

**Martha's Vineyard Public Schools**

**MCAS Data Report  
Spring 2007**



**English Language Arts**

|               |    |
|---------------|----|
| Grade 3 ..... | 2  |
| Grade 4.....  | 5  |
| Grade 5.....  | 9  |
| Grade 6.....  | 13 |
| Grade 7.....  | 16 |
| Grade 8.....  | 20 |

**Mathematics**

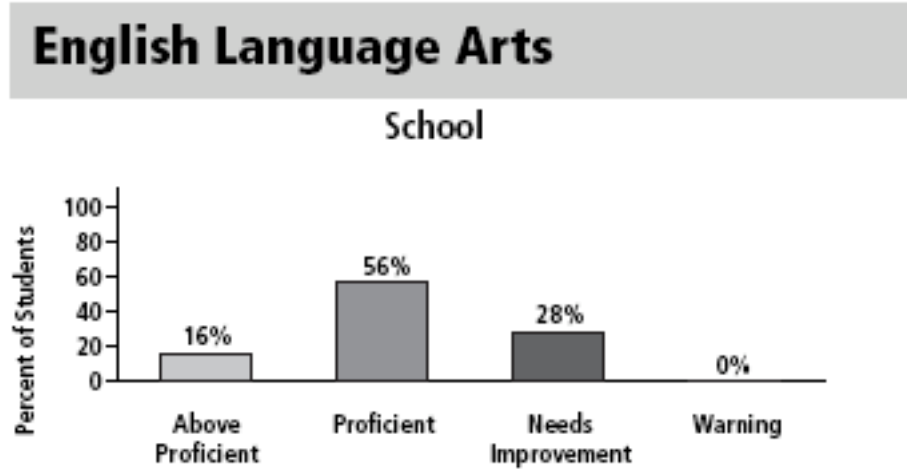
|              |    |
|--------------|----|
| Grade 3..... | 24 |
| Grade 4..... | 27 |
| Grade 5..... | 31 |
| Grade 6..... | 34 |
| Grade 7..... | 38 |
| Grade 8..... | 43 |

**Science**

|               |    |
|---------------|----|
| Grade 5 ..... | 48 |
| Grade 8.....  | 50 |

**West Tisbury  
Grade 3 Language Arts: Reading Comprehension**

Report by Jill Lane & Erika Oliver



**I. Overview**

The spring 2007 grade 3 MCAS English Language Arts Reading Comprehension test was based on learning standards in the two content strands of the Massachusetts English Language Arts Curriculum Framework (2001). The MCAS Grade 3 ELA Reading Comprehension test included three separate test sessions. Each selection included selected readings, followed by multiple choice and open response questions.

| Year        | Advanced |       | Proficient |       | Needs Improvement |       | Warning Failing |       | Students Included |
|-------------|----------|-------|------------|-------|-------------------|-------|-----------------|-------|-------------------|
|             | School   | State | School     | State | School            | State | School          | State |                   |
| <b>2007</b> | 16       | 14    | 56         | 45    | 28                | 32    | 0               | 9     | 31                |
| <b>2006</b> | 33       | 18    | 55         | 40    | 12                | 34    | 0               | 8     | 28                |

Overall, our third graders performed very well on the 2007 MCAS English Language Arts Reading Comprehension exam. We are proud of the fact that 72% of our students scored in the top two categories compared with 59% for the state. While we did see a drop in the number of students who scored above proficient in 2007, we are pleased with our results and glad that none of our students scores fell into the warning category.

**II. Analysis of Performance by Grade and Test**

The test was comprised of 2 types of questions: multiple choice and open response. The multiple choice questions address language and literature standards. Open response questions are based on reading selections.

Percentage of Possible Points Attained

|                 | <b>WTS</b> | <b>State</b> |
|-----------------|------------|--------------|
| Multiple Choice | 86%        | 79%          |
| Open Response   | 66%        | 58%          |

**Performance by Question Type:**

Multiple Choice.

There were forty questions on this test. Each of the forty questions addressed either a literature strand or a language strand. Seven of the total questions related to identifying basic facts (Standard 8) and thirty-two questions required students to make inferences from the text (For example, analyzing text for understanding, drawing conclusions, determining main idea, interpreting facts for understanding.) This reflects an emphasis on both the ability to read for basic understanding of a text and the ability to make inferences and support one's thinking with quotes from the text. Thirty-four of the questions were classified as literature questions and six of the questions were designated as language questions. The following chart represents the number of questions linked to each genre.

|             |    |
|-------------|----|
| Fiction:    | 15 |
| Non-Fiction | 16 |
| Poetry:     | 4  |
| Drama:      | 0  |
| Biography   | 5  |

Overall, West Tisbury students performed 11% higher than the state average for multiple choice ELA questions. We may want to explore improving instruction in poetry, vocabulary, style and language.

The list below shows how the “most missed questions” apply to the curriculum frameworks

| # of Question | Learning Standards                                 |
|---------------|--|
| 11            | (14) Poetry-identifying rhymes                     |
| 41            | (15) Style/Language/Imagery                        |
| 30            | (12) Fiction-describing a character (interference) |
| 8             | (4) Vocabulary                                     |
| 37            | (4) Vocabulary                                     |
| 7             | (4) Vocabulary                                     |
| 31            | (12) Fiction                                       |
| 28            | (15) Style/Voice                                   |
| 14            | (13) Non-fiction                                   |

Each open response question is connected to a literature standards and relates to a writing piece. On open response questions, students must compose short answers demonstrating understanding.

Our students did somewhat better on the open response question for non-fiction than the one for fiction. Overall, West Tisbury students scored 6% less than the state average for open response questions. In response to this trend we will provide opportunities to write in a variety of genres (fiction and nonfiction) using different graphic organizers.

Our school's open response scores as compared to the state are as follows

|     |     | WTS  | State | Difference |
|-----|-----|------|-------|------------|
| #21 | NF  | 3.03 | 2.82  | +0.21      |
| #33 | FIC | 1.97 | 2.20  | -0.23      |

### III. Analysis of Identified Subgroup Performance

#### Special Needs Students

The test was administered to 7 students with special needs, which is approximately, 22% of the population.

#### Percent of Students with Disabilities

|                   |      |
|-------------------|------|
| Performance Level | 2007 |
| Above Proficient  | 0%   |
| Proficient        | 71%  |
| Needs Improvement | 29%  |
| Failing/Warning   | 0%   |

#### Observation/Discussion

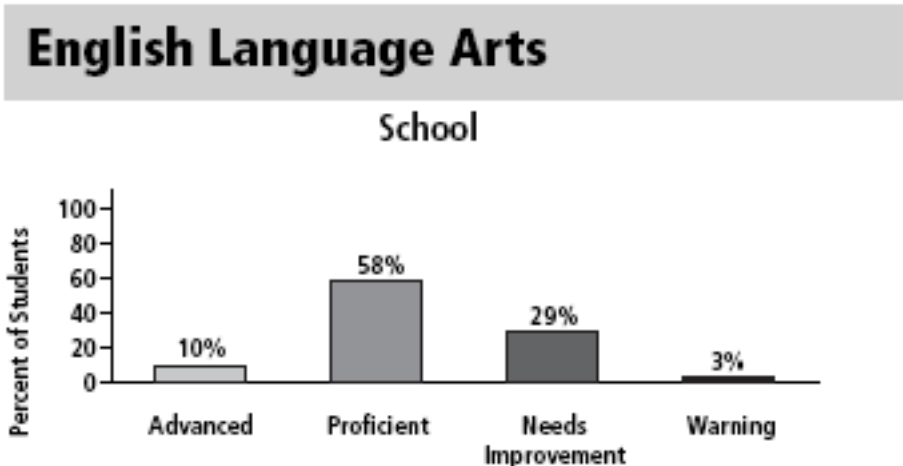
We are very pleased that our students with disabilities performed as well as they did on the 2007 MCAS. It should be noted that these scores reflect the observations of classroom teachers of the special needs students' daily performance in ELA.

#### IV. Recommendations

- Provide students more opportunities to write in a variety of genres (fiction and nonfiction) using different graphic organizers.
- Explore ways of improving instruction in poetry, vocabulary, style, and language.

**West Tisbury Grade 4  
Language Arts: Reading Comprehension**

4<sup>th</sup> Grade MCAS Report: Rebecca Solway & Mary Boyd



**I. Overview**

The Spring 2007 Grade 4 Language Arts: Reading Comprehension required students to read six different genres. Students were asked to make inferences or determine importance in a text.

Fourth graders showed improvement in many key areas, especially on the long composition portion of the exam. Results were mixed and trends hard to find, as fourth graders did well with questions in a given strand, standard, or type and then scored poorly on questions within the same area. The exception area to this is that overall performance on open response questions was quite low.

Performance Levels

| Year        | Advanced |       | Proficient |       | Needs Improvement |       | Warning Failing |       | Students Included |
|-------------|----------|-------|------------|-------|-------------------|-------|-----------------|-------|-------------------|
|             | School   | State | School     | State | School            | State | School          | State |                   |
| <b>2007</b> | 10       | 10    | 58         | 46    | 29                | 34    | 3               | 10    | 31                |
| <b>2006</b> | 4        | 8     | 36         | 42    | 54                | 39    | 7               | 12    | 28                |
| <b>2005</b> | 2        | 10    | 60         | 40    | 38                | 40    | 0               | 10    | 42                |
| <b>2004</b> | 9        | 11    | 61         | 45    | 30                | 35    | 0               | 9     | 33                |
| <b>2003</b> | 3        | 10    | 51         | 45    | 43                | 34    | 3               | 10    | 35                |

**Discussions/ Observations:**

Significant improvement over 2006 was noted in all levels. Most notable is the increase in number of proficient students and the decrease in number of needs improvement students. There was also a respectable increase in the percent advanced and a similar decrease in the number of failing/warning.

## II. Analysis of Performance by Grade and Test

The test was comprised of 3 types of questions: multiple choice, open response and a writing prompt. The multiple choice questions address language and literature standards. Open response questions are based on reading selections. The long composition prompt is a narrative connected to a personal experience.

### Percentage of Possible Points Attained

|                 | West Tisbury School | State |
|-----------------|---------------------|-------|
| Multiple Choice | 84                  | 79    |
| Open Response   | 45                  | 51    |
| Writing Prompt  | 73                  | 70    |

### Performance by Question Type:

#### Multiple Choice.

There were forty questions on this test. Each of the forty questions addressed either a literature strand or a language strand. There were thirty six multiple choice questions. Seven addressed language standards and twenty nine addressed reading and literature standards.

West Tisbury School (WTS) students outperformed the state average in this question type. However, we do not like to compare our students to the state average, but rather we prefer the challenge of comparing ourselves to the higher State Proficient Average.

WTS scored below the State Proficient Average (SPA) in approximately half of the multiple choice questions. Patterns were hard to find in the multiple choice responses. Individual questions and how they were presented seemed to have a large impact on overall student success. Cause and effect seemed to present challenges as did determining the purpose or reason behind statements in both fiction and nonfiction reading samples. On those questions where WTS performed above the SPA average, using nonfiction text features and restating the main idea in nonfiction text were strengths. Overall, word identification and meaning were areas of strength. Language that appears to trick WTS fourth graders often includes "most likely," "best shows," or other language designed to tease out author purpose for writing, either overall or in a specific scenario. Finding the best or most likely answer among similar choices appears difficult.

The list below shows how the "most missed questions" apply to the curriculum frameworks

| # of Question | Learning Standards                    |
|---------------|---------------------------------------|
| 31            | 13.11 – Distinguish fact from opinion |
| 7             | 4.7 — identifying compound words      |
| 30            | 8.16 – cause and effect               |
| 40            | Not in frameworks for k-4. Bad State. |
| 16            | 5.7 – Correct Mechanics in Writing    |

**Observations/Discussion**

Applying skills, such as fact v. opinion, when given a fragment or phrase rather than a complete passage. (see question 31 below)

- 31** Which of the following phrases is an opinion from the article?
- A. “. . . dirt had to evolve.”
  - B. “. . . dirt is amazing stuff!”
  - C. “. . . 75 percent of the earth’s surface is water.”
  - D. “. . . roots broke up more rocks to help create more soil.”

Key word analysis is also important and needs to be stressed.

Other important skills to stress: Going back into text, marking where to find answers (underlining, highlighting, etc). Identifying versus using correct mechanics—why is something used, for what purpose?

**Open Response Questions**

There were four open response questions with scores ranging from 0-4. Each open response question is connected to a literature standards and relates to a writing piece. On open response questions, students must compose short answers demonstrating

Data in this area confirms teacher’s belief that this area is an area that needs major focus in the coming academic years. In general, WTS preformed 10% below SPA on all four questions. The average WTS score for three of the questions was below 60%, or an overall score of less than 2.5 out of a possible 4 points. No zeros recorded means that all students at least attempted a response to the question. This marks an improvement from previous years.

On the questions where WTS students scored relatively well, lots of 3s were noted. Significant gains could be made if these were able to move to 4s.

Fiction was the lowest scoring out of the four questions. Continued modeling, practice, evaluation, and re-writing will be necessary.

Key words in excellent student responses included “I know this because ” before citing text. Using cause and effect in open response “If, then .” Language from the text is used to support answer. Comparisons and comparative language enrich responses.

West Tisbury School’s open response scores as compared to the state are as follows

|     | West Tisbury School | State |
|-----|---------------------|-------|
| #8  | 2.32                | 2.25  |
| #17 | 1.9                 | 1.91  |
| #26 | 1.52                | 1.75  |
| #35 | 1.81                | 1.99  |

**Observations/Discussion**

In this area, WTS did not surpass the overall state average, let alone the SPA. This indicates that this is a major focus area. See above for notes and suggestions on teaching to this area. Additional suggestions include having a “writer’s toolbox” to remind students of ways to make their writing better in every area. Frequent use of this technique may have carryover into this area. However, teacher’s also note the need for direct, explicit, instruction that is NOT necessarily embedded in content as it is currently taught.

**Writing Prompt**

The Writing Prompt assessed students on two aspects of composition.

1. Topic/Idea Development (CT), which included writing development, organization, use of detail, variety in sentence structure and language.
2. Use of Standard English Writing Conventions(CC), which included mechanics as well as usage and grammar.

The scoring range on CT is 2-12 and the scoring range on CC is 2-8

|                           |          | 2003 | 2004 | 2005 | 2006 | 2007 |
|---------------------------|----------|------|------|------|------|------|
| Topic/Idea Development CT | State    | 7.49 | 7.4  | 7.66 | 7.5  | 7.3  |
|                           | District | 7.21 | 6.8  | 7.22 | 6.5  | 7.5  |
|                           | School   |      | 6.8  | 7.36 | 6.4  | 7.7  |
| Writing Conventions (CC)  | State    | 6.22 | 6.5  | 6.41 | 6.9  | 6.6  |
|                           | District | 6.16 | 6.3  | 6.45 | 6.3  | 6.8  |
|                           | School   |      | 6.2  | 6.48 | 6.2  | 6.9  |

**Observations/Discussion**

This was a major focus area for the 2006-2007 school year. There was notable improvement in this area. Students wrote more and generally had better organized and supported writing. They were more familiar with genre AND with the expectations for performance.

Next steps include building on the unit developed on personal narrative, focusing on adding voice, style, and engaging the reader.

**III. Analysis of Identified Subgroup Performance**

**Special Needs Students**

The test was administered to 12 students with special needs, which is approximately, 41% of the population.

**Percent of Students with Disabilities**

| Performance Level | 2007 |   |
|-------------------|------|---|
| Above Proficient  | 0    | 0 |
| Proficient        | 33%  | 4 |
| Needs Improvement | 58%  | 7 |
| Failing/Warning   | 8%   | 1 |

**IV. Recommendations**

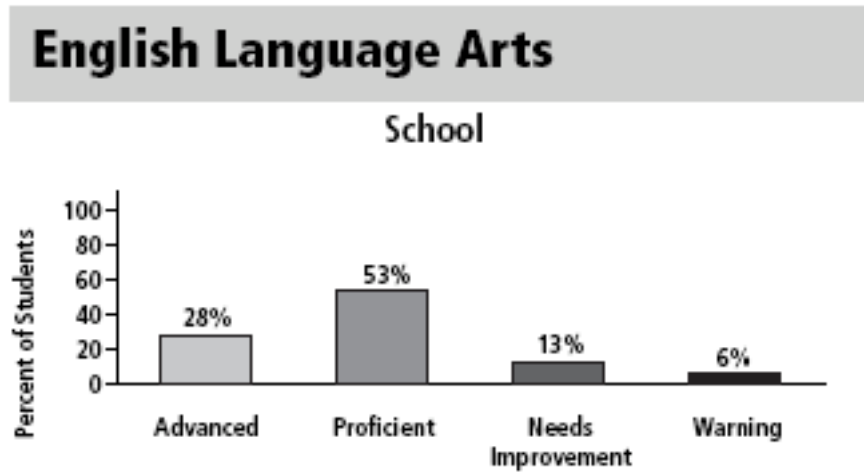
See each section above for specific recommendations.

Explicit instruction for all areas and question types.

Parent education in what is expected in writing, including the different types of writing needed in fourth grade. A parent night that mirrors our very successful math parent night would be beneficial.

Some parents seem frustrated or surprised by the high expectations set in fourth grade. With a greater understanding of what is expected by the state, parents and teachers can better support 4<sup>th</sup> graders in meeting the state’s requirements.

**West Tisbury Grade 5 English Language Arts  
Report by Pat Kelly and Sue Miller**



**I. Overview**

The Spring 2007 Grade 5 MCAS English Language Arts Reading Comprehension Test was based on learning standards in the two content strands of the Massachusetts English Language Arts Curriculum Frameworks.

The MCAS grade 5 ELA Reading Comprehension test included three separate test sessions. Each session included selected readings, followed by multiple choice and open response questions.

Overall the West Tisbury 5<sup>th</sup> graders performed very well. With 81 % of the total population scoring in the Advanced or Proficient range, we place 80<sup>th</sup> out of 933 fifth grade classes in the state.

Performance Levels

| Year        | Advanced |       | Proficient |       | Needs Improvement |       | Warning Failing |       | Students Included |
|-------------|----------|-------|------------|-------|-------------------|-------|-----------------|-------|-------------------|
|             | School   | State | School     | State | School            | State | School          | State |                   |
| <b>2007</b> | 28       | 15    | 53         | 48    | 13                | 28    | 6               | 9     | 33                |
| <b>2006</b> | 1        | 15    | 60         | 44    | 19                | 31    | 0               | 9     | 42                |

**Discussions/ Observations:**

We noticed that on the Item Analysis score sheet that our students consistently performed within the state range. The number of students who score in the advanced range increased this year, while the number of students who needed improvement decreased.

Of the 8 special needs students who took the test, 50% scored in the Proficient range, while 38% scored Needs Improvement, and 13% scored in the Warning range.

## II. Analysis of Performance by Grade and Test

The test was comprised of 2 types of questions: multiple choice and open response. The multiple choice questions address language and literature standards. Open response questions are based on reading selections.

|                 | Percentage of Possible Points Attained<br>(West Tisbury School ) | State |
|-----------------|--|-------|
| Multiple Choice | 83%  | 77%   |
| Open Response   | 60%  | 55%   |

### Performance by Question Type:

Multiple Choice.

There were thirty six multiple choice questions. Five of these questions address the Language standard and twenty nine questions address the Reading and Literature Standard.

In general, our students performed very well. They scored 83% over all on multiple choice questions and 60% n Open Response questions. All of the more difficult questions asked students to make inferences or to analyze text. These are both higher level thinking skills, which 5<sup>th</sup> graders are in the process of developing.

The list below shows how the “most missed questions” apply to the curriculum frameworks

| # of Question          | Learning Standards |
|------------------------|--------------------|
| #2 Non-Fiction         | Strand #13         |
| #3 Non-fiction         | Strand #13         |
| #13 Style and Lit      | Strand #15         |
| #14 Myths              | Strand #16         |
| #16 Myths              | Strand #16         |
| #17 Vocabulary         | Strand #4          |
| #25 Fiction            | Strand #12         |
| #30 Non-Fiction        | Strand #13         |
| #33 Understanding Text | Strand #8          |
| #38 Drama              | Strand #17         |
| #39 Drama              | Strand #17         |
| # 40 Vocabulary        | Strand #4          |

### Observations/Discussion

It is important to note that our students missed more non-fiction questions than the other types. Fifth grade is a turning point for students to move from fiction to non-fiction as a focal point of instruction. In fact, in the fifth grade, text books in science and social studies are introduced for the first time. At the same time, students still have to be able flexible to respond to both non-fiction and fiction, as evidenced in their errors with the myth and drama questions. It should also be noted that students need to master the ability of stating an opinion and backing up their ideas with evidence from the text. This is a skill that can be taught through direct instruction and modeling.

### Open Response Questions

There were four open response questions with scores ranging from 0-4. Each open response question is connected to a literature standard and relates to a reading piece. On open response questions, students must compose short answers demonstrating their understanding.

West Tisbury students in the 5<sup>th</sup> grade performed above the state on the Item Average Scores. Students consistently scored above the 2.25 mark on Open Response items.

Our school's open response scores as compared to the state are as follows

|     | West Tisbury School | State |
|-----|---------------------|-------|
| #9  | 2.41                | 2.14  |
| #18 | 2.72                | 2.48  |
| #27 | 2.34                | 2.18  |
| #36 | 2.25                | 1.91  |

### Observations/Discussion

Students still need more direct instruction in drawing conclusions, stating their opinions, and backing up their ideas with quotes from the text. Because 5<sup>th</sup> graders take MCAS exams in four domains, they should also be instructed on how answering Open Response questions in the English Language Arts exam may be different than writing a response for Science or Math. Teaching students that they need to be conscience of their audience is critical.

### III. Analysis of Identified Subgroup Performance

#### Special Needs Students

The test was administered to 8 students with special needs, which is approximately, 25% of the population.

#### Percent of Students with Disabilities

|                   |      |
|-------------------|------|
| Performance Level | 2007 |
| Above Proficient  | 0    |
| Proficient        | 50%  |
| Needs Improvement | 38%  |
| Failing/Warning   | 13%  |

### Observations/Discussion

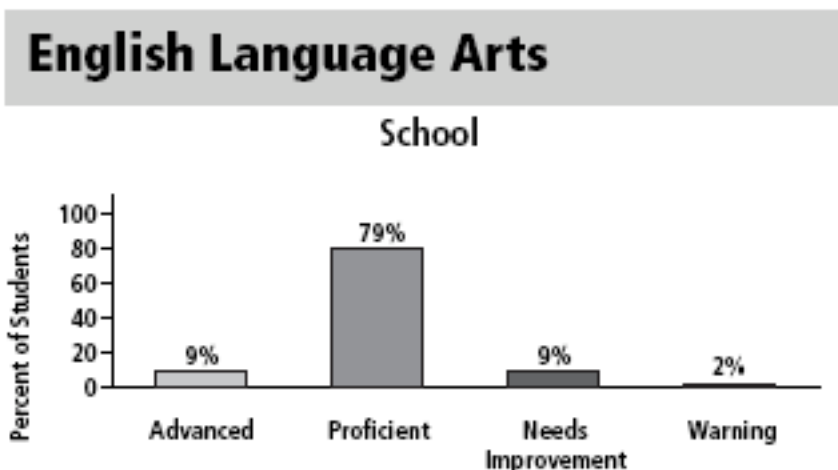
It is important to note that 50%(4) of our special needs students scored in the Proficient range. The 13%(1) represents a severely handicapped child who reads at a significantly lower reading level, despite making significant gains in his/her reading ability during the 2006-07 school year and received reading instruction in a separate classroom.

#### **IV. Recommendations**

Continued daily, direct instruction in reading at the student's level should occur throughout the school year. Students who are reading significantly below grade level should be allowed to take an off level test which is closer to their level of reading instruction.

Continued modification of lessons for students with special needs is recommended. We utilize our laptop carts frequently. One our favorite sites to use is Trackstar. At this site, teachers can search any topic and will find "Tracks" that other teachers have created. The tracks are collections of web sites that the students can easily link to. At each web site there are individually guided activities that students can complete at their own speed. Often there are quizzes and/or printouts so that teachers can monitor student growth. Through these multi-modalities, we believe our students are given many opportunities to learn the material in ways that meet individual learning styles. In our final assessments of units, we also add questions from previous MCAS exams so that students feel comfortable answering questions in a standardized format. This also includes Open Response questions. Early in the year, we model what different Open Response answers look like, using samples provided from the state web site. We also include short plays that incorporate our Social Studies units.

**West Tisbury School**  
**Grade 6: English Language Arts**  
 Report by Julie Hitchings, ELA Teacher, West Tisbury School



**I. Overview**

The Spring 2007 Grade 5 MCAS English Language Arts Reading Comprehension Test was based on learning standards in the two content strands of the Massachusetts English Language Arts Curriculum Frameworks.

The MCAS grade 56ELA Reading Comprehension test included three separate test sessions. Each session included selected readings, followed by multiple choice and open response questions.

Overall, the West Tisbury 6th grade students did very well on the 2007 ELA MCAS.

- In 2006, 70% of the 6th graders performed at the Proficient or Advanced levels.
- In 2007, that percentage went up to 88%
- During this same period, Needs Improvement and Warning levels went down from 30% in 2006 to 11% in 2007.
- The West Tisbury School CPI for 6th Grade ELA was 94.8 and we ranked in the top 10% of all schools in the Commonwealth according to Boston.com.

Performance Levels

| Year        | Advanced |       | Proficient |       | Needs Improvement |       | Warning Failing |       | Students Included |
|-------------|----------|-------|------------|-------|-------------------|-------|-----------------|-------|-------------------|
|             | School   | State | School     | State | School            | State | School          | State |                   |
| <b>2007</b> | 9        | 9     | 79         | 58    | 9                 | 25    | 2               | 7     | 43                |
| <b>2006</b> | 12       | 10    | 58         | 54    | 27                | 28    | 3               | 8     | 33                |

Discussions/ Observations

Once again WTS outperformed their peers in the Commonwealth in the 6th Grade ELA MCAS. We are very proud of the fact that 88% of the WTS 6th Graders scored proficient or higher. We are also very proud of the fact that we had very few students in the Needs Improvement category. Only one student (who is an identified student with disabilities) scored in the Warning category.

## II. Analysis of Performance by Grade and Test

The test was comprised of 2 types of questions: multiple choice and open response. The multiple choice questions address language and literature standards. Open response questions are based on reading selections.

### Percentage of Possible Points Attained

|                 |                     |       |
|-----------------|---------------------|-------|
|                 | West Tisbury School | State |
| Multiple Choice | 87%                 | 75%   |
| Open Response   | 62%                 | 55%   |

|                               |      |       |     |      |
|-------------------------------|------|-------|-----|------|
| Performance by Question Type: | Adv. | Prof. | NI  | Warn |
| Open Response:                | 81%  | 59%   | 42% | 24%  |
| Multiple Choice:              | 95%  | 84%   | 59% | 35%  |

There were thirty six multiple choice questions. Five of these questions address the Language standard and twenty nine questions address the Reading and Literature Standard. The list below shows how the “most missed questions” apply to the curriculum frameworks

The 10 most missed questions for WTS 6th Graders are listed below, with the “most missed question” at the top:

| #  | Type | Standard |  |
|----|------|----------|--|
| 22 | MC   | S12      | Fiction (S8)                                 |
| 2  | MC   | S8       | Understanding Text (very subtle, inference)  |
| 23 | MC   | S12      | Fiction (“mock scolding voice” S4, S8)       |
| 12 | MC   | S4       | Vocab “mutual irritation”                    |
| 24 | MC   | S12      | Fiction (S8)                                 |
| 11 | MC   | S12      | Fiction (S8)                                 |
| 34 | MC   | S13      | Nonfiction                                   |
| 3  | MC   | S13      | Nonfiction (voc. “indentation”/context clue) |
| 6  | MC   | S13      | Nonfiction (context clues)                   |
| 32 | MC   | S13      | Nonfiction                                   |

Overall, WTS students did very well on the multiple choice questions. Only 3 of West Tisbury’s most missed MC questions were 10 percentage points below the state proficient level. (#22, #2, #23). Because 8 of our ten “most missed questions came from Standards 12 and 13 we will concentrate on improving instruction and student performance in this area for 2008.

**Open Response Questions:** There were four open response questions with scores ranging from 0-4. Each open response question is connected to a literature standards and relates to a reading piece. On open response questions, students must compose short answers demonstrating their understanding.

West Tisbury School’s open response scores as compared to the state are as follows

| Question | Standard   | WTis | State Prof. averages |
|----------|------------|------|----------------------|
| 9        | Nonfiction | 2.70 | 2.44                 |
| 36       | Nonfiction | 2.77 | 2.68                 |
| 18       | Poetry     | 1.98 | 1.99                 |
| 27       | Fiction    | 2.02 | 2.25                 |

Our 6th grade students did very well on the open response questions. West Tisbury students equaled or surpassed the state proficient level on three (3) out of the four (4) Open Response questions. The only Open Response question that our students did not out perform the State Proficient Average (SPA) was in Poetry, and in this area we only 1/10 of a point off the SPA.

Observations/Discussion

- Last year's emphasis on nonfiction writing in 6th grade seems to have paid off.
- We need to work harder on Open Response for poetry & fiction. Students need to write more in response to poetry - in addition to reading it, writing it and talking about it. I will do more modeling of structures.
- We need to reinforce students recognition of structures requested in the questions. For example, #18 asked how the cat is different during day and night; I suspect the students didn't recognize this as a compare/contrast question. If they had, I believe more could have answered well.

**III. Analysis of Identified Subgroup Performance**

Special Needs Students

The test was administered to 15 students with special needs, which is approximately, 1/3 of the population.

Percent of Students with Disabilities:

|                   |      |
|-------------------|------|
| Performance Level | 2007 |
| Above Proficient  | 0%   |
| Proficient        | 73%  |
| Needs Improvement | 20%  |
| Failing/Warning   | 7%   |

Observations/Discussion

1/3 of the students in this cohort are students with Special Needs. Our Special Needs students performed very well on this exam. The overwhelming majority of the students in this subgroup scored Proficient. The breakdown of what our percentages means as far as individual students is listed below.

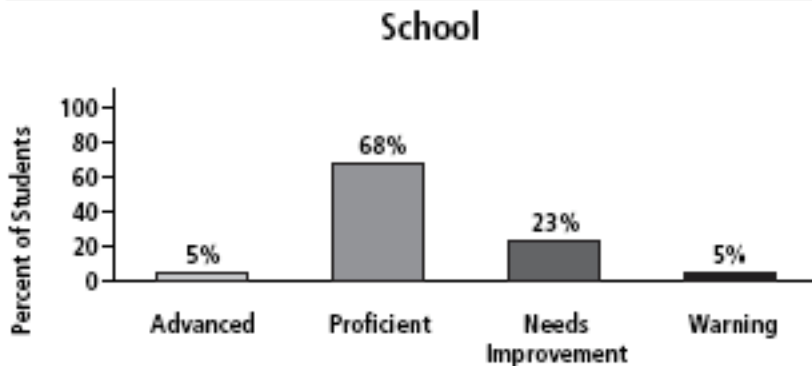
- 73% = 11 students
- 20% = 3 students
- 7% = 1 student

**IV. Recommendations**

- Get together with the 5th, 7th , and 8th grade LA teachers and the Reading and Special Education teachers to get the bigger picture of what our whole school needs are.
- Continue to use the MCAS scores and results of last year's 5th graders to target specific needs.
- Emphasize Fiction and Poetry writing more; continue curriculum for teaching nonfiction writing.

**West Tisbury School**  
**Grade 7 Language Arts**  
 Report by 7<sup>th</sup> Grade ELA Teacher: Fran Finnegan

## English Language Arts



### I. Overview

The grade 7 MCAS English Language Arts tests was presented in the following two parts.

- The ELA Composition Test, which was used as a writing prompt to assess learning standards from the Massachusetts English Language Arts Curriculum Framework's Composition strand.
- The ELA Reading Comprehension tests, which used multiple choice and open response questions to assess learning standards from the Curriculum Framework's Language and Reading Literature standards.

Overall, West Tisbury seventh graders performed well in the Spring 2007 English Language Arts MCAS. 78% performed in the Proficient and above range. WTS outperformed the state percentages in the proficient range by 8% and in the warning range by 3%. WTS matched the state in the Needs Improvement category and fell short of the state average in the Advanced range by 4%. Being a small class with only 22 students, the 5% Warning statistic represented 1 student.

The Advanced statistic is down 8% from a high of 13% in 2006 and 9% in 2005. The Proficient range has stayed somewhat level, but falling slightly with 76% in 2005, 71% in 2006, and 68% this year. The Needs Improvement range is up 10% from 2006. Due to the schools declining enrollment, the number of students taking the test has dropped by 50% since 2005.

### Performance Levels

| Year | Advanced |       | Proficient |       | Needs Improvement |       | Warning |       | Failing | Students |
|------|----------|-------|------------|-------|-------------------|-------|---------|-------|---------|----------|
|      | School   | State | School     | State | School            | State | School  | State |         |          |
| 2007 | 5        | 9     | 68         | 23    | 23                | 23    | 5       | 8     | 22      |          |
| 2006 | 13       | 10    | 71         | 55    | 13                | 26    | 3       | 9     | 31      |          |
| 2005 | 9        | 10    | 76         | 56    | 15                | 27    | 0       | 7     | 46      |          |
| 2004 | 8        | 9     | 82         | 59    | 10                | 25    | 0       | 7     | 50      |          |
| 2003 | 11       | 8     | 79         | 57    | 9                 | 28    | 0       | 7     | 53      |          |

Discussions/ Observations:

The small class size (22 students) for seventh grade somewhat skewed what was basically a normal distribution of scores. The number of students in the proficient range suggests strong instructional integrity and the low showing in the Advanced and Warning can reasonably be expected from such a small sampling. Of the 22 students in this class, 4 were on active IEP's, 2 have 504's, and 3 are currently be evaluated for learning difficulties. Two were receiving reading support at the time of the test.

**II. Analysis of Performance by Grade and Test**

The assessment requires students to demonstrate literacy proficiencies by writing an informational, long composition based on a writing prompt. 26 multiple choice questions based on texts spanning many genre, as well as four open response short essays. The following table represents our student's level of proficiency within different types of response formats.

Percentage of Possible Points Attained

|                 | West Tisbury School | State |
|-----------------|---------------------|-------|
| Writing Prompt  | 67%                 | 67%   |
| Multiple choice | 76%                 | 78%   |
| Open Response   | 60%                 | 73%   |

Performance by Question Type:

|                     | West Tisbury School |         | State |     |
|---------------------|---------------------|---------|-------|-----|
| Writing Prompt      | 13.4pts             | 13.3pts | 67%   | 67% |
| Long Composition    |                     |         |       |     |
| Topic Development   | 6.9pts              | 7.0pts. | 58%   | 58% |
| Writing Conventions | 6.5pts              | 6.3pts  | 81%   | 81% |

The writing prompt assesses students' skills at writing in an informational mode that shares knowledge and conveys instructions, messages and ideas. The writing prompt assesses two areas of composition: Topic/Idea development, which includes writing development organization, use of detail, and sentence and language variety, in addition to the usage of Standard English conventions, which include mechanics as well as usage and grammar. Students are scored between 2-12 points for topic development and 2-8 for conventions,

Students in seventh grade at WTS were in line with state averages for the Long Composition of the MCAS. Student scores suggest that they know and use the conventions of language at a consistent rate. They write well-constructed sentences using grammar correctly. Students are less proficient in the area of topic development which suggests they do not consistently use evidence to prove assumptions or assertions, eliminate important details, and leave the reader with questions.

Observations/Discussions

The low scores in topic development is of continual concern. Past MCAS scores have indicated similar results. This has been a topic of instructional energy over several years. It is an area we cover with explicit instruction and regular guided practice using a variety of writing genre. The 2007 7th grade ELA MCAS results are consistent with local assessments in this area. Topic development, use of quotes from text, and inclusion of sufficient details are difficult skills for students with language based deficiencies. Consistent and continual use of multiple strategies in

this area generally show an increase in these skills in the immediate and a somewhat less consistent carry-over into standardized testing.

### Multiple Choice.

The multiple choice questions are related to either Reading or Literature (36 questions) or Style and Language (4 questions) strands of the ELA Curriculum Framework.

WTS seventh graders scored 71% on the multiple choice questions in reading and literature against the state score of 69%. On the isolated language questions of which there were only 4, WTS students achieved at a 66% level against the state average of 74%. WTS answered the language questions with scores of 77%, 77%, 81%, and 91%.

The list below shows how the “most missed questions” apply to the curriculum frameworks

|             | # of Question | Learning Standards |  |
|-------------|---------------|--------------------|--|
| Language    | #26           | S4 vocabulary      | “meaning of word ‘whipped’                           |
|             | #35           | S4 vocabulary      | “meaning of the word ‘neurotoxin’                    |
|             | #25           | S5 structure       | “function of the dash”                               |
| Literature: | #23           | S12 fiction        | characterization - “Why is Travis about to cry?”     |
|             | #21           | S12 fiction        | characterization - “Why was Travis mad?”             |
|             | #22           | S12 fiction        | “Why was Arliss’ action important?”                  |
|             | #38           | S13 fiction        | symbolism  |
|             | #2            | S13 nonfiction     | “Why is the quote important?”                        |
|             | #8            | S13 nonfiction     | “How does the author mainly feel about the players?” |
|             | #5            | S13 nonfiction     | “What is paragraph 12 mainly about?”                 |
|             | #28           | S13 nonfiction     | “How was this pamphlet arranged?”                    |
|             | #31           | S13 nonfiction     | “What do the bullets indicate?”                      |
|             | #12           | S14 poetry         | “What is the purpose of using the word ‘you’?”       |

### Observations/Discussion

WTS students are able to interact with a variety of genre with a good degree of accuracy. Many questions were answered with 91% accuracy. WTS students missed questions related to the structure meaning, and main ideas of nonfiction writing. The questions most often missed can be associated with higher order thinking skills and relate inference and subtle comprehension.

Of the 4 language related questions, the most frequently missed questions were related to vocabulary.

### Open Response Questions

Open response questions (4 points each) require students to respond in short essay format to a piece of literature.

WTS seventh graders scored, on average the same as the state range. In only one case did they exceed the state average. With a top score of 4, students only manage to earn a little more than half the points allotted to a response.

West Tisbury School's open response scores as compared to the state are as follows

|      | West Tisbury School | State |
|------|---------------------|-------|
| #8   | 2.36                | 2.22  |
| #18  | 2.45                | 2.56  |
| #27  | 2.09                | 2.13  |
| # 36 | 1.95                | 2.07  |

#### Observations/Discussion

These scores are disappointing given the amount of time and instruction given to particular skill, but not unexpected for this test group. The extensive use of graphic organizers for all genre and instructional structures is responsible for the scores being what they are, however mediocre they may seem. WTS grade eight curriculum exposes students to more writing genre and this group will benefit from a wider exposure to writing genre.

### III. Analysis of Identified Subgroup Performance

#### Special Needs Students

The test was administered to 5 students with special needs, which is approximately, 20% of the population.

#### Percent of Students with Disabilities

|                   |      |            |
|-------------------|------|------------|
| Performance Level | 2007 |            |
| Above Proficient  | 0%   |            |
| Proficient        | 40%  | 2 students |
| Needs Improvement | 40%  | 2 students |
| Failing/Warning   | 20%  | 1 student  |

#### Observations/Discussion

All members of the identified subgroup have language based disabilities. Analysis of individual score indicate that many students score above expectations on this MCAS.

### IV. Recommendations

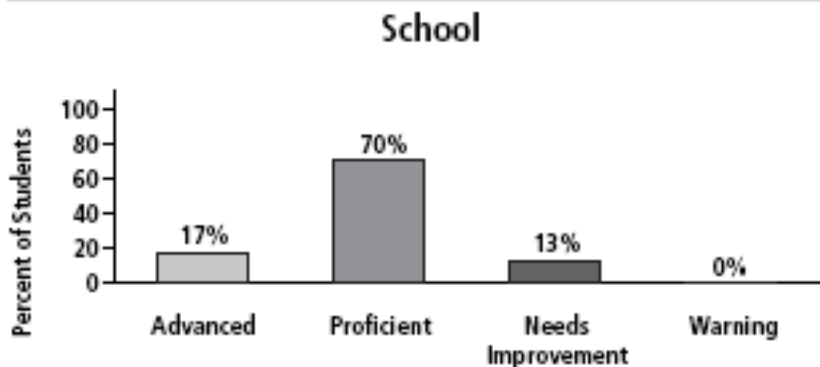
Continue to:

- provide extensive reading instruction to targeted students and provide extensive reading opportunities to all students
- teach the structure of the short essay, using graphic organizers and structure maps
- provide explicit instruction in the nonfiction text structure.
- build experience with biography, nonfiction, and the classics
- teach open response writing in response to fiction and nonfiction texts
- improve the quality of all writing by raising expectations in areas such as providing evidence, providing proof, and supplying important details
- teach the elements of style, introductions, conclusions, word choice, and figurative language
- examine the teaching of topic development

**West Tisbury School Grade 8 English Language Arts**

Report by 8<sup>th</sup> Grade ELA Teacher: Fran Finnigan

**English Language Arts**



**I. Overview**

Overall, the WTS eighth graders made a strong showing in the 2007 MCAS. 87% of our students performed proficient or above. The advanced range was 5% higher than the state. Proficient range was 17% higher. In the Needs Improvement range WTS was 5% lower than the state. We are proud of the fact that there were no failures. These scores are fairly consistent with the 2006 scores when 22% of the group reached Advanced. Prior to 2006, the eighth grade had not been tested since 2001. Previous scores were consistently higher than the state or district.

Performance Levels

| Year        | Advanced |       | Proficient |       | Needs Improvement |       | Warning Failing |       | Students Included |
|-------------|----------|-------|------------|-------|-------------------|-------|-----------------|-------|-------------------|
|             | School   | State | School     | State | School            | State | School          | State |                   |
| <b>2007</b> | 17       | 12    | 70         | 63    | 13                | 18    | 0               | 6     | 30                |
| <b>2006</b> | 22       | 12    | 65         | 62    | 11                | 19    | 2               | 7     | 46                |

Discussions/ Observations:

The strong showing in the 2007 8<sup>th</sup> grade ELA scores are in line with what we have historically experienced at WTS. Students have always performed well above the state averages. The number of students in the test group has fallen by 1/3. These scores are somewhat more indicative of the skills of this test group than the work they performed locally.

**II. Analysis of Performance by Grade and Test**

The 8<sup>th</sup> grade ELA assessment requires students to demonstrate their literacy proficiencies by responding to 36 multiple choice questions based on texts spanning many genre, as well as four open response short essays. The following table presents levels of students' proficiency writing different types of response formats.

| Percentage of Possible Points Attained | West Tisbury School | State |
|--|---------------------|-------|
| Multiple choice                        | 82%                 | 77%   |
| Open Response                          | 61%                 | 59%   |

### Performance by Question Type:

#### Multiple Choice.

The multiple choice questions are related to either the Literature of Language strands of ELA State Frameworks.

85% of WTS students scored correctly on 19 of the 36 Multiple choice questions. This is a strong reading showing. Questions represent a variety of reading skills and skills associated with the interpretation of literature such as character motives, author's purpose, inference, and figurative language.

The list below shows how the "most missed questions" apply to the curriculum frameworks

| # of Question | Learning Standards   |
|---------------|--|
| #8            | S4 vocabulary - "what does the word 'forensically' suggest about dogs?"  |
| #14           | S8. vocabulary - "Identify the meaning of station as in social rank?"  |
| #25           | S8.12 fiction - "Which best describes grandfather?" (inference)  |
| #31           | S8.8 nonfiction - (understanding text) - "What is the main reason that garbage workers' slang evolved over the years?" |
| #40           | S8.8 nonfiction - (understanding text) - "What point is the author trying to make?"<br>author's purpose                |

The eighth graders of WTS taking the 2007 MCAS were strong readers and handled the literature and language multiple choice questions easily scoring 82% over the state average 77%. The questions missed can be associated with higher order thinking skill and critical thinking rather than decoding errors. Understanding nonfiction writing indicates students need more practice in understanding the structure of nonfiction and how to anticipate what information will be presented.

#### Open Response Questions

Open response questions (4 points each) require students to respond in short essay format to a piece of literature.

Of the possible 4 points on each Open Response (OR), WTS students received between 2 and 3 points on average. Our performance on all questions was about equal with the state performance levels except for question #28. No student left an Open Response essay blank. On 3 of 4 Open Response 50% of this class scored 3 points out of 4.

West Tisbury School's open response scores as compared to the state are as follows

|      | West Tisbury School | State |
|------|---------------------|-------|
| #9   | 2.6                 | 2.35  |
| #20  | 2.37                | 2.2   |
| #28  | 2.33                | 2.38  |
| # 36 | 2.53                | 2.34  |

The average point scores do not demonstrate how more than 50% of this group performed on these writing tests. A few students scoring 1's brought down the average of those who scored 3 and even 4's.

In looking at individual scores, some students who were challenged in language performed the best in some OR's. This might be explained by the fact that these students tended to write "everything they knew" about a topic and the evaluators saw sufficient depth.

### III. Analysis of Identified Subgroup Performance

#### Special Needs Students

The test was administered to 7 students with special needs, which is approximately, 25% of the population.

#### Percent of Students with Disabilities

|                   |       |
|-------------------|-------|
| Performance Level | 2007  |
| Above Proficient  | 0%    |
| Proficient        | 43.8% |
| Needs Improvement | 57%   |
| Failing/Warning   | 0%    |

#### Observations/Discussion

The majority of our students with disabilities did not perform well on this important exam. We must ensure that all students have the opportunity to learn and improve.

#### **IV. Recommendations**

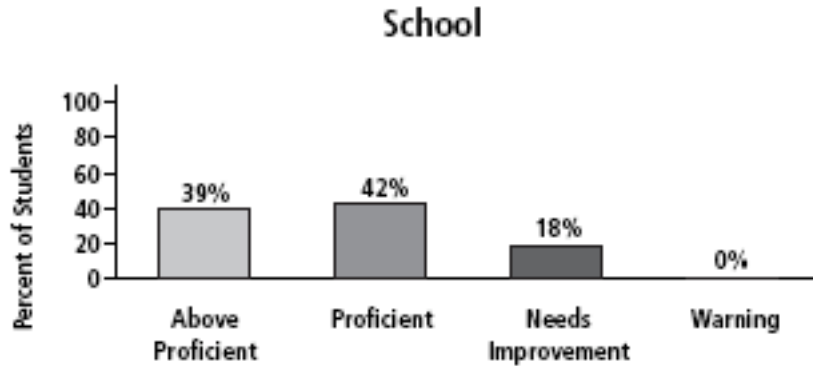
To continue to:

- provide specific reading instruction to students who are not on IEP's and score below grade level on local reading assessments.
- make reading instruction part of the regular classroom protocol
- teach the structure of the short essay (open response) using a variety of graphic organizers
- build experience of all genre of literature, myth, nonfiction, folk literature, fiction, biography
- improve the quality of all writing by raising expectations in areas such providing evidence, and supplying important details
- teach the structure of nonfiction in all the content areas
- score open responses with a MCAS type scoring guide
- increase maturity and sophistication of writing through use of elements of style, word choice, figurative language

To differentiate instruction

**West Tisbury School Grade 3 Mathematics**  
 Report by Erika Oliver and Jill Lane

**Mathematics**



The Spring 2007 grade 3 MCAS Mathematics test was based on learning standards in the Massachusetts Curriculum Framework 2000.

I. Overview

Overall our third graders performed very well with 81% scoring in the top two categories, compared with 60% for the state. Especially notable is the fact that 39% of our students scored in the advanced category, compared with 19% for the state. We are also proud of the fact that none of our students fell in the warning category.

Performance Levels

| Year        | Advanced    |       | Proficient  |       | Needs Improvement |       | Warning Failing |       | Students Included |
|-------------|-------------|-------|-------------|-------|-------------------|-------|-----------------|-------|-------------------|
|             | School W.T. | State | School W.T. | State | School W.T.       | State | School W.T.     | State |                   |
| <b>2007</b> | 39          | 19    | 42          | 41    | 18                | 24    | 0               | 16    | 33                |
| <b>2006</b> | 4           | 4     | 71          | 48    | 25                | 32    | 0               | 16    | 28                |

II. Analysis of Performance by Question Type

The Grade 3 MCAS for 2007 consisted of a total of 35 questions, including 25 multiple choice questions, 5 short answer questions, and 5 open response questions. All of the questions were created around the 5 major content standards.

| Math Content Strands                        | Number of Questions |
|---|---------------------|
| • Number Sense and Operations               | 13                  |
| • Patterns, Relations and Algebra           | 7                   |
| • Geometry                                  | 4                   |
| • Measurement                               | 4                   |
| • Data Analysis, Statistics and Probability | 7                   |

The following table describes the breakdown of student by question type. It is important to recognize that both the open response and short answer sections consist of only 5 questions each. Therefore a slight shift in performance appears larger statistically.

| Question Type   | Grade 3 | 2006 | 2007 |
|-----------------|---------|------|------|
| Multiple Choice | School  |      | 85%  |
|                 | State   |      | 75%  |
| Short Answers   | School  |      | 93%  |
|                 | State   |      | 73%  |
| Open Response   | School  |      | 78%  |
|                 | State   |      | 73%  |

**Performance by Question Type:**

**Multiple Choice**

Our students scored 85% correct, compared with 78% for the state. (7pt.+)

Number sense and operations (77%) and Geometry (79%) represented the highest level of difficulty for our students.

Observations/Discussion

Questions that were difficult:

- #12 - bar graph/comparing amounts
- #14 - estimating costs
- #20 - fractions on a # line
- #25 - # sense
- #26 - number sentences
- #31 - < = >

**Short Answer**

Our students scored very well – 93% compared to 73% for the state. This was our best category overall.

The following standards represented the highest level of difficulty for our students:

- Number sense and operations
- Geometry with 3 dimensional shapes

**Open Response Questions**

Fair – 78% compared to 73% for the state.

The following standards represent the highest level of difficulty for the majority of students:

- Measurement (question #23)
- Time and elapsed time on our analog clock.

Observations/Discussion

We need to spend more instructional time on the concept of elapsed time.

### III. Analysis of Identified Subgroup Performance

#### Special Needs Students

The test was administered to 7 students with special needs, which is approximately, 22% of the population.

|                   |      |
|-------------------|------|
| Performance Level | 2007 |
| Above Proficient  | 43%  |
| Proficient        | 14%  |
| Needs Improvement | 43%  |
| Failing/Warning   | 0%   |

#### Observations/Discussion

We were very pleased with the group of students scoring above proficient, and the fact that 0% scored in the warning category. The 43% in Needs Improvement equals three (3) students with disabilities and correlates with the classroom teachers' observations of their daily performance in math in class.

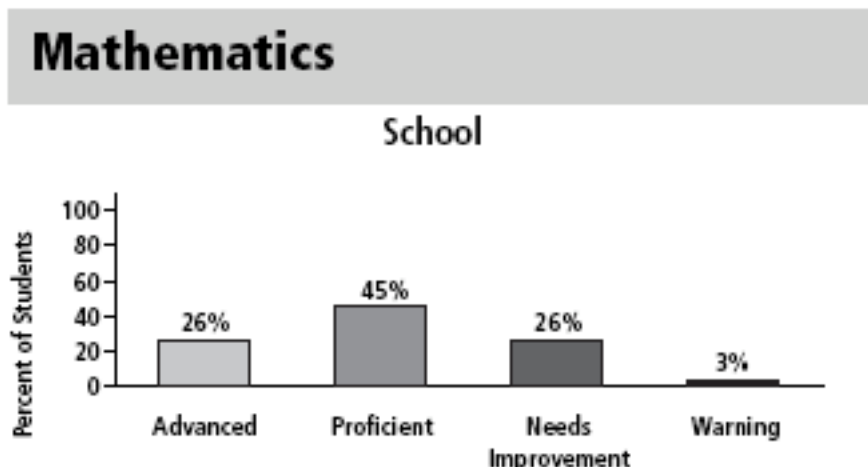
### IV. Recommendations

- Continue to explore teaching strategies that promote student thinking and furthers their ability to explain mathematical reasoning.
- Help students improve their ability to mentally transfer their oral explanations of their mathematical reasoning into open response writing.
- Work with K-2 teachers to ensure commonality of vocabulary as it relates to both Everyday Math and MCAS.

**West Tisbury  
Grade 4 Mathematics**

Report by Mary Boyd and Rebecca Solway

The Spring 2007 grade 4 MCAS Mathematics test was based on learning standards in the Massachusetts Curriculum Framework 2000.



**I. Overview**

Overall performance was much stronger than the previous year. More than 71% of 4<sup>th</sup> graders scored proficient or better, compared to 54% the previous year. Considering population and emotional/behavioral/SPED needs, this is a considerable gain.

2006 MCAS identified needs in geometry and measurement, esp. when compared to state proficient average. 2007 showed marked improvement, with all related questions scoring near or above state proficient average. Overall number of questions omitted entirely dropped. Additionally, overall attempts at open response questions were more successful, though still falling short of our goals. Short answer questions (especially those involving multiple steps) remain challenging for many students, especially those on IEPs.

Performance Levels

| Year        | Advanced |       | Proficient |       | Needs Improvement |       | Warning Failing |       | Students Included |
|-------------|----------|-------|------------|-------|-------------------|-------|-----------------|-------|-------------------|
|             | School   | State | School     | State | School            | State | School          | State |                   |
| <b>2007</b> | 26       | 19    | 45         | 29    | 26                | 39    | 3               | 13    | 31                |
| <b>2006</b> | 17       | 15    | 37         | 25    | 43                | 45    | 3               | 15    | 30                |
| <b>2005</b> | 10       | 14    | 40         | 27    | 48                | 44    | 2               | 15    | 42                |
| <b>2004</b> | 12       | 14    | 27         | 28    | 52                | 44    | 9               | 14    | 33                |
| <b>2003</b> | 6        | 12    | 31         | 28    | 57                | 43    | 6               | 16    | 35                |

Discussions/ Observations:

In general, percentages are trending in the correct direction. There was a jump in the number of advanced students and in the number of proficient students. The number of needs improvement scores fell, while the percent warning/failing stayed the same.

## II. Analysis of Performance by Question Type

The Grade 4 MCAS for 2007 consisted of a total of 35 questions, including 25 multiple choice questions, 5 short answer questions, and 5 open response questions. All of the questions were created around the 5 major content standards.

| Math Content Strands                        | Number of Questions |
|---|---------------------|
| • Number Sense and Operations               | 16                  |
| • Patterns, Relations and Algebra           | 8                   |
| • Geometry                                  | 4                   |
| • Measurement                               | 3                   |
| • Data Analysis, Statistics and Probability | 8                   |

The following table describes the breakdown of student by question type. It is important to recognize that both the open response and short answer sections consist of only 5 questions each. Therefore a slight shift in performance appears larger statistically.

| Question Type   | Grade 4  | 2007 |
|-----------------|----------|------|
| Multiple Choice | School   | 79%  |
|                 | District | 77%  |
|                 | State    | 71%  |
| Short Answers   | School   | 79%  |
|                 | District | 77%  |
|                 | State    | 70%  |
| Open Response   | School   | 74%  |
|                 | District | 67%  |
|                 | State    | 61%  |

### Performance by Question Type: Multiple Choice

Mixed results were noted—students in WTS 4<sup>th</sup> grade trended with the state proficient average with no notable deviations. The two lowest scoring MC questions involve topics (combinations and volume) not addressed in Everyday Math (EDM) until units 11 and 12, indicating a need to address them earlier in the course content. It appears that careful reading, answer elimination, and MC strategies need to be explicitly taught and practiced in a more deliberate manner.

The area of most difficulty seems to be Number sense—multiples and even numbers, closest in value (rounding), decimal equivalents (may be test fatigue). Overall WTS had 4 questions out of 13 below 80% but all were above 70%.

Geometry—3-dimensional shapes (too late in EDM, needs to be addressed earlier)

Data, Statistics, Probability—Challenges in combinations, charts, tables. Three questions below 80%, 1 below 65%.

#### Observations/Discussion

Patterns, Relations, and Algebra—strong overall, no questions below 80%.

Geometry shows overall improvement from last year when compared to State Proficient Average.

Measurement—volume (too late in EDM, needs to be addressed earlier). This question is covered under the geometry unit and lowers our overall performance in measurement, which was actually quite good. Tables presented challenges in all question types and across all strands.

### **Short Answer**

This is an area of need for WTS 4<sup>th</sup> grade. On 4 out of 5 questions, we performed below state proficient average. All SA responses were over 60% and within 20% of the state proficient average. (All tracked the SPA.)

Patterns, Relations, Algebra—counting by intervals, solving for variables.

Number Sense—computation (division and multiplication) proved difficult for some of our students.

#### Observations/Discussion

Need to teach this format more explicitly—multi step problem solving: planning, working, follow through. Straight up computational strategies need to be in place by December to allow for adequate time for student practice and proficiency.

Students need instruction on following through after completion—making sure they answered the question that was asked.

### **Open Response Questions**

Overall, scores were lower in this question type for both school and SPA. Again, WTS trended with the SPA, lower in 3 questions, higher on 2.

Everyone is attempting to respond, very few 0s scored. This is a major improvement from previous school years and a reflection of newly instituted instructional practices. Many 1s and 2s indicate that students were correctly attempting at least one portion (usually first part of question).

Number Sense—Multiple steps, biggest challenge area appears to be getting the most for your money and showing steps to prove your answers.

Data Analysis—Pictographs not used in EDM, needs expansion—in this area, also look at timing, unit appears very early in school year.

Patterns, Relations—Cans, weight, finding the least amount needed.

#### Observations/Discussion

Multiple teaching and learning strategies were introduced in 2006-2007 that should continue to benefit overall achievement in this question type. Our performance in this question type appears to have improved from previous years. In addition, 4<sup>th</sup> grade has added parent math nights and after school homework assistance to further our progress in these areas.

Vocabulary alignment appears to be an area of need—EDM uses words such as certain, impossible, etc. MCAS is more likely to use most, least, each, every, greatest, same. The skills of determining overall importance within a set of possible answers.

Teaching how to use visuals to aid in answering questions, reading through and ensuring student understanding of tasks before beginning seems to be an area of need.

### III. Analysis of Identified Subgroup Performance

#### Special Needs Students

The test was administered to 12 students with special needs, which is approximately, 41% of the population.

| Performance Level | 2007% | 2007 # |
|-------------------|-------|--------|
| Above Proficient  | 8%    | 1      |
| Proficient        | 33%   | 4      |
| Needs Improvement | 50%   | 6      |
| Failing/Warning   | 8%    | 1      |

#### Observations/Discussion

It is exciting to note that 5 of the 12 passed with proficient or better scores and only one received a failing/warning. This is especially positive due to the high percentage of needs within this population. More information and analysis will be forthcoming as teachers are provided with student data specific to special needs.

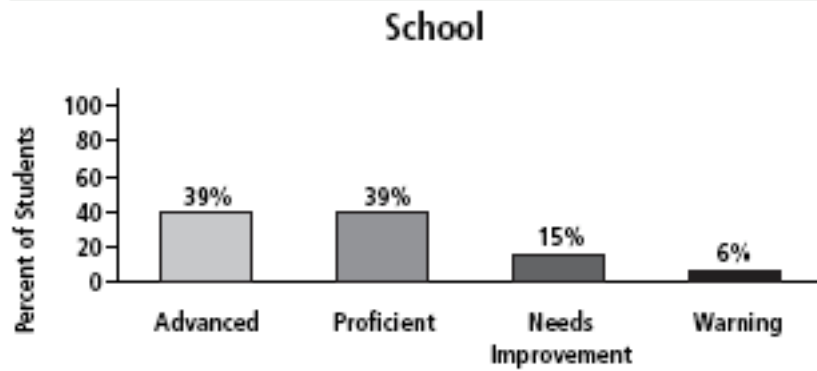
#### IV. Recommendations

- Continue math night, homework club, problem of the week, parent enrichment, math team.
- Examine pacing and content of EDM in terms of MCAS timing.
- Explicit instruction in all questions types and formats.
- Continued focus on vocabulary as it impacts MCAS and EDM.
- Examine school wide commitment to location of students and assignment/training of proctors for students on IEPs.
- Work on using tables in multiple problem types and in each content strand.
- Develop mini units for each strand that emphasizes challenging areas, beginning with Data Analysis, Statistics and Probability and Patterns, Relations, and Algebra.

**West Tisbury  
Grade 5 Mathematics**

**Report by Sue Miller and Pat Kelly**

**Mathematics**



2007 was the second year that Mathematics MCAS was given to all grade 5 students in the state.

**I. Overview**

Overall, the West Tisbury 5<sup>th</sup> grade students performed very well. Our students ranked 79<sup>th</sup> out of 933 schools in overall math performance.

Performance Levels

| Year        | Advanced |       | Proficient |       | Needs Improvement |       | Warning Failing |       | Students Included |
|-------------|----------|-------|------------|-------|-------------------|-------|-----------------|-------|-------------------|
|             | School   | State | School     | State | School            | State | School          | State |                   |
| <b>2007</b> | 39       | 19    | 39         | 32    | 15                | 31    | 6               | 18    | 33                |
| <b>2006</b> | 9        | 17    | 29         | 26    | 29                | 34    | 14              | 23    | 42                |

**Discussions/ Observations:**

In general, the student's errors fell across all of the strands. There were however, more errors in Number Sense and any other strand.

## II. Analysis of Performance by Question Type

The Grade 5 MCAS for 2007 consisted of a total of 35 questions, including 29 multiple choice questions, 5 short answer questions, and 5 open response questions. All of the questions were created around the 5 major content standards.

| Math Content Strands                        | Number of Questions |
|---|---------------------|
| • Number Sense and Operations               | 16                  |
| • Patterns, Relations and Algebra           | 9                   |
| • Geometry                                  | 5                   |
| • Measurement                               | 4                   |
| • Data Analysis, Statistics and Probability | 5                   |

The following table describes the breakdown of student by question type. It is important to recognize that both the open response and short answer sections consist of only 5 questions each. Therefore a slight shift in performance appears larger statistically.

| Question Type   | Grade 5  | 2006       | 2007 |
|-----------------|----------|------------|------|
| Multiple Choice | District | (See Judy) | 82   |
|                 | State    |            | 73   |
| Short Answers   | District |            | 81   |
|                 | State    |            | 66   |
| Open Response   | District |            | 71   |
|                 | State    |            | 57   |

### Performance by Question Type:

#### Multiple Choice

The students were consistent with the state with only seven questions below 80%.

Number Sense represents the standard with the highest level of difficulty for the 5<sup>th</sup> graders this year.

Our students consistently fell within the state range. In general, more cumulative review is needed to ensure mastery of all concepts taught.

#### Short Answer

Our students out performed the state in short answer questions.

There is no strand that proved more difficult than any other.

#### Open Response Questions

Although we scored below 80% (71%), we continued to outperform the district and the state in Open Response questions.

Students had difficulty with Measurement and Patterns.

#### Observations/Discussion

More instruction and practice with multi-step problems. Students also need to be flexible in switching from several different concepts presented on one page.

### III. Analysis of Identified Subgroup Performance

#### Special Needs Students

The test was administered to 9 students with special needs, which is approximately, 25% of the population.

|                   |      |
|-------------------|------|
| Performance Level | 2007 |
| Above Proficient  | 22%  |
| Proficient        | 22%  |
| Needs Improvement | 33%  |
| Failing/Warning   | 22%  |

#### Observations/Discussion

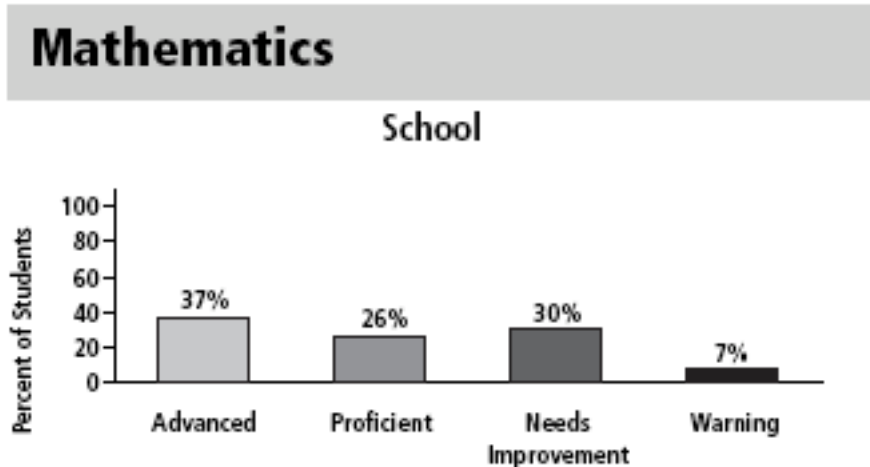
In general, almost half of our students performed at the Proficient or above Proficient levels. It should also be noted that two of these students were in a substantially separate math class, well below grade level.

### IV. Recommendations

Continue with the efforts put forth in the classroom in helping prepare the students for the MCAS. Special Education students should be given an exam that coincides with their current level of performance and instruction.

### West Tisbury School Grade 6 Mathematics

Report by Tricia Pedro, Math Teacher, West Tisbury School



#### I. Overview

Overall we did well on last year's 6th grade Math MCAS. According to the Boston Globe, we scored 171 out of 565 schools statewide. Using the Boston Globe's rankings, we were second highest performing 6th grade class on-island.

#### Performance Levels

| Year | Advanced |       | Proficient |       | Needs Improvement |       | Warning Failing |       | Students Included |
|------|----------|-------|------------|-------|-------------------|-------|-----------------|-------|-------------------|
|      | School   | State | School     | State | School            | State | School          | State |                   |
| 2007 | 37       | 20    | 26         | 32    | 30                | 28    | 7               | 20    | 43                |
| 2006 | 3        | 17    | 33         | 29    | 33                | 29    | 30              | 25    | 33                |
| 2005 | 8        | 17    | 42         | 29    | 32                | 30    | 18              | 23    | 38                |
| 2004 | 31       | 17    | 33         | 25    | 27                | 32    | 8               | 25    | 48                |
| 2003 | 12       | 16    | 40         | 26    | 35                | 32    | 13              | 26    | 60                |

#### Discussions/ Observations:

WTS outperformed their peers in the Commonwealth in the 6th Grade Math MCAS. 63% of the WTS 6th Graders scored proficient or higher. While we had a slightly higher percentage of kids in the needs improvement category than the state, we had a significantly lower percentage of kids in the warning category.

## II. Analysis of Performance by Question Type

The Grade 6 MCAS for 2007 consisted of a total of 35 questions, including 29 multiple choice questions, 5 short answer questions, and 5 open response questions. All of the questions were created around the 5 major content standards.

| Math Content Strands                        | Number of Questions |
|---|---------------------|
| • Number Sense and Operations               | 16                  |
| • Patterns, Relations and Algebra           | 10                  |
| • Geometry                                  | 5                   |
| • Measurement                               | 4                   |
| • Data Analysis, Statistics and Probability | 4                   |

The following table describes the breakdown of student by question type. It is important to recognize that both the open response and short answer sections consist of only 5 questions each. Therefore a slight shift in performance appears larger statistically.

| Question Type   | Grade 6  | 2007 |
|-----------------|----------|------|
| Multiple Choice | District | 84   |
|                 | State    | 73   |
| Short Answers   | District | 64   |
|                 | State    | 61   |
| Open Response   | District | 68   |
|                 | State    | 61   |

### Performance by Question Type: Multiple Choice

Overall students did well on the multiple choice questions. There were a total of 29 questions. I looked specifically at the questions where 75% or less of our kids answered correctly. Questions in which 25% of our students answered incorrectly were studied closely. There were 9 out of 29 questions where we scored less than 75%. Of those 9 questions, only 3 were significantly less than 75%.

What standards represent the highest level of difficulty for the majority of students?.

Number sense and patterns/algebra were the standards that presented the highest level of difficulty for the majority of our students.

#### Observations/Discussion

Some of the issues on these questions were vocabulary or wording differences between our materials and the test. I am going to try to vary my wording more often to eliminate this difference. Other mistakes appear to be caused simply because they may not have paid attention to the question. On a few of the questions it appears they simply looked at the answer and picked the one that caught their eye.

### **Short Answer**

Again, I looked specifically at the questions where 75% or less of our kids answered correctly. On 3 out of 5 of the short answer questions, we scored significantly lower than 75% of the kids getting the problem correct. However, the same holds true for the state proficient group as well.

Two of the three questions were in the geometry strand and the last question was in number sense that presented our students with the highest level of difficulty.

#### Observations/Discussion

Statewide kids did not perform well on these questions. I honestly don't know why. I don't have access to the answers the kids gave and therefore cannot determine where their errors were. None of the questions, in my opinion, were too difficult for 6th graders.

### **Open Response Questions**

To help raise the bar on our expectations, we compare our performance to the State Proficient Average (SPA) and not merely look at the State Average which is lower. On the ORQs, we scored extremely close to the state proficient group. On 3 out of 5 questions, our average score was greater than a 3.0. On the remaining two questions, we scored an average between 2.0 and 3.0. Also with the exception of 3 students everyone received at least 1 out of 4 possible points on all 5 of the ORQs

One of the questions we had difficulty with was on data and statistics, and the other one was on number sense. While there was some difficulty with these questions the average score on the data question was a 2.35, and on the number sense question the average score was a 2.79.

#### Observations/Discussion

The data and statistics question went into more detail than we had done in class. I'll be sure to adjust my teaching to meet these needs. On the other question the issue was probably finding percent of a number. We will continue to work these issues.

### III. Analysis of Identified Subgroup Performance

#### Special Needs Students

The test was administered to 15 students with special needs, which is approximately, 44% of the population.

|                   |      |
|-------------------|------|
| Performance Level | 2007 |
| Above Proficient  | 7%   |
| Proficient        | 33%  |
| Needs Improvement | 40%  |
| Failing/Warning   | 20%  |

#### Observations/Discussion

Of the 15 students with disabilities, 14 showed an improvement between the 5th and 6th grade MCAS tests. Also 8 out of those 14 students had a gain of 10 or more points. The 3 students who received a warning on the test were in a pullout math program. One of those 3 is significantly below grade level in math. There are 6 students who fell into needs improvement. Three of those 6 were in the high needs improvement category.

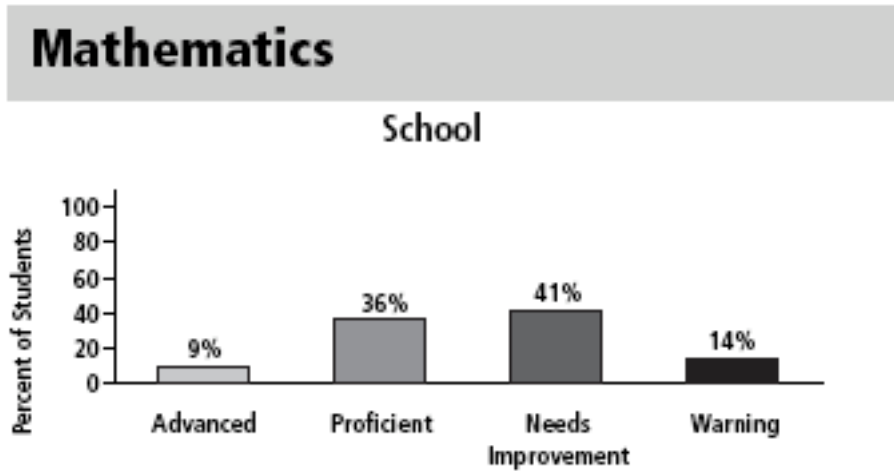
Six of the 15 students with disabilities scored advanced or proficient.

### IV. Recommendations

- Establish small group instruction for students with difficulty in math. The time could come from elective time.
- Special Education pull out math program students should have math with a math teacher.
- More spiraling during math class and more review to keep concepts fresh.
- Explore changes in wording during class discussions. Also adding in multiple choice questions to HW to practice how to answer and work through the given choices on the question.

**West Tisbury Grade 7 Mathematics**

Report by Tricia Pedro, Math Teacher, West Tisbury School



**I. Overview**

We are very proud of the performance by this group of 7th graders. While the cohorts overall performance may not have been as high as last years 7th graders, this cohort showed marked improvement from the previous scores as 6th graders. This cohort of 7th graders saw there average scored increased 7 points. To me, this demonstrates what hard workers they are.

Performance Levels

| Year | Advanced |       | Proficient |       | Needs Improvement |       | Warning Failing |       | Students Included |
|------|----------|-------|------------|-------|-------------------|-------|-----------------|-------|-------------------|
|      | School   | State | School     | State | School            | State | School          | State |                   |
| 2007 | 9        | 15    | 36         | 31    | 41                | 30    | 14              | 24    | 22                |
| 2006 | 10       | 12    | 39         | 28    | 32                | 33    | 19              | 28    | 31                |

Discussions/ Observations:

Seventeen (17) out of 22 students saw there scores increase between 6th and 7th grade. Nine of those 17 showed a gain of 10 or more points. It should be noted that a small group of these students who where determined to be academically "at risk" in Math worked with a Math Specialist last year during an extra math period. All four of those students who worked with the Math specialist improved their scores.

## II. Analysis of Performance by Question Type

The Grade 7 MCAS for 2007 consisted of a total of 35 questions, including 29 multiple choice questions, 5 short answer questions, and 5 open response questions. All of the questions were created around the 5 major content standards.

| Math Content Strands                        | Number of Questions |
|---|---------------------|
| • Number Sense and Operations               | 11                  |
| • Patterns, Relations and Algebra           | 12                  |
| • Geometry                                  | 4                   |
| • Measurement                               | 4                   |
| • Data Analysis, Statistics and Probability | 8                   |

The following table describes the breakdown of student by question type. It is important to recognize that both the open response and short answer sections consist of only 5 questions each. Therefore a slight shift in performance appears larger statistically.

| Question Type   | Grade 5  | 2006 | 2007 |
|-----------------|----------|------|------|
| Multiple Choice | District |      | ?    |
|                 | State    |      | 67%  |
| Short Answers   | District |      | 62%  |
|                 | State    |      | 69%  |
| Open Response   | District |      | ?    |
|                 | State    |      | 59%  |

### Performance by Question Type: Multiple Choice

To determine student performance on multiple choice questions I focused on the questions where more than 25% of the student answered incorrectly. There was a total of 18 out of 29 questions with less than 75% accuracy. Eleven out of the 18 questions were in session 2 of the test. To me this raises the question of possible test fatigue.

Number Sense and Algebra appear to have offered our students the greatest level of difficulty. The breakdown of missed questions is seven (7) in Number Sense, six (6) in Algebra, one (1) in Geometry, two (2) in Measurement, and two (2) in Data and Statistics.

#### Observations/Discussion

The topics that were missed were covered in 7th grade, and most of it was also covered in 6th grade as well. After reviewing the test, and our students answers, I believe that many of the errors were caused simply because the students picked the first answer that caught their eye as opposed to actually solving the problem.

It should also be noted that 61% of the missed multiple choice questions were in the second test session. Also session two consisted of 3 open response questions and 14 multiple choice questions. Again, I wonder if this point the issue of test fatigue.

### Short Answer

The 7th grade students at the West Tisbury School performed very well on the short answer questions of the test. They achieved greater than 75% accuracy on 3 out of 5 questions.

Once again, Number Sense appears to be the strand in which WTS students have the greatest challenge. One of the two questions which students achieved less than 75% accuracy was in Number Sense and the other was in Geometry. Also, it should be noted, that only three (3) out of the five (5) strands were represented by short answer questions.

### Observations/Discussion

Without seeing the students actual answers it is hard to determine what their mistakes were. I did not, however, feel that either of the questions with less than 75% accuracy were beyond their abilities.

### Open Response Questions

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While measurable improvement was made in the area of open response questions, this remains an area for focus and improvement.

The question on measurement proved the most difficult. This question had an average score of 1.71. All 5 of the strands were represented in the open response questions.

### Observations/Discussion

As was the case with their overall performance, our student performance in Open Response was better in 7th grade than in 6th grade. For starters, fewer students had a score of zero on an open response question than they did the previous year. The performance of this cohort in 6th grade showed the range of the average scores was 1.27 to 2.27. In 7th grade, the range of the average scores was 1.71 to 3.41. And while these are different tests, the Open Response questions continue to emphasize the same skill sets. To help our students improve these important skills, a chunk of time was spent in 7th grade helping the students break down questions and showing/strategizing with them how to answer the questions.

### III. Analysis of Identified Subgroup Performance

#### Special Needs Students

The test was administered to 5 students with special needs, which is approximately, 23% of the population.

|                   |      |
|-------------------|------|
| Performance Level | 2007 |
| Above Proficient  | 0%   |
| Proficient        | 20%  |
| Needs Improvement | 60%  |
| Failing/Warning   | 20%  |

#### Observations/Discussion

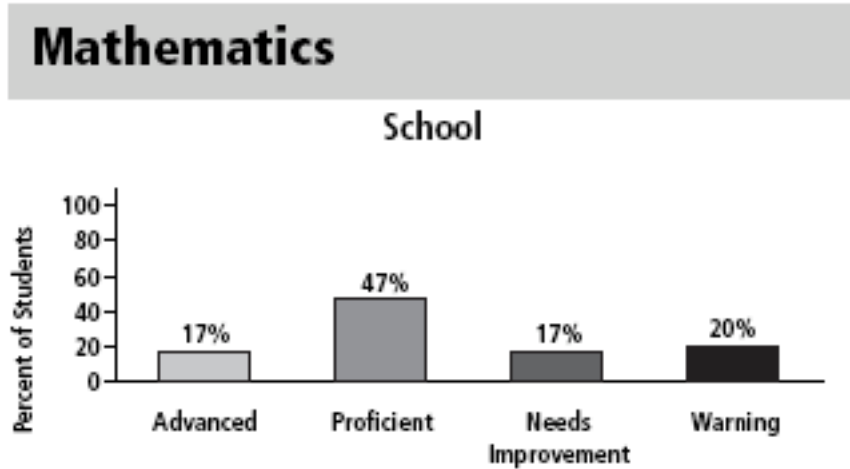
The data above is important, however, it only reveals part of the story. What the table above does not show is that four (4) out of the five (5) students with disabilities improved their score between 6th and 7th grade. A closer look at the four students with disabilities who improved their score reveals that two of these students had a gain of 10 or more points. The one student in this subgroup who did not show an improved score has severe learning disabilities and currently operates with a 4th grade math ability.

### IV. Recommendations

1. Establish a small group instruction for students with difficulty in math. The time could come from elective time.
2. Special Education "pull out" math programs work best with a math teacher.
3. More spiraling during math class and more review to keep concepts fresh.
4. Explore changes in wording during class discussions. Also adding in multiple choice questions to HW to practice how to answer and work through the given choices on the question.

**West Tisbury School Grade 8 Mathematics**

**MCAS Report by Kari Cioffi**



**I. Overview**

Overall, the 8<sup>th</sup> graders did very well on this test, especially when compared to the performance of their peers throughout the state of Massachusetts. The percentage of students that scored Advanced matched that of the state percentage. The amount of students that scored Proficient were 19% higher than the state average.

On the other end of the spectrum, our students scored 13% lower than the state on Needs Improvement and 5% lower than the state were in Warning. These are the areas that we want to score lower than the state and we successfully met that goal.

Performance Levels

| Year | Advanced |       | Proficient |       | Needs Improvement |       | Warning Failing |       | Students Included |
|------|----------|-------|------------|-------|-------------------|-------|-----------------|-------|-------------------|
|      | School   | State | School     | State | School            | State | School          | State |                   |
| 2007 | 17       | 17    | 47         | 28    | 17                | 30    | 20              | 25    | 30                |
| 2006 | 20       | 12    | 39         | 28    | 30                | 31    | 11              | 29    | 46                |
| 2005 | 4        | 13    | 43         | 26    | 29                | 30    | 14              | 31    | 51                |
| 2004 | 20       | 13    | 46         | 26    | 30                | 32    | 4               | 29    | 50                |
| 2003 | 2        | 12    | 47         | 25    | 19                | 30    | 2               | 33    | 47                |

The diagram below shows the percentage of students at the West Tisbury School who scored Advanced and Proficient as compared to the State average.

| Year | Advanced And Proficient |       |
|------|-------------------------|-------|
|      | School                  | State |
| 2007 | 64                      | 45    |
| 2006 | 59                      | 40    |
| 2005 | 47                      | 39    |
| 2004 | 66                      | 39    |
| 2003 | 49                      | 37    |

As the diagram above illustrates, our students consistently score higher than the state with the combined Advanced and Proficient scores. Although the number of students who scored a Warning nearly doubled for our district from 2006 – 2007 we continue to score lower than the state percentage in this area as well as for those students scoring a Needs Improvement.

## II. Analysis of Performance by Question Type

The Grade 8 MCAS for 2007 consisted of a total of 35 questions, including 29 multiple choice questions, 5 short answer questions, and 5 open response questions. All of the questions were created around the 5 major content standards.

| Math Content Strands                      | Number of Questions |
|---|---------------------|
| Number Sense and Operations               | 11                  |
| Patterns, Relations and Algebra           | 12                  |
| Geometry                                  | 4                   |
| Measurement                               | 4                   |
| Data Analysis, Statistics and Probability | 8                   |

The following table describes the breakdown of student by question type. It is important to recognize that both the open response and short answer sections consist of only 5 questions each. Therefore a slight shift in performance appears larger statistically.

| Question Type   | Grade 8  | 2007 |
|-----------------|----------|------|
| Multiple Choice | District | 71   |
|                 | State    | 64   |
| Short Answers   | District | 55   |
|                 | State    | 56   |
| Open Response   | District | 60   |
|                 | State    | 55   |

### **Performance by Question Type: Multiple Choice**

Students at the West Tisbury School performed well on the Multiple Choice questions of the 8th grade Math MCAS exam. We scored a 71% accuracy compared to the state average of 64%. In an effort to improve instruction and student performance, I focussed on the questions that 75% or less of our students answered correctly. There were 17 out of 29 questions where we scored 75% or less.

Of those 17 problem area questions, 7 were in Number Sense and Operations, 5 were in Patterns, Relations and Algebra, 1 question in Geometry, 1 question in Measurement and 3 questions in Data Analysis, Statistics and Probability.

#### Observation/Discussion

When looking closely at the question type that the students missed, I noticed that I teach my students to do the Distributive Property, for example, to get to a final and simplified answer. The Multiple Choice question on this property only asked them to take it one step further rather than coming up with a final answer. This is a minor detail that I can fix by simply having them add one additional step when solving this type of problem.

Other questions missed involve scientific notation and absolute value which are both taught in isolation. This is something that I can review often to help them remember how to solve these questions.

### **Short Answer**

Our students did not perform as well on the Short Answer questions as they did on the Multiple Choice portion. I see this as an area where we can improve our scores for next year. To help in this effort, once again I focussed on the questions that 75% or less of our students answered correctly. Of the 5 questions, we scored 75% or below on 3 of them. We scored 1% less than the state on this type of question.

Three of the five short answer questions showed significant need for improvement. Two of these three questions were in Measurement and the other question was in Number Sense and Operations.

#### Observations/Discussion

In addition to the standards identified above, two of the three questions involved fractions, which students typically struggle with in general. In one of the problem questions, they had to not only convert yards to feet, but they had to convert with fractions. I spend a lot of time teaching them how to work with fractions, but apparently, I will need to try even harder to help them understand when and how to do various things with fractions. The other fractional question, was to find  $\frac{1}{2}$  of  $\frac{3}{8}$ . This is something that we practice often, so it shows me that fractions continue to be a trouble area for many students. The other question that they missed focussed on Volume and using the formula to find the missing height of a rectangular prism. Once again, this is something that we spend a great deal of time on and I had hoped that they would do well with this question.

### Open Response Questions

Students at the West Tisbury School performed better on the Open Response than on the Short Answer portion of the MCAS exam. Additionally, our students did better than the state average by 5% in this category. However, of the five open response questions, we scored 75% or below on all of them. Solving Open Response questions will also be an area we continue to work on. Open Response questions involve reading the prompt carefully and answering multiple steps. These are two things that students typically rush through.

In the 2007 exam there was one question in each Math Content Strand that students did not perform well on.

#### Observations/Discussion

I spent a lot of time teaching my students how to determine the slope and y-intercept of a line from a formula and from the line itself. I did not, however, stress the importance of understanding what the slope actually tells us about that line. This is something that I need to work on.

We work on Venn Diagrams, but students sometimes struggle when they involve three topics and the fact that they need to subtract to find missing pieces of the Venn Diagram at times. The Measurement question involved a Cylinder, finding the Circumference, finding the Difference and finding the Diameter after finding all of the information above. It was a detailed problem that had a lot of vocabulary and asked them to find the missing part (the diameter) once the Circumference was found. They struggled with this in the Short Answer section as well.

### III. Analysis of Identified Subgroup Performance

#### Special Needs Students

The test was administered to 8 students with special needs, which is approximately, 25% of the population.

|                   |      |
|-------------------|------|
| Performance Level | 2007 |
| Above Proficient  | 0%   |
| Proficient        | 13%  |
| Needs Improvement | 38%  |
| Failing/Warning   | 50%  |

#### Observations/Discussion

The District information was used for this data as opposed to the School information. This includes the Special Needs Students who were here for the entire school year as well as those student(s) who enrolled post October 2006.

12.5% of this group of students with disabilities were pullout students for math and receive an off grade level math class that is inline with their math ability, but makes the performance on standardized grade level testing more difficult for them.

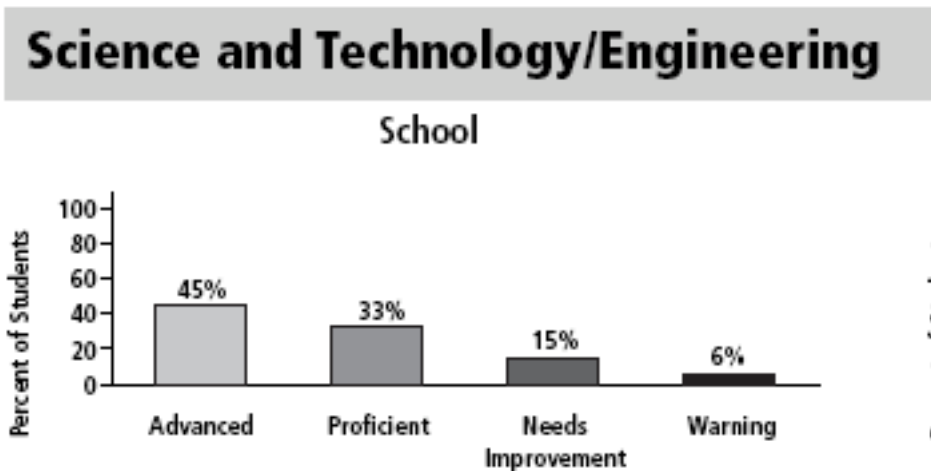
We had One (1) special needs student score a Proficient, three (3) scored a Needs Improvement and four (4) were in the Warning Category.

#### **IV. Recommendations**

1. Explore the possibility of establishing additional small group instruction for students with difficulty in mathematics. The ideal time would be during elective.
2. Pull-out mathematics students would benefit from having mathematics class with a mathematics teacher.
3. A continued effort to fine tune the Open Response Questions and how to read/understand what the question is asking. Currently, grades 6-8 use the same set-up and methods.
4. Try to vary the way I word my lessons so that students can see multiple ways that the questions could be asked.
5. Use many more Multiple Choice questioning to get them used to narrowing down their answers since 29 out of 39 questions are Multiple Choice questions on this test. Also, continue to show them how to use the Multiple Choice answers that are given to help them come up with the correct answer.
6. Focus on test taking strategies and how to approach all three types of questioning.

### West Tisbury Grade 5 Science

Report by 5th Grade Teachers: Pat Kelly & Sue Miller



#### I. Overview

The spring 2007 grade 5 MCAS Science and Technology/Engineering test was based on learning standards in the Massachusetts Science and Technology Curriculum Framework (2006). The Framework identifies four major content strands”

- Earth and Space Science
- Life Science (Biology)
- Physical Sciences( Chemistry and Physics)
- Technology/Engineering

Our students did very well on the 2007 Grade 5 Science and Technology MCAS exam. We are proud of the fact that once again, the West Tisbury 5<sup>th</sup> grader students far outranked the district and most of the state. Boston.com ranked West Tisbury Schools performance in the top 10% of the state and placed us 80<sup>th</sup> out of 933 fifth grade schools.

#### Performance Levels

| Year | Advanced |       | Proficient |       | Needs Improvement |       | Warning Failing |       | Students Included |
|------|----------|-------|------------|-------|-------------------|-------|-----------------|-------|-------------------|
|      | School   | State | School     | State | School            | State | School          | State |                   |
| 2007 | 45       | 14    | 33         | 37    | 15                | 37    | 6               | 12    | 33                |
| 2006 | 26       | 17    | 43         | 33    | 31                | 39    | 0               | 11    | 42                |
| 2005 | 24       | 16    | 48         | 35    | 21                | 38    | 7               | 12    | 29                |
| 2004 | 6        | 20    | 49         | 35    | 26                | 33    | 0               | 13    | 35                |
| 2003 | 27       | 18    | 54         | 33    | 15                | 34    | 5               | 15    | 41                |

#### Discussions/ Observations:

A significant number (78%) of our students ranked in either the Advanced or Proficient levels. Our percent of students in the Needs Improvement or Warning levels (21%) is significantly below the state levels (49%).

## II. Analysis of Performance by Question Type

The Grade 5 MCAS for 2007 consisted of a total of 39 questions, including 34 multiple choice questions, 5 open response questions. On the open response students were required to support their answers in written format. All of the questions were created around the 4 major content standards.

| Science Content Strands                  | Number of Questions |
|--|---------------------|
| Life Science (Biology)                   | 10                  |
| Physical Science (Chemistry and Physics) | 11                  |
| Earth and Space Science                  | 8                   |
| Technology/ Engineering                  | 10                  |

### Performance by Question Type: Multiple Choice

This year, as in the past three years, our students performed better than the state and consistently scored in the 80% range.

Standards focusing on Earth Science seemed to represent the most difficulty for our students.

#### Observations/Discussion

Students performed very well in Technology and Engineering, as well as in Physical Science. Students need to review continuously throughout the year since the exam covers material taught in previous years. Previously learned units, such as life cycles and the solar system, need to be reviewed as they are not taught in depth in the 5<sup>th</sup> grade.

### Open Response Questions

Students performed very well on the Open Response questions. On 50% of the questions, our student outscored the state.

As was the case in the Multiple Choice questions, Earth Science standards presented the highest levels of difficulty for our students.

#### Observations/Discussion

We find that with the lower grade levels, teachers are assigned specific units to teach. However, once the student reach the 5<sup>th</sup> grade, in addition to our assigned content units, we also need to review previously taught units, as they were taught to our students 2-3 years ago. An example would be life cycles, which is taught in the 1<sup>st</sup> grade. Our students do not see this material again unless it is reviewed prior to the test in the 5<sup>th</sup> grade.

## III. Analysis of Identified Subgroup Performance

### Special Needs Students

The test was administered to 9 students with special needs, which is approximately, 25% of the population.

|                   |      |
|-------------------|------|
| Performance Level | 2007 |
| Above Proficient  | 11%  |
| Proficient        | 33%  |
| Needs Improvement | 44%  |
| Failing/Warning   | 11%  |

Observations/Discussion

Content reading is extremely difficult for seriously disabled students whose reading levels are significantly below grade level. The amount of vocabulary across the different strand is especially difficult for them.

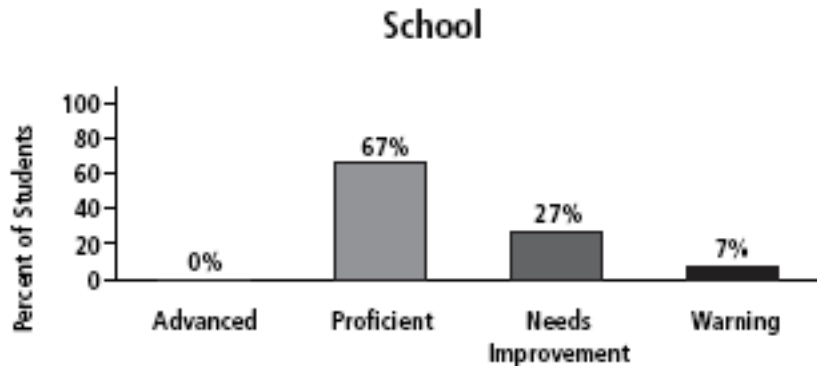
**IV. Recommendations**

Continued modification of lessons for students with special needs is recommended. It is also recommended that hands on experiments occur for all students as frequently as possible as these seem to solidify the concepts better.

**West Tisbury Grade 8 Science**

**Report by Karl Nelson, Science Teacher, West Tisbury School**

**Science and Technology/Engineering**



**I. Overview**

The spring 2007 grade 8 MCAS Science and Technology/Engineering test was based on learning standards in the Massachusetts Science and Technology Curriculum Framework (2006). The Framework identifies four major content strands:

- Earth and Space Science
- Life Science (Biology)
- Physical Sciences( Chemistry and Physics)
- Technology/Engineering

The West Tisbury 2007 8th grade class consisted of 32 students whose results on the Science & Technology MCAS Exam were as follows: 0% of the students scored advanced, 66% scored “Proficient,” 27% of the students “Need Improvement,” and 7% scored in the “Warning” range. According to Boston.Com, in 2004, this same class ranked 169th of 770 schools (22nd percentile) on the 5th grade Science & Technology MCAS exam. This same class in 2007 ranked 17th of 492 schools (4th percentile). This represents a marked increase in our student’s science performance when compared to their Commonwealth peers.

Performance Levels

| Year | Advanced |       | Proficient |       | Needs Improvement |       | Warning Failing |       | Students Included |
|------|----------|-------|------------|-------|-------------------|-------|-----------------|-------|-------------------|
|      | School   | State | School     | State | School            | State | School          | State |                   |
| 2007 | 0        | 3     | 67         | 30    | 27                | 44    | 7               | 24    | 30                |
| 2006 | 2        | 4     | 32         | 28    | 53                | 43    | 13              | 25    | 47                |
| 2005 | 0        | 4     | 44         | 29    | 44                | 41    | 12              | 26    | 50                |
| 2004 | 10       | 5     | 40         | 28    | 38                | 35    | 15              | 31    | 52                |
| 2003 | 10       | 4     | 44         | 28    | 30                | 38    | 16              | 30    | 50                |

Discussions/ Observations:

On this exam there were 10 physical science questions, 8 life science questions, 11 earth science questions and 10 technology questions. The largest discrepancy between the state proficiency scores and the 2007 8th grade class appears to have been in the earth science discipline. Our desire is that our science scores improve by being closer to the state proficiency level and in fact that all students score in the proficient range.

**II. Analysis of Performance by Question Type**

The Grade 5 MCAS for 2007 consisted of a total of 39 questions, including 34 multiple choice questions, 5 open response questions. On the open response students were required to support their answers in written format. All of the questions were created around the 4 major content standards.

| Science Content Strands                  | Number of Questions |
|--|---------------------|
| Life Science (Biology)                   | 8                   |
| Physical Science (Chemistry and Physics) | 10                  |
| Earth and Space Science                  | 11                  |
| Technology/ Engineering                  | 10                  |

**Performance by Question Type:  
Multiple Choice**

Students at the West Tisbury School performed well on the multiple choice portion of this exam. There were 68 points possible on the exam and the average points attained by this class was 53.9 points which is 79% of the total. The state average number of points earned on multiple choice questions was 44.1 which is 65% of the total.

Five multiple choice questions on the exam addressed earth science topics. The following cites those multiple choice items that our students scored below 80% on:

- #7 Glacial deposits indicating climate change - 43%
- #23 Formation of metamorphic rocks - 47%
- #5 Convection currents within the mantle & heat transfer - 70%
- #21 Order of celestial bodies in universe by size - 77%
- #11 Density of the different layers of the earth - 70%

Three multiple choice questions on the exam addressed life science topics. The following cites those multiple choice items that our students scored below 80% on:

- #32 Symbiotic relationships and what they provide each contributor - 59%
- #27 Role of decomposers in ecosystem & specific examples - 77%
- #26 Number of chromosomes and pairs in every cell of human/any organism - 77%

Five multiple choice questions on the exam addressed physical science topics. The following cites those multiple choice items that our students scored below 80% on:

- #34 Positions of a pendulum & potential vs. kinetic energy - 43%
- #22 Speed & motion (manipulation of  $s = d/t$ ) - 53%
- #15 Separation of common mixtures or compounds into elements - 73%
- #10 Physical vs. chemical changes - 77%
- #29 Characteristics of chemical - 77%

Three multiple choice questions on the exam addressed technology topics. The following cites those multiple choice items that our students scored below 80% on:

- #4 Uses for different materials - 70%
- #33 Benefits of mass production of goods vs. custom production - 77%
- #13 Primary function of radio station - 76%

The following standards represent the highest level of difficulty for the majority of students:

- identifying relationships between climate change and geographical changes in the earth over time
- speed & motion
- kinetic vs. potential energy as it relates to the varying degrees of movement in objects
- formation of rocks
- specific benefits within symbiotic relationships
- heat transfer
- variations between the different layers of the earth

#### Observations/Discussion

The questions which seem to give students the most trouble tend to deal with specific situations as they relate to the standards. Most of the areas of difficulty deal with earth science related topics and secondly with the physical science topics of motion and energy transfer.

#### **Open Response Questions**

Students at the West Tisbury School out performed the state average on the Open Response portion of this exam. Of the 40 points attainable on open response questions, our students on average, scored 29.9 points or 65% of the total points as compared to a state score of 19.9 points or 49%

There were three questions that our students performed below the state proficient group. Item number 18 dealt with the identification of planetary characteristics and answering questions as to the same based on a chart with the provided information. The state proficient score was 3.31 pts. whereas our student's average score was 2.50 pts. Item number 37 dealt with the identification and breakdown of food webs - understanding the interdependence of organisms within those food webs. The state proficient score was 2.49 pts. whereas our student's average score was 2.30 pts. Item number 39 dealt with the forces of drag, gravity and thrust acting on a body. The state proficiency score was 3.03 pts. whereas our student's average score was 2.70 pts. The remaining two open response questions dealt with physical science and life science topics where our students scored above the state proficiency scores.

The areas that seemed to give students the most difficulty were reading and interpreting a chart or table to identify planetary characteristics. Also the area of the identification of forces that act on a body, moving or otherwise.

Observations/Discussion

Students may not be getting enough practice at reading and interpreting charts and tables thereby resulting in lower scores than their state proficient peers. I would have expected that my students would have done very well on the life science open response question dealing with food webs since the questions that were asked were discussed and investigated much throughout the year. I do need to stress more the difference between primary, secondary and tertiary consumers. Because of time shortages I did not cover to the extent I should have.

**III. Analysis of Identified Subgroup Performance**

Special Needs Students

The test was administered to 8 students with special needs, which is approximately, 25% of the population.

| Performance Level | 2007 |
|-------------------|------|
| Above Proficient  | 0    |
| Proficient        | 7%   |
| Needs Improvement | 36%  |
| Failing/Warning   | 56%  |

Observations/Discussion

Students with disabilities did not perform well on this exam. Only one student from this subgroup scored proficient and none scored advanced. Within this subgroup weaknesses were seen in all areas of the exam. In fact no particular discipline within the exam stood out as giving students of special needs more difficulty than any other except for the fact that this subgroup seemed to do best in the disciplines of life science and technology.

#### **IV. Recommendations**

One recommendation is that students are exposed to more tables and charts from which they have to glean information to answer specific questions asked of them on various topics.

- It is also recommended that students continue to write in their content area and specifically with regard to answering content area questions such as those that are required of them from the MCAS exam.
- Students need to be given more exposure to speed and motion problems and situations in which they can gain more practice with the topic.
- Students should spend more time studying energy transfer, especially that relating to kinetic vs. potential energy and the movement of objects such as pendulums and the paths of objects during flight.
- Students also require more practical understanding of the relationship between common substances (mixtures & compounds) and the elements/compounds that make them up.
- Students also need to encounter more experience with the topics surrounding the make up of the earth (including density, temperature, thickness & state) and energy transfer within that realm.
- Students also require more experience with the relationship between evidence of climate change and a changing of the earth's surface over time.
- When studying food webs, cover the various tropic levels of consumers.