	N-9	Divide players into teams; find number of teams and remainder
38	G-4	Given steps for line segments on coordinated grid, ID the figure
39	N-11	Which expression represents price before given sale reduction

<b>Science and Technology/Engineering</b>		
<b>Item Number</b>	<b>Standard</b>	<b>Description</b>
5	Earth S2`	Use scale to ID best description of hardness of unknown material
6*	Tech S2-2	ID set of information that most helps choose correct screw
10	Life S2	Use picture to ID part of sunflower mainly used for reproduction
11	Earth S3	Given descriptions, ID rock that is most likely sedimentary
12*	Physical S2	ID which graduated cylinder contains same volume as another
13	Life S1	Use picture and key to ID branch as tamarack (cloistered leaves)
17	Earth S5	ID size of soil particles has greatest effect on holding water
20	Life S9	Given picture, ID light as most likely causing the plant to bend

**Areas of Improvement: Science and Technology/Engineering, *continued***

22	Tech S1-3	Recognize tongs as working as type of lever
27	Physical S11	Use picture to ID shortest string as producing highest pitch
32	Earth S8	ID on map the jet stream influencing weather across U.S.
34*	Tech S2-3	Know to ask about microwave measurements before buying
35*	Physical S11	ID sound as energy that travels by vibrating particles

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**Target Actions Based on Analysis**

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**English Language Arts:**

- Use released MCAS open-response test items as practice for constructing a reader’s response to a selection by answering all of the parts of the question. The use of details and evidence from the text enhances the quality of the response.
- Continue to work on comprehension strategies with particular emphasis on making inferences and drawing conclusions.
- Use context clues to determine what is meant by “best” when describing a character trait in a text.
- Develop and implement benchmarks, common assessments, and scoring rubrics.

**Mathematics:**

- Continue to work on open-response items that provide practice for students to communicate their mathematical thinking and reasoning.
- In the area of number sense, provide additional practice on fractions, percents, decimals, expanded notation and prime numbers.
- In the area of geometry, increase focus on reflections, graphing on a coordinate plane, and properties of special types of three-dimensional shapes.

**Science and Technology/Engineering:**

- Within the physical science domain, practice how to compare and contrast states of matter and to recognize how sound energy is created along with pitch.
- In the area of life science (biology), review the behaviors of plants in response to light.
- In the area of earth and space science, revisit the three categories of rocks, the properties of soils, weather, and natural processes that shape the earth’s surface.
- Continue the work of the curriculum review committee to reorder grade level units ensuring a spiraled curriculum through the grades. Once grade level benchmarks are identified, develop common assessments with scoring rubrics and consensus curriculum maps for implementation next year. Purchase necessary materials for revised scope and sequence of units.

## GRADE 4 MCAS ANALYSIS—SPRING 2007

### English Language Arts and Mathematics:

All students were tested in two content areas. English Language Arts and Mathematics tests have been administered over the five-year comparison range.

#### Five-Year Comparison of Grade 4 English Language Arts and Mathematics MCAS Results

Grade 4 English Language Arts										
Year	Percent of Students								Number of Triton Students	Triton CPI
	Advanced		Proficient		Needs Improvement		Warning/Failure			
	School	State	School	State	School	State	School	State		
<b>2007</b>	11	10	50	46	30	34	9	10	257	84.6
<b>2006</b>	6	8	48	42	38	39	8	12	240	82.7
<b>2005</b>	14	10	44	40	37	40	5	10	246	84.0
<b>2004</b>	14	11	52	45	29	35	5	9	281	86.3
<b>2003</b>	10	10	50	45	37	34	3	10	276	84.6

Grade 4 Mathematics										
Year	Percent of Students								Number of Triton Students	Triton CPI
	Advanced		Proficient		Needs Improvement		Warning/Failure			
	School	State	School	State	School	State	School	State		
<b>2007</b>	11	19	34	29	43	39	12	13	259	77.6
<b>2006</b>	18	15	27	25	47	45	8	15	241	78.6
<b>2005</b>	14	14	38	27	38	44	10	15	246	81.6
<b>2004</b>	16	14	36	28	40	44	8	14	281	80.2
<b>2003</b>	11	12	31	28	53	43	6	16	276	77.3

**General Performance Level Analysis**

**English Language Arts:**

- Student performance in English Language Arts over the last five years has been erratic in all categories.
- The percent of students scoring in the proficient and advanced categories decreased 12 percentage points from 2004 to 2006 and then increased by 7 from 2006 to 2007.
- Since 2003, the percent of students scoring in the warning category has steadily increased by 6 percentage points.
- The highest CPI of 86.3 was in 2004 and the CPI for 2007 is the same as 2003, that being 84.6.

**Mathematics:**

- Similarly, student performance in mathematics over the last five years has been erratic.
- The percent of students scoring in the proficient and advanced categories showed 52% for both 2004 and 2005 and has dropped to 45% for both 2006 and 2007.
- Fewer students scored at the advanced level in 2007 than the state average.
- The highest percent of students who scored in the warning level over the five year period was 12% in 2007 and was one percentage point lower than the state average. In 2003, that difference was 10 percentage points with Triton at 6% and the state at 16%.
- The CPI steadily climbed from 2003 to 2005 reaching a high of 81.6 and has since steadily decreased from 2005 to 2007 resulting in a 4 point drop to 77.6.

**District Improvement Plan Targets**

**Percent of Students Scoring in Proficient and Advanced by Student Subgroups**

Subject	Aggregate		Students with Disabilities		Low Income		Male		Female	
	ELA	Math	ELA	Math	ELA	Math	ELA	Math	ELA	Math
2006 Baseline	54	45	11	11	38	30	45	46	64	43
2007 District	61	45	14	9	27	24	50	41	71	49
2007 State	56	48	19	17	32	27	50	49	62	47
2008 Target	61	53	24	24	47	40	53	54	69	51

**English Language Arts:**

- Exceeded 2008 improvement targets for the aggregate and gender female.
- Scored lower than the 2006 baseline in low income.
- Scored below the 2007 state average in students with disabilities and low income.
- Scored above the 2007 state average in the aggregate and gender female.

**Mathematics:**

- Scored lower than the 2006 baseline in students with disabilities, low income, and gender male.
- Scored below the 2007 state average in the aggregate, students with disabilities, low income and gender male.
- Scored above the 2007 state average in gender female.

**Test Item Analysis**

**Item Type:**

**English Language Arts:** The three types of items and their point values include multiple-choice (1), open-response (4), and the writing prompt (topic development (12) plus conventions (8) = 20). Students obtained the highest percent of possible points on multiple-choice (82%) and the least (53%) on open-response items. The composition score totaled 74% and exceeded the state average of 70%. Within the composition score there is a 21 point difference between conventions (86%) and topic development (65%). Student performance exceeded the state on all test items.

**Mathematics:** The three item types and their point values include multiple-choice (1), short-answer (1), and open-response (4). Student performance was either the same as or lower than the state on these test items. Students scored the highest percent of points (70%) on the multiple-choice items, 1 point lower than the state average. Students scored the same as the state (61%) on the open response items. The greatest difference of 3 points was on the short answer items where the state (70%) exceeded the district performance (67%).

**Areas of Strength:**

**English Language Arts:**

- Student performance was stronger on the language strand (80%) than the literature strand test items (70%).
- Students demonstrated proficiency with the structure and elements of Standard 12: Fiction, Standard 14: Poetry, and Standard 16: Myth.
- Student performance on the writing prompt in the area of conventions was strong with 86% of possible points attained.

**Mathematics:**

- Overall student performance was the strongest on the data analysis, statistics, and probability strand where students demonstrated proficiency with reading and interpreting data.

**Areas of Improvement**

- An asterisk (\*) denotes lower than state average.
- Over 25% of our students responded incorrectly to the following multiple choice items:

<b>English Language Arts</b>		
<b>Item Number</b>	<b>Standard</b>	<b>Description</b>
6	S13	Non-fiction. Voyager. Fact the map of Voyager’s flight best shows
27*	S13	Non-fiction. Dirt. Why author compares dirt organisms, people
29*	S8	Understanding Text. Dirt. Which is fertile soil made of
32*	S13	Non-fiction. Dirt. How headings like ‘Endangered Dirt’ helps reader

**Areas of Improvement, *continued***

<b>Mathematics</b>		
<b>Item Number</b>	<b>Standard</b>	<b>Description</b>
4	G-1	Count the faces of a combined cube and pyramid structure
7	N-10	Determine the difference of two 4-digit numbers
9	N-17	Expression that is closest in value to product of two numbers
15	M-1	Which measure is best represented by filling a box with blocks
19	G-4	Which shape has only acute angles
22	N-6	Determine the verbal equivalent of a decimal number
26	M-2	Perform unit conversion to feet and inches given inches
33	G-9	Determine the shapes resulting from cutting a quadrilateral
34	D-3	Determine correct statement about data in a table
35	N-13	Divide three-digit numbers by one-digit number, no remainder
37	D-5	Determine total possible combinations from set of stickers
39	N-5	Determine decimal equivalent of a fraction

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**Target Actions Based on Analysis**

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**English Language Arts:**

- Use previously released MCAS open-response items, scoring rubrics, and sample student work for each point value to provide exemplars and practice for students on this type of question. The use of details and evidence from the text enhances the quality of the response.
- Provide additional practice for understanding text with a focus on identifying main idea and factual details.
- Use context cues when asked to identify the “best” answer.
- Continue to work on the structure and elements of non-fiction text.
- Continue to work on comprehension strategies with emphasis on making predictions, inferences, and drawing conclusions.
- Provide practice with idioms and figurative language to improve vocabulary.
- Develop and implement benchmarks, common assessments, and scoring rubrics.

**Target Actions Based on Analysis, continued**

**Mathematics:**

- Continue to work on open-response items that provide practice for students to communicate their mathematical thinking and reasoning with numbers, pictures, and/or words.
- In the area of number sense, students need to make the connection between strategic, problem-solving computation and traditional algorithms (subtraction and division). They also need additional focus on decimals and fractions.
- In the area of patterns, relations, and algebra, continue work on extending numeric patterns, the use of symbol and letter variables in mathematical sentences, and calculating the value of variables in simple equations.
- In geometry, provide practice with identifying the properties of angles (acute, right, and obtuse).
- In the area of measurement, help students to understand the attributes of length, area, weight, and volume as well as selecting the type of unit for measuring each attribute.
- In the area of data, statistics, and probability, provide opportunities for students to construct various representations of data sets such as tables and pictographs.

## GRADE 3 MCAS ANALYSIS—SPRING 2007

### English Language Arts and Mathematics:

All students were tested in two content areas. The reading tests have been administered over the five year comparison range. The mathematics test was added in 2006 so there is now two years of data for review.

#### Five-Year Comparison of Grade 3 Reading MCAS Results

Grade 3 Reading										
Year	Percent of Students								Number of Triton Students	Triton CPI
	Above Proficient		Proficient		Needs Improvement		Warning/Failure			
	School	State	School	State	School	State	School	State		
2007	13	14	51	45	27	32	9	9	241	85.3
2006	17	18	42	40	35	34	7	8	260	86.3
2005	NA	NA	70	62	26	31	4	7	241	89.5
2004	NA	NA	73	63	24	30	3	7	244	90.8
2003	NA	NA	77	63	19	30	5	7	288	90.8

#### Two-Year Comparison of Grade 3 Mathematics MCAS Results

Grade 3 Mathematics										
Year	Percent of Students								Number of Triton Students	Triton CPI
	Above Proficient		Proficient		Needs Improvement		Warning/Failure			
	School	State	School	State	School	State	School	State		
2007	15	19	45	41	25	24	15	16	239	81.9
2006	3	4	48	48	34	32	15	16	260	80.5

**General Performance Level Analysis**

**Reading:**

- In 2006, an additional performance category was added to the grade 3 reporting of results splitting the proficient category into Proficient and Above Proficient. In addition, open-response test items were included and results reported. Both changes reflect requirements of the *No Child Left Behind (NCLB)* federal law.
- While the percent of students who passed the test from 2003 to 2005 remained virtually the same (2003 = 95%, 2004 = 97%, 2005 = 96%) the percent of students scoring in the proficient category steadily decreased.
- More students scored in the proficient and above proficient categories in 2007 (64%) as compared to 2006 (59%).
- Since 2004, the percent of students who scored in the warning category has steadily increased from 3% to 9% in 2007.
- The CPI has dropped 5.5 points from 2003 (90.8) to 2007 (85.3).

**Mathematics:**

- A minimum of 3 years of data is required to conduct trend analysis.
- In 2007, more students scored in the proficient and advanced categories (60%) as compared to 2006 (51%).
- In both 2006 and 2007, fewer students scored in both the warning and advanced levels as compared to the state.
- The CPI has increased from one year to the next.

**District Improvement Plan Targets**

**Percent of Students Scoring in Proficient and Advanced by Student Subgroups**

Subject	Aggregate		Students with Disabilities		Low Income		Male		Female	
	ELA	Math	ELA	Math	ELA	Math	ELA	Math	ELA	Math
2006 Baseline	59	51	8	8	25	16	51	50	56	53
2007 District	64	60	29	18	40	32	64	67	66	54
2007 State	59	60	27	28	34	38	56	60	60	60
2008 Target	65	58	21	21	36	28	58	57	62	60

**English Language Arts:**

- Showed improvement in all groups.
- Exceeded 2008 improvement targets for students with disabilities, low income, gender male and gender female.
- Scored above the 2006 baseline in all subgroups.
- Exceeded the 2007 state average for all groups.

**Mathematics:**

- Showed improvement in all groups.
- Exceeded 2008 improvement targets in the aggregate, low income and gender male.
- Scored above the 2006 baseline in all subgroups.
- Scored below the state average for students with disabilities, low income, and gender female.

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## Test Item Analysis

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### **Item Type:**

**English Language Arts:** The two types of items and their point values include multiple-choice (1) and open-response (4). Students scored 81% of the possible points for multiple-choice items and exceeded the state by 2 points. Students scored 59% of possible points on the open-response items and close to the state average of 58%. There is a 22 point difference between student performance on these two item types.

**Mathematics:** The three item types and their point values include multiple-choice (1), short-answer (1), and open-response (2). Students performed the highest (77%) on multiple-choice items but lower than the state average (78%). The lowest percent of points scored (73%) was on short-answer items and was matched by the state. Student performance on the open-response items (76%) exceeded the state by 3 points and is higher than ELA (59%) by 17 points.

### **Areas of Strength:**

#### **English Language Arts:**

- Students demonstrated proficiency on Standard 8: Understanding Text where they were asked to identify basic facts and ideas.
- Students also demonstrated proficiency with understanding the structure and elements of Standard 12: Fiction and Standard 16: Myth.

#### **Mathematics:**

- Overall student performance was the strongest on the data analysis, statistics, and probability strand where students demonstrated proficiency with reading, interpreting, and calculating data.
- In addition, student performance showed improvement on the geometry strand.

**Areas of Improvement**

- An asterisk (\*) denotes lower than state average.
- Over 25% of our students responded incorrectly to the following multiple choice items:

<b>Reading</b>		
<b>Item Number</b>	<b>Standard</b>	<b>Description</b>
13	S8	Understanding Text. Bones. Reason why no regular mealtime
14*	S13	Nonfiction. Bones. What is the main idea of paragraph 11 and 12
24	S13	Nonfiction. Watching Worms. Purpose of creating a worm farm
28	S15	Style/Language. McTooth. What do paragraphs 25-27 show
32*	S4	Vocabulary. McTooth. ID Kind of word: moonlight-compound word
35	S13	Nonfiction. Knight. What does a code of honor tell
36*	S13	Nonfiction. Knight. How did Nicholas's duties change as squire
41	S15	Style/Language. John Henry. Why author uses image in paragraph 11

<b>Mathematics</b>		
<b>Item Number</b>	<b>Standard</b>	<b>Description</b>
4*	P-4	Which number sentence expresses difference of two numbers
10*	P-2	Which symbol makes a number sentence true
14*	N-12	Estimate total cost of group of items given unit cost
15*	D-2	Determine which pictograph matches tally chart
20*	N-4	Determine which fraction best names a point on a number line
25	N-8	Calculate the quantity that is 'n' times as many as 'm'
26*	N-7	Determine which number sentence is true
31*	P-2	Which symbol makes a number sentence true

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### **Target Actions Based on Analysis**

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#### **English Language Arts:**

- Use released MCAS open-response items, scoring rubrics, and sample student work for each point value to provide exemplars and practice for students on this type of question. Practice locating evidence from the text to support the student's response.
- The third grade 2007 MCAS reading test shifted significantly from a focus on fiction to a focus on non-fiction. Students need more practice understanding the structure and elements of this genre along with the application of comprehension strategies to this kind of text.
- Continue to work on the analysis of poetry.
- Provide practice identifying and analyzing an author's words that appeal to the senses to create imagery.
- Continue to focus on the development of comprehension strategies, particularly making inferences and drawing conclusions.
- Strengthen focus on vocabulary development and ongoing review.

#### **Mathematics:**

- Continue to work on open-response items that provide practice for students to communicate their mathematical thinking and reasoning with numbers, pictures, and/or words.
- In the area of number sense, students need additional practice with estimation, fractions, and multiplication.
- In patterns, relations, and algebra, provide additional opportunities for students to identify which symbol makes a number sentence/expression true (<, >, =).
- In the area of measurement, continue to practice elapsed time.

## 2007 MCAS RESULTS SUMMARY

### **General:**

We should continue our efforts to include direct instruction on how to answer an open-response type item. Our students perform better on mathematic open-response question as compared to English language arts. In mathematics, students were given or had to create a graphic organizer to answer the question and then explain their thinking. In English language arts, students are often required to look back in the text selection to locate evidence that supports their thinking. It may be helpful to help students create a graphic organizer to answer English language arts open-response items and include a space to identify text evidence. Within their answers, students need to use key words from the questions that make explicit connections between their thinking, the evidence, and what they are being asked.

### **English Language Arts:**

1. The English language arts test shifted focus from analysis of fiction to non-fiction this year. The tests in grades 3, 5, and 7 placed a heavy emphasis on this genre. Students in grade 3 and 4 continue to need to develop their proficiency with this genre. Beginning in grade 5 and continuing through grade 10, students demonstrated a high of proficiency, particularly at grade 7.
2. We need to continue our work on teaching comprehension strategies with an increased focus on making inferences and drawing conclusions.
3. Student performance in conventions (mechanics, spelling, grammar) on the writing prompt was considerably stronger than in topic development. Students need to develop their proficiency on writing topic sentences/thesis statements, and then supporting them with details and rich language/vocabulary. We need to develop and utilize common writing assessment and scoring rubrics at the building level. Teachers need to come together to score these assessments, developing a common understanding about what constitutes a rubric value and why.
4. We need to continue our work on the identification of grade level benchmarks, and “unpack” those benchmarks so that specific concepts and skills are clear to all who reference them. From there we need to develop common benchmarks assessments that will assist us with gauging the learning and responding to student needs.

### **Mathematics:**

1. In grades 3 and 4 our students need more exposure to standard algorithms, math sentences, and expressions. Once students have demonstrated a solid understanding of a concept and have communicated their thinking behind the problem-solving strategies used to demonstrate their understanding, teachers can share the standard algorithm as an additional strategy. If student do not have a strong understanding of place value, using terms like “carry” and will only confuse students further.
2. Students in grade 3 through 7 demonstrated proficiency on items associated with the data, statistics, and probability strand where they were asked to read, interpret, and extend data in tables, charts, and graphs. This proficiency may be one reason why our students performed better on the math open-response items.

### **Summary, *continued***

3. Students in grades 5, 6, and 8 showed a strong proficiency on the patterns, relations, and algebra strand. The grade 8 test placed a heavy emphasis on this strand and our students performed well.

4. At all levels we need to examine ways to strengthen our students' understanding of fractions, decimals, percents, and performing conversions between these representations.
5. While grade 10 students showed strong proficiency on the geometry strand, instruction in grades 4-8 should emphasize concepts and skills associated with 2-D and 3-D figures such as faces, angles, symmetry, reflections, and transformations.
6. Beginning in grade 5 student need to develop their proficiency with identifying and calculating mean, median, and mode on a variety of data sets displayed in a variety of ways.
7. We should continue our work on developing student proficiency on open-response items that provide practice with communicating the mathematical thinking and reasoning behind problem-solving
8. We need to complete our work on identifying grade level benchmarks and identifying specific skills embedded within general curriculum standards. From there we need to develop common formative assessments and trimester/quarterly benchmark assessments with accompanying scoring rubrics that will assist us in better meeting our students' needs.

**Science and Technology/Engineering:**

1. We need to continue stressing the importance of drawing and labeling diagrams related to scientific concepts (life cycles, cell, layers of the earth, etc.).
2. We need to complete our curriculum review and revision work in grades K-5. A revised scope and sequence has been developed to strengthen the spiral of concept development through the grades. We need to purchase the necessary materials that respond to this reorganization so that teachers have the tools they need for instruction that strengthen student learning. Once the grade level benchmarks are complete, we need to develop consensus curriculum maps that include common assessments with scoring rubrics.
3. We need to complete discussion around the course of study in grades 6-8 and implement a plan for improving student achievement in the content area.

The Massachusetts Department of Education website is a wonderful resource for parents and educators. They have assembled over 3015 released test items from 2003-2007. These questions can be sorted by year, grade, subject area/question category, and question type. Samples of open-response and writing prompt items also include the scoring rubric as well as sample student work that responds to each point value.

To access this resource go to [www.doc.mass.edu](http://www.doc.mass.edu). At the top of the home page, click on Assessment/Accountability. On that page, click on MCAS. Scroll to the bottom of the MCAS page and click on "Search MCAS Questions." Follow the instructions on this page to construct you request. You can print two versions: one version includes the answers and the other version doesn't. You just need to press the button to do either. Remember to click 'Print View' in the bottom right corner to only print the test text.