

**GREENWICH PUBLIC SCHOOLS**  
**MONITORING REPORT**  
**STUDENT ACHIEVEMENT: Mathematics (E-003)**  
**December 18, 2008**

I hereby present my monitoring report on the District Ends Policy “Student Achievement.”  
I certify compliance and that the information contained in this report is accurate.

Signed: \_\_\_\_\_  
(Betty J. Sternberg, Superintendent of Schools)

Date: \_\_\_\_\_

**BROADEST POLICY PROVISION**

*The District shall establish an assessment system that is aligned with the District’s Mission and Vision and provides a comprehensive, consistent and integrated system of student learner objectives / outcomes, assessment, analysis and reporting.*

**EXECUTIVE SUMMARY**

In order to ensure that all students master the objectives of the Greenwich curriculum, student achievement in mathematics is assessed against four broad groups of indicators: 1) aggregate performance of standardized tests such as the Connecticut Mastery Test (CMT) and the Connecticut Academic Performance Test (CAPT), 2) preparation for post secondary options including average scores on the Scholastic Assessment Test (SAT 1) and Advanced Placement Tests (AP), 3) annual growth in achievement on CMT, and 4) performance disaggregated by student subgroup on CMT and CAPT.

Accomplishments include elementary school scores at five year highs at the advanced level on the CMT for the district as a whole and maintenance of recent gains at the goal and proficient levels. Particularly strong gains were made at Glenville, Julian Curtiss, New Lebanon and Parkway. At the middle school level, scores overall are at five-year highs at proficient and goal and maintain gains at the advanced level. WMS saw particularly large increases. On the CAPT, scores continue to fluctuate at the advanced level and remain stable at the goal and proficient levels.

Governance issues include potential recommendations for increased graduation requirements and new courses focusing on Financial Literacy.

Management issues focus on the need for additional support to teachers in math content, instruction and the use of technology. Other management issues include instructional time in both the elementary and middle school levels, efforts to increase the percentage of students reaching goal and advanced on the CMT and CAPT and overall participation rates and mean scores on SAT I.

## I. ACCOMPLISHMENTS / HIGHLIGHTS

1. Elementary CMT4 math scores remained stable at the proficient and goal levels and reached a five year high at the advanced level. Middle school math scores equaled the five year highs at both the goal and proficient levels in 2007-2008 and maintained recent gains at the advanced level. Overall, the district maintained significant gains achieved in 2007 on CMT mathematics which included a five year high at the proficient level.
2. CAPT scores show inconsistent results at the advanced level over the past five years. Scores have risen and fallen by fairly large amounts each year. Results at the goal and proficient levels remain stable over the same time frame with fewer fluctuations.
3. As a response to 2006-2007 CMT4 math data, we focused K-8 professional learning during the 2007-2008 school year on enhancing teachers' instructional knowledge about how to support under-achieving students in both the elementary and middle school mathematics programs. We successfully introduced assessment strategies and related topics in a series of professional learning workshops.
  - Steven Leinwand the former mathematics consultant from the State Department of Education met with grades 6-8 mathematics teachers to help staff refine strategies and develop activities to better meet the needs of our under-performing students.
  - K-5 teachers worked with the Math Coordinator to provide additional professional learning experiences on the use of various assessment components of our math program to measure and report student progress.
4. Through direct interventions by our part-time math coaches in each of the Title 1 schools, specific math initiatives focused on supporting classroom teachers. Coaches provided individual assessments (diagnostic testing) as well as targeted instruction to remediate students' mathematical weaknesses. Significant gains at both Julian Curtiss and New Lebanon School can be traced back in part to these interventions.
5. Through continued refinement of the K-5 Everyday Math Program over the past four years, the district has worked extremely hard to create a vision of the Greenwich Public Schools' Mathematics Program. We have developed a system that allows classroom teachers to interactively share lesson plans, computer activities and math support materials with their colleagues.
6. The middle school teachers completed standardized exams for both Algebra I and Honors Geometry. These assessment materials are in use at all three middle schools. We have also completed the curriculum pacing charts for all A and B level math courses in grades 6, 7 and 8.
7. In middle school we continue to hit our targets for placing students in grade 8 Algebra I. In 2008-2009, 56% of all eighth graders are taking either Algebra I or Geometry, a 20% increase over five years. **Reference: Appendix Table 5**
8. At Greenwich High School in 2006 – 2007, we recognized that our *Bridge to Algebra* and the *Extended Algebra I* classes had a much wider range of reading and problem solving

abilities than we had previously anticipated. In response, for 2007 – 2008 at the request of staff and the Special Education teachers, we expanded the use of differentiated instructional materials beyond Carnegie Learning’s *Pre-Algebra* and *Algebra 1* textbooks. This now includes a Pre-Algebra and an Algebra 1 textbook with a reading level more appropriate for students in these classes.

9. There has been a commitment of the administration to reduce the class size of the *Bridge to Algebra* and *Extended Algebra* classes to a level that allows teachers without aides or a collaborative teacher to more readily and effectively address the individual needs of students.

## II. DATA REVIEW

### 1. CMT Results – District (3-5)

- Overall, CMT mathematics scores in grades 3-5 have shown steady growth at the advanced level over the past five years and have remained stable at the goal and proficient levels. In 2007-2008, 91.5% of students scored at proficient and above, 77.9% at goal and above, and 42.8% at advanced.

**Reference: Appendix Table 2 and Management Issue #3**

### 2. CMT Results – District (6-8)

- CMT mathematics scores in grades 6-8 at the advanced level maintained the gains over the last two years and show steady growth over the past five years. At the goal and proficient levels, scores have remained flat with a slight upward trend. In 2007-2008, 92.4% of students scored at proficient and above, 78.8 % at goal and above, and 46.1% at the advanced level.

**Reference: Appendix Table 3**

### 3. CAPT Results – District (10-12)

- On the 2008 CAPT, the percentage of Greenwich High School students achieving at the advanced level decreased by 8.9 percentage points (43.1% to 34.2%), at the goal level by 3 percentage points (70.6% to 67.6%), and remained constant at 89.2% for those at the proficiency level and above. Subgroups not meeting the Adequate Yearly Progress (AYP) targets were Hispanics, Students with Disabilities, and Economically Disadvantaged.

**Reference: Appendix Table 4 and Management Issue #5**

## III. ELEMENTARY

### 1. CMT Results – Elementary by School

- **Hamilton Avenue:** We do not believe that the 2007-2008 CMT scores accurately reflect Hamilton Avenues’ student progress towards mastery of the goal concepts on the CMT. We will carefully monitor assessment results to determine if other factors may have contributed to the significant decline in results.

- **By School at Proficient:** At most elementary schools, scores at the proficient range increased across the district when compared to 2006-2007 results. However, these scores do remain somewhat flat over the five year period. Both Julian Curtiss and New Lebanon continue to trend upward with an average increase of over 8.6 percentage points over five years.
- **By School at Goal:** Scores of students at the goal level on 2007-2008 CMT declined slightly across the district from 2006-2007. However, Julian Curtiss had almost a 4 percentage point increase in the number of students scoring at goal. The Glenville and North Mianus data also indicate a slight trend upward in the percentage of students performing at goal. The Riverside and International School at Dundee data indicate a higher percentage of students scoring at goal. (Average for the two last schools is 86.8%, while the average for the district slipped to 77.9%).
- **By School at Advanced:** Overall, the district experienced the most significant gains in the advanced range, with seven schools reporting moderate to significant gains at this level. Leading the district's gains and reaching five year highs at the advanced level were Glenville, Julian Curtiss, New Lebanon and Parkway. Riverside, Old Greenwich and Cos Cob all showed increases in the percentage of students performing at this level. While scores at ISD decreased from 2006 – 2007, the five year trend is relatively flat. North Street School is also at high levels at advanced viewed over the past five years but has trended downward slightly over the past three years.

**Reference: Appendix Table 2 and Management Issue #1**

**Table 1: CMT4 Mathematics Comprehension Strand Analysis**

Mathematics Strand Report – Elementary																											
			Numerical Understandings										Geo. & Measure						Working with Data					IU			
Grade	Year	Number Tested	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
3	2007	692	90	99	NT	97	90	96	96	NT	95	89	71	NT	NT	95	75	91	98	NT	95	NT	88	91	NT	NT	54
	2008	674	91	99	NT	97	86	97	95	NT	94	86	68	NT	NT	95	75	81	96	NT	95	NT	88	93	NT	90	60
4	2007	664	94	99	76	91	97	99	93	92	91	95	66	NT	NT	83	74	83	77	NT	97	NT	89	95	93	91	71
	2008	683	93	97	75	93	94	96	91	91	87	95	65	NT	NT	80	70	87	85	NT	96	NT	92	93	92	90	80
5	2007	656	95	92	81	90	85	95	85	91	90	87	70	NT	NT	83	76	77	82	92	98	86	91	86	87	73	86
	2008	637	98	97	82	91	86	96	87	97	90	92	73	NT	NT	83	71	71	83	87	97	83	91	90	93	72	90

**2. CMT Results – Elementary by Strand**

The elementary CMT Mathematics Test is divided into five content areas:

- Numerical and Proportional Reasoning (Strands 1-11)
- Geometry and Measurement (Strands 14-18)
- Working with Data (Strands 19-24)
- Algebraic Reasoning (Strand 22)
- Integrated Understandings (Strand 25)

- **Grade three test results** provide us with baseline data from which we can measure future growth. 2008 results suggest flat growth in individual strands compared to 2007 results with one exception: Strand 25 (Integrated Understandings, often referred to as Open-Ended Problem Solving) has historically been an area of general weakness not only here in Greenwich but also in most other districts across the state. Greenwich third graders have experienced six points of growth on strand 25 between 2007 and 2008 which we attribute to the increased emphasis on problem solving in the Everyday Math program.
- **Grade four students** are also holding onto the growth achieved over the last several years as well as showing continued growth in strands 16, 17, 21, and 25. This is especially encouraging as classroom instruction has focused on improving our students’ ability to estimate solutions to problems measure accurately and solve open-ended problems, which all areas addressed in these strands.

- **Grade five students** are assessed in all but two strands of the twenty-five strand areas. Students in grade five increased or maintained previous growth in the percentage at mastery in seventeen of the twenty-three strands. This is excellent news and adds support to the efforts to change not only how we teach mathematics but what we are teaching.

### 3. CMT Results - Elementary Growth Analysis

Growth charts present an opportunity to examine how the same set of students performs over time. The following (2) charts measure the growth over two grades for successive years as noted in each title. To measure student growth, locate the number at the bottom of each column titled with a CMT level. That number represents the total number of students that performed at that level in the Spring of 2007. Tracing across the chart will provide the spread or distribution of the cohort in the Spring of 2008.

The software used to construct these comparison tables can also identify individual students. Teachers use this information to better target instruction for students who have failed to maintain expected levels of growth. Ideally, the percentage of students in advanced, goal and, to a lesser extent, proficient should increase in the second year and the percentage of students in basic and below basic should decrease. This would signal success in the district's efforts to move students up over time.

- A comparison of grade 3 and 4 students who took the CMT in both 2007 and 2008 reveals that 27% of the students moved up one or more levels, 56% stayed on the same level and 16% moved down one or more levels.

**Table 2: Elementary Growth Data**  
**Change in CMT Mathematics Level Grade 3 to Grade 4**

	Spring 2008					
Spring 2007	Advanced	Goal	Proficient	Basic	Below Basic	Total
Advanced	169	86	7			262
Goal	44	110	31	7	1	193
Proficient	3	30	24	16	3	76
Basic		2	6	9	9	26
Below Basic			2	4	13	19
Total	216	228	70	36	26	<b>576</b>

Up One or More Levels	160
Same Level	325
Down One or More Levels	91

Number of Students Tested in Spring 2007 and in Spring 2006 (cohort)	<b>576</b>
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	2007	2008
Advanced	38	56
Goal	40	34
Proficient	11	13
Basic	6	4
Below Basic	5	3

- A comparison of grade 4 and 5 students who took the CMT in both 2007 and 2008 reveals that 21% of the students moved up one or more levels, while 67% stayed on the same level and 11% moved down one or more levels.

**Table 3: Elementary Growth Data**  
**Change in CMT Mathematics Level Grade 4 to Grade 5**

Spring 2007	Spring 2008					Total
	Advanced	Goal	Proficient	Basic	Below Basic	
Advanced	201	68	1			270
Goal	36	115	28	4		183
Proficient		15	25	9	1	50
Basic		1	5	12	2	20
Below Basic			1	4	8	13
Total	237	199	60	29	11	<b>536</b>

Up One or More Levels	113
Same Level	361
Down One or More Levels	62

	2006	2007
Advanced	44	50
Goal	37	35
Proficient	11	9
Basic	5	4
Below Basic	2	2

Number of Students Tested in Spring 2007 and in Spring 2006 (cohort)	<b>536</b>
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#### 4. CMT Results – Elementary DRG Comparisons

**Table 4: Elementary – DRG Comparisons  
DRG Comparison across Grades 3-5**

Spring 2008			
	GPS	DRG B	DRG A
<b>Math Proficient</b>	91.7	93	95.8
<b>Math Goal</b>	78.5	80.4	86.3
<b>Math Advanced</b>	43.5	43.8	50.4

- At grades three through five, Greenwich does not compare favorably to either DRG B or DRG A. The gap between Greenwich and DRG B varies between 1.9 percentage points at goal to a relatively non-existent gap of 0.3 at advanced. However, the gap widens considerably when we compare ourselves to DRG A: 7.8 points at goal, 6.9 points at advanced and 4.1 points at proficient. We recognize these shortfalls and despite individual school and subgroup gains, more progress is needed to close these gaps.  
**Reference: Management Issue #1**

#### IV. MIDDLE SCHOOL

##### 1. CMT Results – Middle School by School, Reference: Appendix Table 3

- **Eastern Middle School**  
Eastern’s CMT scores remain at very high levels and most grades meet or exceed DRG A averages. At the advanced level, Eastern maintained the large increases of the past two years, while the percentage of students scoring at goal and proficient remain stable or near five year highs.
- **Central Middle School**  
When viewed over five years, Central’s scores reflect a relatively stable percentage of students at goal and flat scores at proficient. The largest gains have been in the percentage of students reaching advanced despite a drop of almost 3 percentage points over last year when they reached a five year high. CMS scores exceed DRG B at advanced and are just slightly lower at goal and proficient.
- **Western Middle School**  
Western Middle school made inroads in closing the achievement gap within the district. From 2007 to 2008, CMT scores reflect an increase in the percentage of students scoring at all three levels (proficient, goal and advanced). Data indicate a five percentage point increase at the advanced level this year and an upward trend over the past five years. The five year trend at WMS is also up at the proficient level. At the goal level, the trend is flat to downward. WMS students continue to score below DRG A and DRG B students and below CMS and EMS students.

**Table 5: CMT4 Mathematics Comprehension Strand Analysis**

Mathematics Strand Report – Middle																											
		Numerical Understandings										Geo. & Measure					Working with Data					IU					
Grade	Year	Number Tested	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
6	2007	655	97	92	86	87	84	95	71	73	71	91	67	76	NT	NT	74	58	75	94	89	75	76	85	88	68	56
	2008	644	97	88	85	87	85	91	60	71	71	86	66	71	NT	NT	89	60	84	95	89	70	86	85	87	71	63
7	2007	636	75	81	77	78	82	NT	78	74	72	91	70	75	60	NT	76	61	76	71	84	80	74	76	68	64	72
	2008	647	78	86	83	83	83	NT	76	77	81	91	72	79	71	NT	81	63	77	81	85	78	85	86	69	75	73
8	2007	628	87	NT	83	88	87	NT	67	81	83	NT	58	80	77	NT	60	68	71	85	90	75	75	76	77	81	45
	2008	639	79	NT	77	87	87	NT	62	75	77	NT	58	78	74	NT	56	59	60	82	82	84	80	71	75	81	57

**2. CMT Results – Middle School by Strand**

The CMT in grades six through eight continues the format established with the elementary school exam. Strand 14 (time) is no longer tested and strand 6 (basic facts) is not included after grade 6.

- **Grade Six** results are mixed. Gains were achieved in several areas which were long considered to be weak areas, strand 15 – approximating measures and strand 25 - integrated understandings. However, these gains were somewhat offset by lower percentages in numerical estimations (strand 10) and computation (strand 7).
- **Grade Seven** had results in 2008 that are very strong in comparison to the previous year. The percentage of seventh grade students at mastery trends upward in all but two strands, 7 (computation) and 20 (Data Analysis).
- **Grade Eight** results are, in light of the strong growth seen in grade 7, somewhat disappointing. The lack of measurable growth, especially in strands 15-19 (measurement) is under review. Middle School teachers are planning to reemphasize these concepts through repeated exposure, support materials in addition to the textbook and through the use of a new software tool, “Gizmos”.

### 3. CMT Results - Middle School Growth

(refer to page 6 for a explanation of growth charts)

- A comparison of grade 5 and 6 students who took the CMT in both 2007 and 2008 reveals that 15% of the students moved up one or more levels, 71% stayed on the same level and 13% moved down one or more levels.

**Table 6: Elementary - Middle School Growth Data  
Change in CMT Mathematics Level Grade 5 to Grade 6**

Spring 2007	Spring 2008					Total
	Advanced	Goal	Proficient	Basic	Below Basic	
Advanced	217	52	1			270
Goal	27	133	13	1		174
Proficient	1	31	32	10	3	77
Basic		2	7	4	5	18
Below Basic			1	6	15	22
Total	245	218	54	21	23	561

Up One or More Levels	85
Same Level	401
Down One or More Levels	75

Number of Students Tested in Spring 2007 and in Spring 2006 (cohort)	561
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	2006	2007
Advanced	44	48
Goal	39	31
Proficient	10	14
Basic	4	3
Below Basic	4	4

- A comparison of grade 6 and 7 students who took the CMT in both 2007 and 2008 reveals that 12% of the students moved up one or more levels, 75% stayed on the same level and 13% moved down one or more levels.

**Table 7: Middle School Growth Data  
Change in CMT Mathematics Level Grade 6 to Grade 7**

	Spring 2008					
Spring 2007	Advanced	Goal	Proficient	Basic	Below Basic	Total
Advanced	249	31				280
Goal	45	132	26	2	1	206
Proficient		14	43	9	1	67
Basic			9	10	4	23
Below Basic			1	6	10	17
Total	294	177	79	27	16	<b>593</b>

Up One or More Levels	74
Same Level	444
Down One or More Levels	75

Number of Students Tested in Spring 2007 and in Spring 2006 (cohort)	<b>593</b>
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	2006	2007
Advanced	49	47
Goal	30	35
Proficient	13	11
Basic	5	4
Below Basic	3	3

- A comparison of grade 7 and 8 students who took the CMT in both 2007 and 2008 reveals that 18% of the students moved up one or more levels, 74% stayed on the same level and 9% moved down one or more levels.

**Table 8: Middle School Growth Data**  
**Change in CMT Mathematics Level Grade 7 to Grade 8**

Spring 2007	Spring 2008					Total
	Advanced	Goal	Proficient	Basic	Below Basic	
Advanced	211	29	1			241
Goal	28	116	30	3		177
Proficient		14	53	17	1	85
Basic			2	7	14	23
Below Basic				2	6	8
Total	239	159	86	29	21	<b>534</b>

Up One or More Levels	95
Same Level	393
Down One or More Levels	46

Number of Students Tested in Spring 2007 <b>and</b> in Spring 2006 (cohort)	<b>534</b>
-----------------------------------------------------------------------------	------------

	2006	2007
Advanced	45	45
Goal	30	33
Proficient	16	16
Basic	5	4
Below Basic	4	1

- A comparison of grade 6 and 8 students who took the CMT in both 2005 and 2008 reveals that 21% of the students moved up one or more levels, 71% stayed on the same level and 8% moved down one or more levels.

**Table 9: Middle School Growth Data**  
**Change in CMT Mathematics Level Grades 6 (2004-2005) to Grades 8 (2007-2008)**

Spring 2005	Spring 2008					Total
	Advanced	Goal	Proficient	Basic	Below Basic	
Advanced	185	46	2			233
Goal	22	113	28	4		167
Proficient		15	49	16		80
Basic			5	6	8	19
Below Basic				1	7	8
Total	207	174	84	27	15	<b>507</b>

Up One or More Levels	104
Same Level	360
Down One or More Levels	43

	2007	2008
Advanced	41	46
Goal	34	33
Proficient	17	16
Basic	5	4
Below Basic	3	1

Number of Students Tested in Spring 2008 and in Spring 2005 (cohort)	<b>507</b>
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- Four Year Elementary to Middle School Growth Analysis:** Although the cohort becomes much smaller when examined over four years, it does create an interesting comparison. Looking at grade 4 and 8 students who took the CMT in the Fall of 2004 and the Spring of 2008, the chart reveals that 27% of the students moved up one or more levels, 60% stayed on the same level and 13% moved down one or more levels. Consistent with previous middle school cohort analysis, the largest percentage of growth occurs at the advanced level. These charts seem to confirm our understanding of how students learn mathematics. By spiraling or “revisiting” major topics over time, more students become mathematical proficient by developing a deeper conceptual understanding of the concepts, operations and relations.

**Table 10: Elementary – Middle School Growth Data  
Change in CMT Mathematics Level Grades 4 (2003-2004) to Grade 8 (2007-2008)**

Fall 2004 Grade 4	Spring 2007 – Grade 8					Total
	Advanced	Goal	Proficient	Basic	Below Basic	
Advanced	142	72	2		1	217
Goal	31	86	23	5	3	148
Proficient		21	33	9	2	65
Basic			6	3	5	14
Below Basic				1	4	5
<b>Total</b>	<b>173</b>	<b>179</b>	<b>64</b>	<b>18</b>	<b>15</b>	<b>449</b>

Up One or More Levels	122
Same Level	268
Down One or More Levels	59

Percentage of Students Tested in Spring 2007 and in Spring 2006 (cohort)	<b>449</b>
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	2003-2004	2007-2008
Advanced	39	48
Goal	40	33
Proficient	14	14
Basic	4	3
Below Basic	3	1

**Table 11: Middle School – DRG Comparisons**

<b>DRG Comparison across Grades 6-8 – Spring 2008</b>			
	<b>GPS</b>	<b>DRG B</b>	<b>DRG A</b>
<b>Math Proficient</b>	92.4	93.9	96.6
<b>Math Goal</b>	78.8	82.3	88.7
<b>Math Advanced</b>	46.1	45.9	54.2

- At grades six through eight, Greenwich does not compare favorably to either DRG B or DRG A. Greenwich scores are 1.5 percentage points lower than the DRG B average at the proficient level and 3.5 percentage points lower at the goal level. Greenwich slightly exceeds the DRG B average at the advanced level. Greenwich scores at all levels remain significantly below the DRG A averages.

**Reference: Appendix Table 3 for an analysis of middle school results over five years**

**V. NARROWING GAPS (3-8) An analysis of five year trends**

**Reference: Appendix Table 1**

1. Analysis of subgroups, aggregated over grades 3-8, reveals generally positive change on the mathematics CMT. Significant growth has been achieved at the advanced level with double-digit growth in the percentage of Hispanic and ELL students scoring at this level. Scores of Hispanic students (13.5% of the GPS population) and ELL students continued to trend upward in all three levels (proficiency, goal and advanced) over the last five years. Scores for Free and Reduced Lunch (F/R) students (8.8% of the GPS population) are also trending up with the highest gains noted in the percentage of students reaching proficient. Scores of Black students (2.4% of the GPS population) remain inconsistent with decreases in the most recent test scores for students scoring at each of the three levels. While significant gaps once existed between ELLs and the district, these gaps appear to be closing more rapidly than in any of the other subgroups. Scores in the proficient level for Special Education students are decreasing with a slight increase in the percentage of students scoring at or above goal. Scores of Asians students continue to out pace the district as a whole, while all other subgroups remain below the general GPS population by relatively wide margins.

A number of factors contribute to these scores. Most importantly, we have increased elementary math instruction time to 60 minutes per day across all grades. By standardizing the mathematics program materials across all levels we have been able to effectively focus our professional learning to support district goals. Heterogeneously grouped classes have contributed to higher expectations for all students.

2. CMT4 subgroup data indicate that there continues to be little to no gap in the performance of males and females on CMT mathematics at all levels. In 2006-2007, males scored just 2.4 percentage points higher than females at the advanced level and .9 percentage points higher at the goal level. Females scored 1.1 percentage points higher than males at the proficient level.
3. Central Middle School and the High School have been cited as not making Adequate Yearly progress in 2007-2008 in mathematics. CMT results for Central Middle School indicate that the school did not meet the target in math proficiency in two sub-groups, students with disabilities and economically disadvantage students. Preliminary results for Greenwich High School indicate that although it met targets in fourteen of the eighteen indicators for meeting proficiency, it did not meet targets set for Hispanic students, students with disabilities and economically disadvantaged students.

**Reference: Management Issue #3**

## **VI. GREENWICH HIGH SCHOOL**

### **1. CAPT Results – Greenwich High School**

- On the 2008 CAPT, the percentage of Greenwich High School students achieving at the advanced level decreased by 8.9 percentage points (43.1% to 34.2%), at the goal level by 3 percentage points (70.6% to 67.6%), and remained constant at 89.2% for those at the proficiency level and above. Subgroups not meeting the Adequate Yearly Progress (AYP) targets were Hispanics, Students with Disabilities, and Economically Disadvantaged.

**Reference: Appendix Table 8 and Management Issue #5**

### **1. CAPT Analysis by Score and Course**

- In Table 12 below, student math CAPT scores were analyzed by the course in which students were enrolled in their sophomore year. (1 = Below Basic, 2 = Basic, 3 = Proficient, 4 = Goal, and 5 = Advanced). Identified areas of concern have been highlighted and will be addressed in 2008 – 2009.

**Reference: Management Issue #3**

**Table 12: Greenwich High School - CAPT Scores by Course**

Course	CAPT Score					# of Students
	1	2	3	4	5	
ALGEBRA 1	1	4	10	2	1	18
ALGEBRA 2A			7	28	35	70
ALGEBRA 2B	1		3	1		5
AP CALCULUS BC					1	1
AP STATISTICS					1	1
BRIDGE TO ALGEBRA	3	1				4
ESL MATH	1					1
EXTENDED ALGEBRA 1	13	13	18	1		45
GEOMETRY A		1	50	134	31	216
GEOMETRY B	6	14	50	27	1	98
HONORS PRE-CALCULUS				2	41	43
HONORS ALGEBRA 2				14	100	114
HONORS GEOMETRY				10	17	27
PRE-CALCULUS					3	3
No math class listed*	10	8	11	5	1	35
<b>Grand Total</b>	<b>35</b>	<b>41</b>	<b>149</b>	<b>224</b>	<b>232</b>	<b>681</b>

**2. CAPT Analysis by Course and Strand**

- In Table 13, the math CAPT scores were analyzed by the courses targeted in Table 12 and the strands tested (4 strands, 12 points each). Curriculum concerns in each course are being addressed in the classroom in 2008 – 2009.

**Reference: Management Issue #5**

**Table 13: Greenwich High School - CAPT Analysis by Course and Content Strand**

<b>NUMERIC</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>NO. OF STUDENTS</b>	<b>AVG</b>
EXT ALGEBRA 1	13	7	7	4	1	4	3	4	2					45	2.644
ALGEBRA 1	1	4	1	4	2		3	1				2		18	4.056
GEOMETRY B	7	7	7	13	18	8	16	8	5	5	2	2		98	4.602
GEOMETRY A			2	11	14	24	27	26	25	35	33	13	6	216	7.486
<i>Total of each score --&gt;</i>	21	18	17	32	35	36	49	39	32	40	35	17	6	377	
<b>ALGEBRAIC</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>NO. OF STUDENTS</b>	<b>AVG</b>
EXT ALGEBRA 1	9	7	8	3	7	4	4	2	1					45	2.800
ALGEBRA 1	1	1	2	2	5	3	1	1	1			1		18	4.333
GEOMETRY B	3	7	8	10	18	15	17	8	6	4	1		1	98	4.735
GEOMETRY A	1	1	4	7	14	34	30	41	47	26	9	2		216	6.690
<i>Total of each score --&gt;</i>	14	16	22	22	44	56	52	52	55	30	10	3	1	377	
<b>GEOMETRY</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>NO. OF STUDENTS</b>	<b>AVG</b>
EXT ALGEBRA 1	20	16	5	2	1		1							45	0.933
ALGEBRA 1	3	3	4	2	4	1		1						18	2.500
GEOMETRY B	21	15	14	5	9	10	6	4	4	7	2	1		98	3.408
GEOMETRY A	3	6	10	22	12	17	19	31	30	25	21	13	7	216	6.750
<i>Total of each score --&gt;</i>	47	40	33	31	26	28	26	36	34	32	23	14	7	377	
<b>STATISTICS</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>NO. OF STUDENTS</b>	<b>AVG</b>
EXT ALGEBRA 1	7	12	8	6	3	4	4		1					45	2.444
ALGEBRA 1	3	3	3		2	3		3		1				18	3.444
GEOMETRY B	5	14	12	14	14	8	11	8	4	4	2	2		98	4.163
GEOMETRY A	3		8	12	18	18	32	31	38	25	17	13	1	216	6.838
<i>Total of each score --&gt;</i>	18	29	31	32	37	33	47	42	43	30	19	15	1	377	

### 3. CAPT Analysis by DRG

- We acknowledge the underperformance of the GHS population compared to other students in DRG B as well as those in DRG A. A complete analysis of the students in our subgroups not meeting AYP was done, along with an analysis of the courses in which our students were enrolled, the teachers teaching the courses, and the strands in which our students showed weaknesses. Measures have been put into place for the 2008 – 2009 school year to address the issues identified in the analysis.

**Reference: Management Issue #5**

**Table 14: Greenwich High School - 2007-2008 Mathematics DRG Comparisons**

Advanced	CAPT	
	2007	2008
DRG A	*	53.1%
DRG B	35.7%	36.9%
Greenwich	43.2%	34.4%
Goal	CAPT	
	2007	2008
DRG A	*	86.8%
DRG B	67.4%	72.8%
Greenwich	<b>70.8%</b>	<b>68.0%</b>
Proficient	CAPT	
	2007	2008
DRG A	*	97.2%
DRG B	92.4%	93.7%
Greenwich	89.7%	89.8%

\* = Data Not Available

### 2. AP/Advanced Results – Greenwich High School

- On the May, 2008 Advanced Placement Exams in Calculus AB and Calculus BC, the scores continued to remain at or near their record high levels. With increased enrollment in AP Statistics, the scores have shown a steady increase.

**Table 15: Greenwich High School - Advanced Placement Mathematics Results**

		2003-2004	2004-2005	2005-2006	2006-2007	2007-2008
<b>Calculus AB</b>	# Tested	60	65	95	75	81
	Mean Score	3.5	4.0	4.0	4.1	4.3
<b>Calculus BC</b>	# Tested	26	27	40	58	54
	Mean Score	4.6	4.6	4.7	4.6	4.5
<b>Statistics</b>	# Tested	23	38	40	68	72
	Mean Score	3.9	3.6	3.5	3.8	3.9

**Table 16: Greenwich High School - Enrollment in AP and Advanced Mathematics Courses**

	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009
<b>AP Calculus AB</b>	57	92	94	100	73
<b>AP Calculus BC</b>	29	38	58	56	49
<b>AP Statistics</b>	48	47	64	80	78
<b>Advanced Calculus</b>	11	12	22	24	21
<b>Non AP Calculus</b>	63	84	71	37	66

**3. Scholastic Assessment Test 1 Mathematics (SAT I) – Greenwich High School**

- While the participation rate on the Math SAT I decreased from 93% to 90% the mean score increased from 564 in 2006-2007 to 578 in 2007-2008.

**Table 17: Greenwich High School - SAT Change in Mean Score Over Five Years**

	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008
<b>% of Graduates Tested</b>	92%	88%	91%	93%	90%
<b>Mean Score</b>	576	586	582	564	578

## VII. GOVERNANCE ISSUES

1. There is currently a discussion at the Connecticut Department of Education regarding Secondary School reforms. One of the recommendations under consideration is to increase the mathematics graduation requirement from three credits to four credits. Within the context of an overall review of graduation requirements for all subject areas coming out of the Secondary Schools Redesign Committee, we will consider making a recommendation to the Board through the Superintendent of Schools.
2. A recent federal executive order created a President's Advisory Council on Financial Literacy. The Greenwich Public Schools will explore the addition of a math credited course that addresses financial literacy, based on the National Mathematics Standards for Financial Literacy. Should this course be proposed, it will come to the Board as a new course at GHS.

## VIII. MANAGEMENT ISSUES

### 1. K-5 Early Intervention:

Relatively strong gains in student CMT math scores at two of the three Title I schools are due in part to the direct instructional support provided by grant-funded part-time certified math staff to the classroom teacher. At each school, these staff members provided direct instruction, assessment and remediation activities for students who performed at or below goal. 2007-2008 test results reflect the overall success of these interventions, as significantly more students reached the math goal or beyond. Budget restraints prevent us from providing these services in 2008-2009 which raises the possibility that we may not be able to duplicate this level of growth.

#### Progress on this issue:

- Although the reallocation of Title II funds for other professional learning needs will prevent us from continuing these supports, we have added math coaching responsibilities to the role of our Elementary Instructional Coaches. These staff members attended an eight hour training workshop so that they can advise classroom teachers on current best practices for delivering math instruction.
- Beginning in 2008, we are conducting a review of intervention programs including diagnostic assessments and intervention activities.
- We have extended The Everyday Math Program into the Pre-School program. We are training Pre-School teachers to use all the components of the program and include daily instruction in mathematics. It is generally felt that incoming kindergarten students who have participated in the Pre-School math program will be better prepared to be successful in primary mathematics.

### 2. Middle School Instructional Time:

In the middle school the number of available minutes for instruction ranges in blocks of 43 to 47 minutes. Two significant issues have surfaced as the Connected Math Program lessons are designed to be delivered in 60 minute blocks of time. The math teachers have found it necessary to cut the number of minutes that students have to interact with the materials in order to fit the lesson into the scheduled time. The middle schools also offer both Algebra I and Honors level Geometry, both of these courses are taught to the standards of the Greenwich High School curriculum objectives. Middle School teachers are required to

complete these high school equivalent courses in less overall time than is available to their GHS colleagues. As a result, course objectives must be modified in order to fit into the middle school schedule and the amount of time students have to engage in the lessons is reduced when compared to GHS math classes.

**Progress on the issue:**

- This issue has been addressed in previous mathematics monitoring reports. Increasing middle school academic instructional time continues to be discussed at the Principals meetings and will be discussed at the Secondary School Review Committee. Both groups share the concern raised and we look forward to a recommendation from the two groups.

**3. Increasing the Percentage of Middle School Students Reaching Goal or Higher on the CMT**

Setting a district goal of 80% of our students at or above goal in each of the three schools and across all three grades is realistic and is the continued focus of our middle school math improvement plan.

**Progress on this issue:**

- The 6-8 math staff has used grade-level meeting time to discuss how best to address raising all students CMT scores to goal or better. We have completed an analysis of the strands that have continued over time to be weak and have identified areas where the alignment with our curriculum could be strengthened. All teachers have completed a recent training with a new software product that can be used to instruct the strands in a new and engaging manner for students. This Internet-based program can become a classroom tool and also be used at home, during the summer and as preparation for taking the CMT. The teachers have planned professional learning time to further the use of this tool and develop lessons and activities to support instruction.

**4. Increasing Overall Participation Rates and Mean Scores - SAT I**

**Progress on this issue:**

- After a decline in the SAT scores in 2006-2007, the class of 2008 showed a significant gain. Analysis of the scores and in what courses students were enrolled in their junior year continues to show that those scoring at the lower end of the spectrum tend to be enrolled in Algebra 2B. The GHS math staff is currently integrating SAT prep questions into the Algebra 2B

**5. Increasing the Percentage of Students Reaching Goal or Higher on the CAPT**

**Progress on this issue:**

- We performed an extensive data analysis of the CAPT data received and identified areas of weakness. Analysis by course in which students were enrolled in the year they took the CAPT showed that the courses where there is the most concern and where we can effect the most change are Bridge to Algebra, Extended Algebra 1, Algebra 1, Geometry B, and Geometry A. We have also identified those 10<sup>th</sup> grade students who are not enrolled in a math course this year, but are required to take the CAPT, and will increase the communication about curriculum and supplemental materials with the staff responsible for preparing these students for CAPT.

The analysis shows that students who are off level (students taking Bridge to Algebra or Algebra 1 as sophomores) are not being exposed to the concepts in the geometry strand needed for the CAPT. For those 10th graders in these courses, we will integrate a unit on geometric concepts into the course. *Numerical and Proportional Reasoning* continues to be an area of concern for those in the identified courses. We developed problem sets and distributed them to teachers to integrate into the

curriculum this year. For those 10<sup>th</sup> graders enrolled in Geometry B and Geometry A, we developed problem sets and distributed them to teachers emphasizing *Algebraic Reasoning* and *Probability and Statistics*, two areas identified by the Course/Strand analysis.

In response to the drop in percentage points at the Advanced level, students enrolled in the honors-level courses (Geometry and Algebra 2) will have CAPT practice addressing all 4 strands integrated into the course. Teachers will use released CAPT questions for students practice, and will share the model responses from these questions for students to compare and improve their responses in order to achieve top scores.

All math courses in which 9<sup>th</sup> and 10<sup>th</sup> grade students are enrolled will include grid-in questions on informal and formal assessment to familiarize the students with this type of question on the CAPT.

In the Bridge to Algebra, Algebra 1 courses, and Geometry A and B courses, one complete cycle from February 17th to March 3rd will be devoted to problem solving, using CAPT released items.

## **IX. EXCEPTIONS**

1. None

## **X. DESCRIPTION OF STANDARDIZED MEASURES**

The **Connecticut Mastery Test (CMT)** is a state-mandated program that assesses and reports the achievement of students in grade three through grade eight in three areas: Mathematics, Reading, and Writing. Prior to the 2005-2006 school year, the CMT was administered in grades four, six and eight. The CMT assesses core academic competencies and serves as a key indicator of a student's readiness to successfully access the high school curriculum. Student scores are characterized by performance level: 5-Advanced, 4-Goal, 3-Proficient, 2-Basic and 1-Below Basic. Students scoring at the advanced level are performing at the top of all students across the state. Students scoring in the goal category possess the knowledge, ability, and skill necessary to successfully perform the tasks and assignments appropriately expected of a student with minimal teacher assistance. Students who score in the proficient category are able to successfully participate in their regular grade appropriate course work. The proficient standard is used to calculate adequate yearly progress under No Child Left Behind (NCLB). Students scoring below the proficient level require intervention to accelerate their academic progress.

The **Connecticut Academic Performance Test (CAPT)** is a state-mandated program that assesses and reports the achievement of tenth grade students in four areas: Mathematics, Science, Reading Across the Disciplines, and Writing Across the Disciplines. Student scores are characterized by performance level: 5-Advanced, 4-Goal, 3-Proficient, 2-Basic and 1-Below Basic. Students scoring at the advanced level are performing at the top of all students across the state. Students scoring in the goal category possess the knowledge, ability, and skill necessary to successfully perform the tasks and assignments appropriately expected of a student with minimal teacher assistance. Students who score in the proficient category are able to successfully participate in their regular grade appropriate course work. The proficient standard is used to calculate adequate yearly progress under No Child Left Behind (NCLB). Scoring at the proficient level or higher on the mathematics, reading and writing subtests is required for graduation from Greenwich High School. Students scoring below the proficient level require intervention to accelerate their academic progress.

The **Scholastic Assessment Test (SAT I)** is a measure of developed verbal and mathematical skills important for success in college. Scores are reported on a scale from 200 to 800. SAT1 is a college entrance examination and student participation is voluntary.

**Advanced Placement (AP)** is a College Board-sponsored program administered and operated by Educational Testing Service. The AP Program gives high school students an opportunity to take college-level courses and exams, and earn credit, advanced placement, or both for college. Greenwich High School offers sixteen advanced placement classes in five different disciplines. Examinations are administered in May and scored by the Educational Testing Service. AP Examination grades are reported on a 5-point scale as follows: 5-Extremely Well Qualified, 4-Well Qualified, 3-Qualified, 2-Possibly Qualified, 1-No Recommendation.

# Appendices

**Table 1: Connecticut Mastery Test Mathematics by Student Subgroup (%)**

		2003-2004	2004-2005	2005-2006	2006-2007	2007-2008
District (all schools and grades)	Advanced	35.4	34.3	41.4	45.0	44.4
	Goal	76.6	77.1	76.9	79.7	78.3
	Proficient	91.2	90.8	91.5	91.9	91.9
Asian	Advanced	50.0	53.7	61.2	63.3	59.7
	Goal	80.8	85.4	91.2	91.8	87.9
	Proficient	95.4	94.5	96.8	96.2	95.0
Black	Advanced	4.7	6.0	6.8	9.8	8.3
	Goal	46.5	32.0	35.2	42.4	32.3
	Proficient	60.5	64.0	63.6	67.4	63.5
Hispanic	Advanced	7.1	13.0	18.9	19.5	20.0
	Goal	49.0	53.6	51.6	56.8	54.2
	Proficient	71.7	79.3	80.0	82.2	81.1
White	Advanced	38.1	36.7	43.8	48.4	48.0
	Goal	80.4	81.5	80.5	83.4	82.8
	Proficient	94.1	93.1	93.5	93.8	94.3
Female	Advanced	35.6	35.0	39.1	43.8	43.1
	Goal	77.3	77.5	76.6	79.8	77.8
	Proficient	92.1	92.2	92.5	92.1	92.5
Male	Advanced	35.2	33.7	43.6	46.2	45.5
	Goal	76.0	76.7	77.1	79.6	78.7
	Proficient	90.5	89.4	90.6	91.7	91.4
Special Education	Advanced	4.7	6.1	11.1	10.5	9.3
	Goal	34.7	26.4	38.4	39.1	38.9
	Proficient	67.9	52.8	63.8	62.8	63.4
English Language Learners	Advanced	2.9	8.6	24.0	21.7	20.2
	Goal	11.8	37.1	56.2	54.7	53.5
	Proficient	32.4	62.9	78.5	76.9	75.9
Free or Reduced Lunch	Advanced	6.2	6.1	7.8	9.9	10.0
	Goal	37.9	33.7	37.4	47.5	40.1
	Proficient	61.4	65.2	70.1	73.4	72.8

**Table 2: Connecticut Mastery Test Mathematics by Elementary School (%)**

		2003-2004	2004-2005	2005-2006	2006-2007	2007-2008
District (all schools grades 3-5)	Advanced	37.4	32.1	37.5	42.5	42.8
	Goal	77.1	75.8	75.1	81.0	77.9
	Proficient	91.2	91.3	90.9	91.7	91.5
Cos Cob	Advanced	36.8	25.8	27.8	35.0	36.6
	Goal	76.5	74.2	66.0	74.4	71.6
	Proficient	88.2	92.4	83.7	87.2	87.8
Glenville	Advanced	39.7	26.1	30.1	42.1	44.4
	Goal	76.9	71.0	71.0	78.7	81.1
	Proficient	93.6	87.0	87.4	90.2	90.6
Hamilton Avenue	Advanced	21.4	11.1	20.0	24.1	12.0
	Goal	59.5	53.3	56.7	69.3	47.9
	Proficient	78.6	77.8	86.7	90.5	73.9
Dundee	Advanced	50.0	46.6	50.3	58.6	49.5
	Goal	87.1	77.6	84.9	89.0	84.6
	Proficient	93.6	93.1	96.1	93.4	95.7
Julian Curtiss	Advanced	30.2	29.9	25.4	45.7	47.3
	Goal	67.9	68.7	65.1	75.0	78.7
	Proficient	81.1	89.6	84.1	86.4	90.7
New Lebanon	Advanced	5.9	2.6	10.3	18.5	18.6
	Goal	38.2	47.4	47.9	65.6	52.0
	Proficient	64.7	65.8	76.1	79.8	82.4
North Mianus	Advanced	44.0	35.3	40.1	50.2	50.7
	Goal	81.3	80.9	80.2	83.1	84.4
	Proficient	97.3	95.6	93.7	91.3	95.7
North Street	Advanced	27.6	26.4	44.4	42.7	41.6
	Goal	79.0	78.0	81.2	84.6	82.0
	Proficient	96.1	96.7	96.2	95.7	94.7
Old Greenwich	Advanced	49.2	53.3	45.1	42.6	46.7
	Goal	88.5	89.6	83.2	85.8	83.2
	Proficient	96.7	94.8	92.9	94.9	94.4
Parkway	Advanced	46.6	31.8	41.1	42.9	47.8
	Goal	86.3	75.3	79.7	82.8	78.3
	Proficient	97.3	92.9	95.1	93.9	93.6
Riverside	Advanced	38.1	45.6	58.7	49.4	54.3
	Goal	79.4	95.6	91.3	91.0	88.9
	Proficient	95.2	100.0	99.0	98.4	95.9

**Table 3: Connecticut Mastery Test Mathematics by Middle School (%)**

		<b>2003-2004</b>	<b>2004-2005</b>	<b>2005-2006</b>	<b>2006-2007</b>	<b>2007-2008</b>
District (all schools grades 6-8)	Advanced	34.5	35.7	45.6	47.8	46.1
	Goal	76.7	78.2	78.8	78.5	78.8
	Proficient	91.4	90.9	92.1	92.4	92.4
Central	Advanced	34.5	39.5	46.3	50.7	44.6
	Goal	76.5	80.7	77.8	81.4	78.5
	Proficient	92.9	93.0	91.4	93.7	92.6
Eastern	Advanced	46.8	39.1	56.8	59.7	57.9
	Goal	87.5	87.1	88.9	87.8	90.4
	Proficient	96.5	95.1	96.9	96.1	96.6
Western	Advanced	20.1	26.9	29.8	28.2	31.7
	Goal	64.1	64.3	66.3	62.4	62.8
	Proficient	83.7	83.2	86.3	85.7	86.4

**Table 4: Connecticut Academic Performance Test Mathematics (%)**

		2003-2004	2004-2005	2005-2006	2006-2007	2007-2008
GHS (Grade 10)	Advanced	39.1	42.8	35.1	43.1	34.2
	Goal	66.9	69.2	65.2	70.6	67.6
	Proficient	88.5	87.7	90.7	89.2	89.2
Asian	Advanced	52.4	57.1	52.3	66.7	58.8
	Goal	76.2	85.7	77.3	82.2	80.4
	Proficient	97.6	91.8	95.5	93.3	92.2
Black	Advanced	The number of students in this subgroup is insufficient for reporting purposes.				
	Goal					
	Proficient					
Hispanic	Advanced	18.2	12.9	5.2	16.5	8.6
	Goal	27.3	36.5	25.8	34.0	28.4
	Proficient	57.6	61.2	72.2	70.1	64.2
White	Advanced	41.5	47.8	40.9	47.7	36.8
	Goal	72.4	75.3	73.8	79.0	74.5
	Proficient	93.0	92.3	95.0	94.3	94.2
Female	Advanced	36.1	42.7	32.5	44.7	31.2
	Goal	64.0	69.0	67.2	68.1	65.4
	Proficient	87.8	91.0	91.3	89.4	90.8
Male	Advanced	41.9	42.9	37.5	41.6	37.2
	Goal	69.8	69.5	63.3	72.8	69.6
	Proficient	89.2	84.6	90.2	89.0	87.6
Special Education	Advanced	10.5	12.2	6.1	10.5	4.9
	Goal	30.5	24.4	20.7	32.9	27.5
	Proficient	65.7	56.1	64.6	60.5	61.8
English Language Learners	Advanced	The number of students in this subgroup is insufficient for reporting purposes.				
	Goal					
	Proficient					
Free or Reduced Lunch	Advanced	8.9	6.1	2.6	8.2	5.4
	Goal	20.0	30.6	22.1	23.0	25.0
	Proficient	55.6	51.0	71.4	57.4	57.1

**Table 7: Advanced Placement Middle School**

	<b>2003-2004</b>	<b>2004-2005</b>	<b>2005-2006</b>	<b>2006-2007</b>	<b>2007-2008</b>	<b>2008-2009</b>
Geometry	9%	8%	9%	10%	11%	14%
Algebra I	28%	33%	27%	30%	34%	42%
Pre-Algebra	64%	59%	64%	60%	47%	42%
Other	*	*	16%	11%	9%	2%

\* = \* = Data Not Available

**Table 8: Connecticut Academic Performance Test – Five Year Trends**

	<b>2003-2004</b>	<b>2004-2005</b>	<b>2005-2006</b>	<b>2006-2007</b>	<b>2007-2008</b>
Advanced	38.87	43.13	35.23	43.22	34.39
Goal	66.92	69.59	65.20	70.79	68.03
Proficient	88.41	88.30	91.23	89.72	89.85