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TO: Superintendents of Schools
FROM: Theodore S. Sergi, Commissioner of Education
DATE: February 3, 2003
SUBJECT: Results from the 2002 Administration of the Connecticut Mastery Test

This report presents the statewide results from the 2002 administration of the third generation of the Connecticut Mastery Test (CMT-3). The CMT is administered each fall to measure the academic performance of approximately 126,000 students in Grades 4, 6 and 8. With the 2002 administration of CMT-3, we can compare results for the same group of students on two tests, (Grades 4 and 6 and Grades 6 and 8). New federal legislation, *No Child Left Behind (NCLB)*, requires calculating test results at the advanced, proficient and basic level. To incorporate NCLB into the state reporting system, five levels of performance are now reported: Advanced (level 5 which is a subset of goal), Goal (level 4), Proficient (level 3), Basic (level 2), Below Basic (level 1).

Highlights of the 2002 CMT-3 results:

- Percentages of students reaching the state goals across the nine tests ranged from 55.9 percent to 68.1 percent. In the majority of cases, this was an increase over the 2000 and 2001 results.
- The rates of participation in the standard CMT-3 increased dramatically: about 1 percentage point for the total population, 2 to 3 percentage points for special education students, and more than 5 percentage points for students in limited English proficient (LEP) programs. ERG I participation increased more than 2 percentage points.
- Students in Grade 4, 6 and 8 perform at high levels of achievement in Reading as shown by the CMT and National Assessment of Educational Progress (NAEP) results. But, the percent of students scoring in the below basic level on the CMT (21.0 percent at Grade 4, 17.8 percent at Grade 6, and 14.5 percent at Grade 8) demonstrates the need for districts to focus their attention on assisting struggling readers.
- Achievement gaps decreased slightly, with black, Hispanic and poor students making greater gains.
- The 2002 CMT results show that when compared to a national sample of students, Connecticut students as a group score between the 59th and the 65th percentile in each subject area at each grade level. That is higher than nearly two-thirds of the students in the nation (see page 8).
- When comparing the same cohort of students on the 2000 CMT-3 and 2002 CMT-3 tests, the growth ranged between 25 and 47 vertical scale points (see page 7).

I. What was the Statewide Performance in Grades 4, 6 and 8 on the 2002 Standard CMT?

TABLE 1
2002 STATE RESULTS BY CONTENT AREA FOR ALL STUDENTS

Content Area	Grade	Percent at or above State Goal (Level 4 + Level 5)	Avg. Scale Score (100-400)	Percent of Students by Performance Level				
				State Goal Range		Proficient (Level 3)	Basic (Level 2)	Below Basic (Level 1)
				Advanced (Level 5)	Goal (Level 4)			
Mathematics	4	60.4	248.7	21.4	39.0	20.4	9.6	9.7
	6	61.1	255.1	20.4	40.7	20.7	10.1	8.1
	8	56.1	250.7	21.8	34.3	20.6	12.8	10.5
Reading	4	55.9	246.0	19.2	36.7	12.8	10.3	21.0
	6	64.1	251.5	18.9	45.3	10.0	8.0	17.8
	8	68.1	252.6	22.7	45.3	10.1	7.4	14.5
Writing	4	61.5	254.2	19.7	41.9	19.8	10.9	7.7
	6	60.8	250.4	22.6	38.2	22.3	9.5	7.4
	8	60.0	248.4	21.2	38.8	18.8	11.8	9.4

CMT-3 Results - 2002

The CMT-3 is aligned with Connecticut's curriculum frameworks and provides information regarding the mastery of important skills in mathematics, reading and writing. The CMT is administered each fall to measure the academic performance of approximately 126,000 students in Grades 4, 6 and 8. Some major findings from the 2002 administration of the CMT-3 follow:

Grade 4

The percentages of 4th graders who scored in the state Goal range were: 60.4 percent in Mathematics, 55.9 percent in Reading, and 61.5 percent in Writing.

When we look at the performance of the students who scored in the Proficient level or above (level 3, 4 and 5) for 2002, there were 80.8 percent of students in Mathematics, 68.7 percent in Reading and 81.4 percent in Writing.

The percentage of students in the below basic level in 2002 was 9.7 percent in Mathematics, 21.0 percent in Reading and 7.7 percent in Writing.

The percentage of students enrolled in special education who are participating in CMT testing has increased in all content areas since 2000. The percentage of these students participating in the standard grade level test has increased 14.6 percent in Mathematics, 17.1 percent in Reading and 15.4 percent in Writing.

Grade 6

The percentages of 6th graders who scored in the state Goal range were: 61.1 percent in Mathematics, 64.1 percent in Reading, and 60.8 percent in Writing.

When we look at the performance of the students who scored in the Proficient level or above (level 3, 4 and 5) for 2002, there were 81.8 percent of students in Mathematics, 74.2 percent in Reading and 83.1 percent in Writing.

The percentage of students in the below basic level in 2002 was 8.1 percent in Mathematics, 17.8 percent in Reading and 7.4 percent in Writing.

The performance of black students has improved markedly in Mathematics, with an increase of 5.9 percent of students achieving the Goal since 2000. Additionally, the percentage of students scoring at the below basic level has decreased by 7 percent. This achievement occurred while testing a greater percentage of students on the standard Grade 6 CMT (89.2 percent in 2000 to 93.4 percent in 2002).

Grade 8

The percentages of 8th graders who scored in the state Goal range were: 56.1 percent in Mathematics, 68.1 percent in Reading, and 60.0 percent in Writing.

If we look at the performance of the students who scored in the Proficient level or above (level 3, 4 and 5) for 2002, there were 76.7 percent of students in Mathematics, 78.1 percent in Reading and 78.8 percent in Writing.

The percentage of students in the below basic level in 2002 was 10.5 percent in Mathematics, 14.5 percent in Reading and 9.4 percent in Writing.

A greater percentage of students eligible for free and reduced lunch are achieving Goal in all content areas since 2000. The greatest increase (5.2 percent) is evident in Reading. This is a greater increase than any other Grade 8 subgroup.

What Test Results Tell Us About Student Achievement (What Connecticut Students Can Do)

Mathematics

The Mathematics test emphasizes mastery of basic skills and concepts and the ability to apply them to solve problems.

Connecticut's 4th and 6th grade students continued to demonstrate high levels of mastery in the areas of computational skills, number sense, geometric shapes and properties, and probability and statistics. Estimating solutions to problems, measurement and integrated mathematics problems are areas of weaker performance. All three grades showed some increases in the percent meeting mastery on solving integrated problems but this area still needs improvement.

Reading

The Reading test has two subtests, the Degrees of Reading Power (DRP®) and Reading Comprehension. The DRP assesses the process of reading and the Reading Comprehension test assesses the product of reading.

In Reading Comprehension, approximately two-thirds of Connecticut students in all three grades were able to form a basic understanding of the text read and could interpret the meaning. A smaller number of students were able to critique or analyze the text they read.

Based on the DRP results, over 52 percent of Grade 4 students possess the knowledge and skills necessary to comprehend textbooks and other materials used at Grade 4 or above. Other students need some teacher assistance on reading material below Grade 4. Over 68 percent of Grade 6 students, based on DRP results, have the skills to read a typical middle school textbook; but only 37 percent have the skills to read and understand an average article in a Connecticut newspaper. Over 58 percent of Grade 8 students demonstrated skill sufficient to read an average article in a Connecticut newspaper and about 70 percent demonstrated skills to read a typical high school textbook.

Writing

There are two subtests that compose the Writing test, Direct Assessment of Writing and Editing & Revising. The Direct Assessment of Writing assesses how well students communicate in writing. The Editing & Revising test assesses a students' ability to revise a written work and make appropriate grammatical edits.

Over 60 percent of 4th grade students can write a narrative fluently, can expand on key events and characters, and exhibit strong organizational skills, as assessed on the Direct Assessment of Writing. A small number of Grade 4 students (about 5 percent) need to improve on their ability to develop a narrative using details and examples in an organized sequence. Close to 60 percent of Grade 4 students achieved mastery on both Editing & Revising content strands: composing/revising and editing.

Over 62 percent of 6th grade students can produce fluent and elaborated expository responses with a mix of general and specific details as demonstrated on the Direct Assessment of Writing. A smaller number (4 percent) need assistance with developing a theme and elaborating their ideas using a mix of general and specific details. Half of all Grade 6 students achieved mastery on both Editing & Revising content strands: composing/revising and editing.

Over 67 percent of 8th grade students demonstrated their ability to write fluent and well-developed persuasive responses that elaborate on their theme using general and specific details as assessed on the Direct Assessment of Writing. A smaller number (about 4 percent) need assistance with developing a response and elaborating their ideas using a mix of general and specific details. Sixty percent of Grade 8 students mastered both Editing & Revising content strands: composing/revising and editing.

II. How has CMT Performance Changed from 2000 to 2002?

The progress of Connecticut's students from 2000 to 2002 is presented in several ways in this section. Tables 2 through 4 show the most commonly used indicators: average scale score and percent of students scoring within the state goal range. These tables compare the students in each Educational Reference Group (ERG) and across the state in the same grade for three different school years.

**TABLE 2
GRADE 4
COMPARISON OF STUDENTS' ACHIEVEMENT FOR 2000-2002**

	Year	Mathematics			Reading			Writing		
		Percent Taking Standard CMT	Average Scale Score (100-400)	Percent Within Goal Range	Percent Taking Standard CMT	Average Scale Score (100-400)	Percent Within Goal Range	Percent Taking Standard CMT	Average Scale Score (100-400)	Percent Within Goal Range
State	2000	93.6	250.1	60.2	92.7	249.7	56.9	92.3	249.7	57.5
	2001	96.0	248.7	61.0	95.0	248.4	57.9	94.6	256.7	61.2
	2002	96.5	248.7	60.4	96.0	246.0	55.9	95.6	254.2	61.5
ERG A	2000	97.5	274.4	83.4	96.9	278.3	84.0	96.5	275.2	79.6
	2001	97.6	275.1	84.4	96.9	276.3	84.5	97.0	286.2	84.0
	2002	98.2	274.8	82.5	97.7	274.8	83.4	97.6	281.2	83.2
ERG B	2000	96.7	268.9	77.9	96.5	268.9	74.8	96.2	266.8	72.9
	2001	97.8	268.8	78.8	97.1	267.4	76.0	96.8	273.9	76.0
	2002	97.7	271.1	81.0	97.2	267.6	75.6	97.2	274.5	78.2
ERG C	2000	97.4	260.1	69.9	96.4	264.2	71.1	96.3	256.6	64.1
	2001	97.9	260.9	73.0	97.4	264.8	74.4	97.2	269.8	72.8
	2002	98.0	260.4	70.7	97.6	260.4	69.7	97.7	264.3	70.0
ERG D	2000	96.1	255.8	65.8	95.2	255.7	64.6	94.8	253.7	63.2
	2001	97.1	254.5	67.0	96.3	255.2	65.5	95.6	261.8	66.5
	2002	97.6	254.2	66.2	97.2	251.9	63.1	96.7	259.0	66.5
ERG E	2000	97.0	253.4	63.9	95.9	255.2	61.4	96.1	250.0	57.1
	2001	97.1	255.0	67.6	96.5	257.4	67.5	96.2	262.1	65.2
	2002	97.4	253.0	65.2	97.2	253.5	64.2	97.0	258.6	67.3
ERG F	2000	95.2	252.0	62.7	93.9	251.4	59.2	93.8	249.5	57.8
	2001	96.6	251.5	65.1	95.6	251.5	61.9	95.6	257.1	63.8
	2002	97.1	249.3	61.3	96.7	247.2	56.7	96.3	252.4	61.3
ERG G	2000	95.8	243.1	53.7	94.8	241.0	49.4	94.3	239.5	47.2
	2001	95.9	245.8	58.2	94.7	247.4	56.6	94.4	254.0	59.9
	2002	97.4	243.3	55.0	96.9	242.3	51.5	96.3	250.3	59.6
ERG H	2000	92.0	243.0	53.2	91.1	239.7	47.2	90.6	241.1	49.5
	2001	95.8	241.5	54.2	94.9	237.7	47.3	94.7	246.6	52.7
	2002	95.9	241.6	53.6	95.5	236.0	46.8	95.2	246.1	55.3
ERG I	2000	84.9	218.6	29.5	83.7	215.0	22.2	83.0	226.2	35.2
	2001	92.0	215.3	29.4	90.3	213.7	22.9	89.1	227.9	34.8
	2002	93.1	216.0	30.6	92.3	212.0	22.7	91.1	225.7	35.7

**TABLE 3
GRADE 6**

COMPARISON OF STUDENTS' ACHIEVEMENT FOR 2000-2002

	<u>Year</u>	Mathematics			Reading			Writing		
		Percent Taking Standard CMT	Average Scale Score (100-400)	Percent Within Goal Range	Percent Taking Standard CMT	Average Scale Score (100-400)	Percent Within Goal Range	Percent Taking Standard CMT	Average Scale Score (100-400)	Percent Within Goal Range
<u>State</u>	2000	92.7	249.8	57.5	92.3	249.7	62.1	92.2	249.5	61.1
	2001	94.7	255.3	61.0	94.4	253.0	63.6	94.2	249.8	60.0
	2002	95.8	255.1	61.1	95.6	251.5	64.1	95.1	250.4	60.8
<u>ERG A</u>	2000	97.2	275.8	82.3	97.2	277.3	87.6	97.1	276.6	85.1
	2001	97.6	280.6	84.7	97.4	281.2	87.2	97.5	274.7	82.5
	2002	97.8	283.6	87.5	97.7	280.8	87.9	97.6	277.1	82.7
<u>ERG B</u>	2000	95.8	269.3	75.3	96.0	268.5	79.4	95.5	266.5	77.1
	2001	96.7	275.6	79.6	96.4	275.7	82.7	96.5	269.9	78.1
	2002	97.3	274.9	79.2	97.5	272.2	81.2	97.3	268.7	76.9
<u>ERG C</u>	2000	97.1	264.9	71.6	97.0	266.5	77.9	96.7	262.6	74.0
	2001	97.1	271.3	76.5	97.1	271.5	80.4	97.3	264.7	72.9
	2002	97.1	269.5	74.6	96.9	269.7	80.0	97.1	263.7	72.9
<u>ERG D</u>	2000	95.6	257.3	64.9	95.3	257.4	70.0	95.2	256.5	69.5
	2001	96.5	262.3	67.8	96.1	262.7	72.1	96.0	255.9	66.3
	2002	96.8	262.5	69.2	96.3	260.6	73.6	96.0	258.9	69.2
<u>ERG E</u>	2000	96.0	256.1	64.1	95.1	259.1	72.0	95.1	257.5	68.1
	2001	96.9	259.8	66.3	96.1	263.6	73.0	96.0	255.8	67.0
	2002	96.9	259.8	67.0	96.5	261.1	72.8	97.0	257.4	67.4
<u>ERG F</u>	2000	94.4	249.3	57.1	93.5	250.2	62.0	93.8	248.7	61.5
	2001	95.6	256.6	62.6	94.3	253.6	65.1	94.9	250.9	62.4
	2002	96.1	256.6	63.0	95.6	253.2	67.3	95.8	250.3	62.4
<u>ERG G</u>	2000	94.7	243.9	51.4	93.3	243.8	57.4	93.4	242.6	55.7
	2001	93.2	251.6	56.4	94.7	250.5	62.0	94.5	244.5	55.5
	2002	96.4	251.0	58.0	96.2	246.5	60.8	95.9	245.5	58.6
<u>ERG H</u>	2000	90.3	238.7	47.5	89.9	237.7	51.9	89.3	236.3	48.4
	2001	94.3	242.5	49.2	94.1	238.3	51.5	93.8	235.6	47.4
	2002	95.7	243.1	49.5	95.4	238.2	53.5	94.5	236.9	49.1
<u>ERG I</u>	2000	83.6	216.5	26.0	82.9	214.0	27.5	83.3	221.3	32.4
	2001	88.9	222.9	30.3	88.3	214.4	29.0	87.4	220.5	31.3
	2002	91.5	222.2	29.2	91.3	214.1	29.8	89.7	221.2	32.9

**TABLE 4
GRADE 8
COMPARISON OF STUDENTS' ACHIEVEMENT FOR 2000-2002**

	Year	Mathematics			Reading			Writing		
		Percent Taking Standard CMT	Average Scale Score (100-400)	Percent Within Goal Range	Percent Taking Standard CMT	Average Scale Score (100-400)	Percent Within Goal Range	Percent Taking Standard CMT	Average Scale Score (100-400)	Percent Within Goal Range
State	2000	91.7	249.8	54.8	91.6	249.4	66.4	91.3	249.5	60.4
	2001	93.8	250.5	55.4	94.0	249.4	66.3	93.6	248.5	58.8
	2002	95.1	250.7	56.1	95.1	252.6	68.1	94.8	248.4	60.0
ERG A	2000	98.3	282.6	84.5	98.4	277.3	89.8	97.9	280.8	86.6
	2001	97.7	283.5	84.7	97.7	276.5	88.9	97.7	277.4	83.4
	2002	97.9	284.4	86.9	98.0	282.6	92.1	97.8	277.5	84.7
ERG B	2000	96.1	270.7	74.3	95.9	268.2	83.0	95.7	266.8	76.0
	2001	96.5	272.3	75.6	96.6	268.2	83.5	96.2	267.1	75.3
	2002	97.0	274.3	77.1	97.2	273.5	85.4	96.8	267.2	77.0
ERG C	2000	97.0	264.1	69.2	96.6	263.5	80.3	96.6	261.9	72.1
	2001	96.0	264.8	69.8	96.7	264.5	80.8	96.5	260.8	70.4
	2002	97.8	266.7	72.0	97.8	268.1	82.0	97.7	261.1	72.4
ERG D	2000	95.6	256.3	61.4	95.5	257.2	74.5	95.3	253.6	65.8
	2001	95.8	259.1	63.8	96.0	259.3	75.9	95.7	253.5	65.9
	2002	96.6	259.1	64.8	96.5	260.9	76.8	96.0	254.4	66.8
ERG E	2000	95.1	256.0	60.5	95.4	257.2	74.2	94.8	251.9	62.1
	2001	95.8	253.9	58.8	95.3	258.4	76.3	95.7	251.2	62.7
	2002	96.2	259.5	65.5	96.3	263.9	79.6	96.4	251.7	64.2
ERG F	2000	93.7	249.8	54.5	93.7	249.2	66.4	93.5	247.5	59.8
	2001	95.2	251.8	56.8	95.5	248.6	66.4	95.5	246.5	57.8
	2002	96.3	249.2	54.6	96.3	251.9	67.6	96.6	245.7	58.5
ERG G	2000	93.0	244.6	49.4	92.7	246.2	64.5	92.8	243.9	55.0
	2001	94.6	246.4	50.4	94.1	249.2	67.3	94.5	244.5	55.7
	2002	95.9	245.7	52.5	96.4	248.6	66.4	96.3	240.7	53.7
ERG H	2000	89.0	237.1	42.4	89.1	237.2	55.5	87.8	238.2	50.3
	2001	93.6	235.5	41.8	93.8	235.6	54.4	92.8	234.7	46.3
	2002	94.7	235.8	42.4	94.6	239.7	57.4	94.4	235.7	48.5
ERG I	2000	79.2	210.3	18.2	79.3	212.0	31.0	79.3	220.3	31.9
	2001	85.6	212.9	20.3	85.8	213.8	31.5	84.8	221.9	32.1
	2002	89.2	215.0	22.1	88.8	217.0	35.7	88.0	223.0	34.8

In interpreting the 2000 through 2002 CMT data, it is important to note the increases in the number of students being tested, especially in ERGs H and I. A clear change, prompted by both federal and state initiatives, is to include *all* students in statewide testing. There are now significantly higher percentages of special education students and students with limited English proficiency participating in the statewide test than there were two years ago. And, there are higher proportions of minority students and poor students being included. This broader inclusion of students in the CMT testing program represents an important step toward the realization of the ambitious goals of *No Child Left Behind*. However, this change in the population of the students tested

tends to skew the results statewide as more lower-performing students enter testing. We expect these participation rates to become more stable in future years. This factor will then have less of an effect on the comparability of statewide scores across years. Section V of this report shows detailed data regarding the changes in test participation rates for various subpopulations.

This offset accounts for the mixed results you see when comparing the statewide scores from two years ago (2000) to this year's scores (2002). There are mostly incremental changes around the percentage of students scoring in the *goal* range. Of the nine goal percentages (Mathematics, Reading and Writing at each of Grades 4, 6, and 8) five have increased and four have decreased. Similarly, of the percentage of students scoring at or above the *proficiency* band, four have increased, and five have decreased. In terms of the average scale scores for each subject at each grade, six have increased and three have decreased. The indicators are mixed and no particular grade or subject stands out in terms of progress. For example, in every grade there are two subjects where the change goes in one direction, while there is one subject that goes in the other. By and large these changes are slight, so the *overall* state results can be characterized as generally stable over the span of the CMT-3. A different story emerges when one considers changes within the sub-populations of examinees. For a summary of subgroup results, see Sections III and IV of this report.

Vertical Scale:

Another way to view progress over time is to follow the performance of a particular cohort of students over time. Since this is the third year of the CMT-3, it is possible to compare the 4th grade performance of students in 2000 to their 6th grade performance in 2002. Likewise, sixth graders in 2000 can be compared to 8th graders in 2002. To interpret student performance across grade levels, vertical scales were developed in the areas of Mathematics, Reading, and Writing. Vertical scale scores can be used to measure growth over time because CMT scores from all three grades have been placed on a common scale. These scales provide a means of monitoring students' academic progress from grade to grade.

Table 5 presents overall growth in performance for two cohorts of students by subject. It should be noted that each 8th grade group differs, to some extent, from its respective 6th grade group and that each 6th grade group differs from its respective 4th grade group because some students entered while other students exited the Connecticut public school system over the years.

These results show meaningful growth in Mathematics, Reading and Writing from Grade 4 to Grade 6 and from Grade 6 to Grade 8. For example, these data show that the mathematical performance of the group of students who took the 4th grade test in 2000, and the 6th grade test in 2002, has moved in a positive direction. While initial results are encouraging, it is premature to draw definitive conclusions about how much growth to expect as students progress from grade to grade. Such conclusions are possible only after the test generation has been in place for several years. The vertical scale scores that correspond to the state goals at each grade level are provided to aid interpretation.

TABLE 5
STATEWIDE SUMMARY OF VERTICAL SCALE SCORES
Score Range = 500- 800

Content Area	Group	2000	2002	Growth	Vertical Scores at Goal		
					4	6	8
Mathematics	Grade 4 to Grade 6	625	672	47	618	663	692
	Grade 6 to Grade 8	668	696	28			
Reading	Grade 4 to Grade 6	624	654	30	618	642	659
	Grade 6 to Grade 8	651	676	25			
Writing	Grade 4 to Grade 6	617	642	25	607	630	656
	Grade 6 to Grade 8	641	666	25			

Achieving the State Goal in All Areas:

Another indicator of CMT achievement is the percentage of students who achieved the state goals in all three-subject areas: Mathematics, Reading, and Writing. As represented in Table 6, the percentage of students scoring in the goal range in all three areas has increased from 2000 to 2002 in Grades 6 and 8. There is also a decrease in the percentage of students who scored in the state goal range in none of the three content areas at Grades 6 and 8. Grade 4 is the exception, with improvements from 2000 to 2001, but not from 2001 to 2002.

**TABLE 6
PERCENTAGE OF STUDENTS WITHIN STATE GOAL RANGE
2000 THROUGH 2002**

Grade	Number of Tests	Percentage of Students Within Goal Range		
		2000	2001	2002
4	All Three Tests	40.2	42.8	42.1
	No Tests	25.8	25.1	25.2
6	All Three Tests	43.7	45.4	46.2
	No Tests	25.8	25.5	24.4
8	All Three Tests	43.5	44.0	45.2
	No Tests	25.7	26.7	25.0

National Comparison:

The CMT is a criterion-referenced test with students' performance interpreted in relation to clear standards. The CMT is not a norm-referenced test on which students' performance would be interpreted in relation to the performance of other students. However, it is useful to have an idea of how Connecticut's students compare to the national population of students in their grades. Based on a study which links CMT performance with performance on the national norm-referenced test, Metropolitan Achievement Test, 8th edition, (MAT-8) estimated percentile ranks are reported in Table 7. These can be interpreted as an estimate of the percentage of students in the nation who would have scored lower than the average Connecticut student on a particular subtest of the MAT-8.

**TABLE 7
NATIONAL PERCENTILE RANK OF AVERAGE CONNECTICUT STUDENT
2000 THROUGH 2002**

	Mathematics			Reading			Writing		
	2000	2001	2002	2000	2001	2002	2000	2001	2002
Grade 4	63	62	62	62	61	59	58	63	60
Grade 6	59	63	63	61	63	61	60	60	60
Grade 8	60	60	60	65	63	65	65	64	64

- Information on Connecticut student achievement shows that the average Connecticut Grade 4, 6 and 8 student scores in about the 60th percentile nationwide in mathematics, reading and writing.
- The percentile ranks from 2000-2002 increased or stayed the same in six out of nine tests, which is a positive sign given the increase in the population tested in 2002.

NOTE: Norms are expressed in percentile ranks that provide estimates of student performance relative to the performance of the national MAT-8 norm group. Percentile ranks range from 1 to 99. A percentile rank of 50 represents the score that divides the norm group into two equal parts-half scoring below and half scoring above this value.

III. Are We Narrowing Achievement Gaps in Connecticut Schools?

Closing the achievement gap has been a goal that the Connecticut State Department of Education has been focusing on since the Second Generation CMT. Although this gap still is very apparent in looking at Generation 3 test data, there are some trends that demonstrate movement toward closing the achievement gap. In Tables 8, 9, and 10, 2002 statewide test results are charted by ERG, Race/Ethnicity, Poverty Level, and Gender for each grade. Each grade chart shows the percentage change of students within the goal level for each sub-group between the 2000 and 2002 CMT administrations.

In looking at these percentage changes, it is obvious that some of the traditionally low performing subgroups have been moving forward to close the achievement gaps.

**TABLE 8
2002 STATEWIDE RESULTS BY SUBGROUP
GRADE 4**

	Mathematics			Reading			Writing		
	Average Scale Score	Percent within Goal Range	Change in % in Goal Range from 2000	Average Scale Score	Percent within Goal Range	Change in % in Goal Range from 2000	Average Scale Score	Percent within Goal Range	Change in % in Goal Range from 2000
ERGs A-H	256.2	67.2	+0.6	253.7	63.3	-0.7	260.6	67.3	+5.2
ERG I	216.0	30.6	+1.1√	212.0	22.7	+0.5√	225.7	35.7	+0.5
Black	217.0	30.8	+2.8√	217.8	27.4	+2.8√	229.9	40.2	+6.2√
Hispanic	218.6	32.9	+1.8√	212.9	24.2	+0.9√	226.9	36.7	+1.9
White	260.3	71.1	+0.5	257.7	67.4	-0.6	263.8	70.1	+5.0
Eligible F/R Lunch	220.1	34.1	+1.4√	216.1	26.9	+0.7√	228.3	39.0	+4.0
Not Eligible	258.8	69.7	-0.2	256.5	66.1	-1.6	263.2	69.4	+4.0
Male	250.0	62.1	+1.0	243.2	54.1	-0.2√	244.8	54.4	+4.4√
Female	247.3	58.6	-0.6	248.9	57.7	-1.8	263.8	68.8	+3.6
STATE	248.7	60.4	+0.2	246.0	55.9	-1.0	254.2	61.5	+4.0

√Indicates that the achievement gap in percentage at goal was reduced.

**TABLE 9
2002 STATEWIDE RESULTS BY SUBGROUP
GRADE 6**

	Mathematics			Reading			Writing		
	Average Scale Score	Percent within Goal Range	Change in % in Goal Range from 2000	Average Scale Score	Percent within Goal Range	Change in % in Goal Range from 2000	Average Scale Score	Percent within Goal Range	Change in % in Goal Range from 2000
ERGs A-H	262.3	68.0	+4.2	259.6	71.6	+2.7	256.7	66.8	+0.1
ERG I	222.2	29.2	+3.2	214.1	29.8	+2.3	221.2	32.9	+0.5√
Black	221.6	28.9	+5.9√	219.2	34.3	+4.9√	223.1	34.7	+1.7√
Hispanic	223.8	30.8	+4.2√	214.6	30.7	+2.8√	221.3	33.4	+1.4√
White	266.7	72.4	+4.0	264.3	75.8	+2.3	260.6	70.6	-0.3
Eligible F/R Lunch	225.6	32.5	+5.0√	218.6	34.2	+4.3√	222.8	34.4	+0.2√
Not Eligible	264.7	70.4	+3.1	262.3	73.9	+1.2	259.3	69.3	-0.6
Male	254.5	60.6	+3.1	247.0	60.5	+1.2	241.8	53.8	-0.6
Female	255.7	61.5	+3.9	256.3	67.9	+2.8	259.3	68.0	+0.1
STATE	255.1	61.1	+3.6	251.5	64.1	+2.0	250.4	60.8	-0.3

√Indicates that the achievement gap in percentage at goal was reduced.

**TABLE 10
2002 STATEWIDE RESULTS BY SUBGROUP
GRADE 8**

	Mathematics			Reading			Writing		
	Average Scale Score	Percent within Goal Range	Change in % in Goal Range from 2000	Average Scale Score	Percent within Goal Range	Change in % in Goal Range from 2000	Average Scale Score	Percent within Goal Range	Change in % in Goal Range from 2000
ERGs A-H	258.1	63.2	+1.9	259.8	74.6	+2.0	253.6	65.1	-0.5
ERG I	215.0	22.1	+3.9√	217.0	35.7	+4.7√	223.0	34.8	+2.9√
Black	215.3	22.2	+4.8√	222.2	39.3	+4.9√	225.6	36.9	+4.4√
Hispanic	215.3	22.9	+1.7	216.1	35.8	+3.9√	221.1	32.6	+0.2√
White	263.2	68.1	+2.5	264.5	79.1	+2.5	257.1	68.9	-0.1
Eligible F/R Lunch	218.2	25.5	+3.8√	220.2	39.2	+5.2√	222.8	34.4	+2.1√
Not Eligible	259.5	64.4	+0.4	261.2	75.8	+0.4	255.2	66.8	-1.4
Male	249.4	54.9	0.0	248.1	65.0	+0.7	238.6	50.7	-2.2
Female	252.1	57.4	+2.7	257.1	71.2	+2.7	258.4	69.5	+1.5
STATE	250.7	56.1	+1.3	252.6	68.1	+1.7	248.4	60.0	-0.4

√Indicates that the achievement gap in percentage at goal was reduced.

Grade 4

- The percentage of students in ERG I who have scored within the Mathematics goal level have increased by over 1 percent since the 2000 administration of the CMT. This is a larger gain than those students in ERGs A-H.
- The percentage of black students who have scored within the Mathematics goal level has increased by 2.8 percent since the 2000 administration of the CMT. This is a greater gain than other ethnic groups.
- In all three content areas, the percentage of poor students (students eligible for free or reduced price lunch) who scored within the goal level has increased the same amount or more than the number of non-poor students.

Grade 6

- In Writing, the percentage of students in ERG I at the goal level increased more than the percentage of students in ERGs A-H. However, in Mathematics and Reading, ERGs A-H made the greater gain.
- In all content areas, black and Hispanic students made greater increases in the percentage of students within the goal range than white students did.
- In all three content areas, the percentage of poor students (students eligible for free or reduced price lunch) who scored within the goal level has increased more than the percentage of non-poor students.

Grade 8

- In all three content areas, black students made greater increases in the percentage of students within the goal level than Hispanics and whites.
- In all three content areas, poor students (students eligible for free or reduced price lunch) made greater increases in the percentage of students within the goal level than non-poor students.
- In all three content areas, ERG I students made greater increases in the percentage of students within the goal level than students in ERGs A-H.

In reviewing these data, we notice some very obvious trends that indicate a closing of the achievement gap between racial/ethnic groups and between poor (students eligible for free or reduced price lunch) and non-poor students. However, this achievement gap still demonstrates a significant disparity in educational achievement throughout the state. Educators should do their best to evaluate their classroom, school and district data to see what areas of the curriculum and instruction need to be addressed to continue to close these gaps.

IV. How has the Performance of Special Populations Changed?

With the implementation of *No Child Left Behind (NCLB)*, it is more important than ever to examine the participation and performance data of particular student populations on the CMT.

Special Education Students

The percentage of special education students who scored within the goal range on the standard CMT has dropped quite significantly in 4th grade Mathematics and Reading and 8th grade Mathematics and Writing from 2000 to 2002. The large increase in participation between 2000 and 2001 did not negatively affect performance to the extent that might have been expected, however it appears that there has been a general drop in performance across grades in the three years of Generation 3. It is difficult to make judgments about the performance of special education students over time because it is a population that is fluid. That is, as individual student achievement improves, students may be exited from the special education program. This subgroup then is comprised only of students who have significant educational achievement issues. See Table 11 below.

**TABLE 11
SPECIAL EDUCATION STUDENTS SCORING WITHIN THE GOAL RANGE**

	Grade 4			Grade 6			Grade 8		
	2000	2001	2002	2000	2001	2002	2000	2001	2002
Math	29.2%	25.6%	24.7%	20.2%	21.4%	20.6%	18.3%	16.4%	15.8%
Reading	22.8%	20.8%	17.5%	23.1%	22.9%	22.7%	27.6%	25.0%	25.7%
Writing	19.8%	21.3%	20.4%	22.0%	18.8%	18.6%	19.3%	16.1%	15.4%

Students with Limited English Proficiency (LEP)

Students with limited English proficiency (LEP) are those students enrolled in bilingual education programs, those who have exited bilingual education programs but continue to receive transitional services, and those students enrolled in English as a Second Language (ESL) programs. In 2001, in response to a legislative change regarding exemption criteria, almost twice as many LEP students participated in the test than in 2000. The participation of LEP students in the 2002 administration continues this trend. (See Table 13.)

Given the increase in participation between 2000 and 2001, one might have expected a significant drop in performance. However, except for a dip in Grade 6 Reading and Writing scores, more students were scoring within the goal range in 2001. This upward trend continued with the 2002 test administration, although the test results indicate poor overall performance for this subgroup of students. It is important to note that this population, like the special education population, is fluid. As the students become more proficient in English, they no longer qualify for language services. This subgroup, students with limited English proficiency, then is always comprised only of students who are in the early stages of English language development.

**TABLE 12
PERCENT OF LEP STUDENTS SCORING WITHIN THE GOAL RANGE**

	Grade 4			Grade 6			Grade 8		
	2000	2001	2002	2000	2001	2002	2000	2001	2002
Math	15.3%	20.1%	22.6%	13.8%	15.1%	16.4%	8.9%	11.9%	14.3%
Reading	6.8%	8.3%	9.3%	10.0%	7.7%	10.6%	7.8%	11.1%	10.5%
Writing	15.6%	19.0%	22.9%	15.1%	12.0%	14.6%	9.3%	11.9%	15.8%

V. How has CMT Participation Changed from 2000 to 2002?

Federal legislation, as well as state legislation and policy, have put a premium on high participation rates for all state tests. Connecticut districts have generally risen to the challenge. Percentages of students who participate in the standard CMT have increased for the overall state population. More notable, however, are the increases for subpopulations of students who may have been underrepresented in previous years: students in Connecticut's large cities, minority students, poor students, special education students, and students with limited English proficiency. The particular emphasis on inclusion of these students in statewide testing programs is fueled by the belief that greater accountability for the learning of *all* students will result in greater learning opportunities and higher rates of success.

**TABLE 13
PARTICIPATION RATES IN THE STANDARD CMT BY SUBGOUPS
ACROSS GRADES 4, 6 AND 8**

	Mathematics			Reading			Writing		
	2000	2001	2002	2000	2001	2002	2000	2001	2002
ERGs A-H	94.9	96.2	96.8	94.4	95.8	96.6	94.1	95.7	96.4
ERG I	82.7	89.0	91.3	82.1	88.2	90.8	82.0	87.2	89.6
Black	89.1	92.6	93.7	88.6	92.2	93.7	88.4	91.5	93.0
Hispanic	80.0	88.4	90.8	79.4	87.5	90.2	78.9	86.5	89.0
White	96.0	96.9	97.4	95.6	96.6	97.1	95.4	96.4	97.0
Eligible F/R Lunch	85.0	90.4	92.6	84.4	89.7	92.1	84.0	88.9	91.5
Not Eligible	95.4	96.3	96.8	95.0	96.0	96.7	94.8	95.9	96.4
Male	91.4	94.0	95.0	90.7	93.3	94.6	90.3	92.8	94.1
Female	94.0	95.8	96.7	93.9	95.8	96.6	93.7	95.5	96.3
Special Education	61.9	73.9	75.8	58.5	70.3	73.8	58.8	70.3	73.6
Limited English Proficient	28.9	67.9	73.3	27.5	66.6	72.7	26.9	64.1	69.6
STATE	92.7	94.9	95.8	92.2	94.5	95.6	92.0	94.1	95.2

Table 13 shows the participation rates for all the students statewide that were in CMT grade levels: 4, 6 or 8. For 2000, 2001, and 2002, the rates in Table 13 indicate the percentage of students across Grades 4, 6 and 8 who participated in the standard grade level version of the CMT.

Special Education Students

Special education students who participate in out-of-level testing and the CMT/CAPT Skills checklist are considered to be participants in the testing along with those special education students who participate in the standard grade-level version of the test. Shown below in Table 14 is the percentage of special education students who participated in the standard test or an alternate assessment.

**TABLE 14
PARTICIPATION OF SPECIAL EDUCATION STUDENTS IN ANY ASSESSMENT
ACROSS GRADES 4, 6 AND 8**

	Mathematics			Reading			Writing		
	2000	2001	2002	2000	2001	2002	2000	2001	2002
Standard	61.9	73.9	75.8	58.5	70.3	73.8	58.8	70.3	73.6
Out-of-Level	30.1	18.5	16.7	33.2	21.9	18.7	16.4	20.0	17.3
Skills Checklist	5.6	4.9	5.3	5.6	4.9	5.3	5.6	4.9	5.3

Although alternate assessment is available for those students with disabilities who are unable to participate in the standard grade level assessment (even with accommodations), districts are encouraged to have high expectations and set high standards for these students and to include them in grade level testing whenever possible. The number of special education students who participated in the grade-level version of the test increased dramatically between the 2000 and 2001 CMT administrations and this upward trend continued in the 2002 administration as well.

As stated earlier, students enrolled in bilingual education programs, those who have exited bilingual education programs but continue to receive transitional services, and those students enrolled in English as a Second Language (ESL) programs constitute the subgroup of students with limited English proficiency. In 2001, in response to a legislative change regarding exemption criteria, almost twice as many LEP students participated in the test than in 2000. The participation of LEP students in the 2002 administration continues this trend. It is interesting to note, however, that while participation increases across years, it decreases across grades. That is, fewer students participate in the testing in Grade 8 than in Grades 6 or 4. A closer examination of data reveals that more students were exempted in Grade 8 than in Grades 6 or 4. Additionally, student absences in Grade 8 were significantly higher than those in Grade 4 and only slightly lower than in Grade 6. See Table 13 for the overall participation rates.

VI. What was the Absentee Rate of all Students in Standard CMT Assessments?

A particular concern with regard to participation on the CMT is the problem of students who are absent from the testing. Under the state’s new accountability model for federal *No Child Left Behind* purposes, absences from testing are a critical component in determining the success of schools and school districts. Table 15 shows a select group of districts with percentage of students who had “no valid score” in 2001 and 2002. The “no valid score” groups include students who were absent from testing, students who were present but left their test blank, students whose Direct Assessment of Writing was non-scoreable, and those rare students who received special modifications. However, in both years, most of the students in this category were absent from testing. The districts were selected for inclusion in this table because either in 2001 or in 2002, the percentage of students with no valid score exceeded 5 percent in at least one content area in at least one grade. Only districts with grade populations of at least 100 were included. **Caution should be used in comparing these scores with other districts. Those districts where participation decreased from 2001 to 2002 are highlighted in bold type.**

TABLE 15
PERCENTAGE OF STUDENTS WITH NO VALID SCORE/ABSENT
(At least 5% in Districts with 100 students or more per grade)

	Grade 6						Grade 8						
	Math		Reading		Writing		Math		Reading		Writing		
	2001	2002	2001	2002	2001	2002	2001	2002	2001	2002	2001	2002	
BRIDGEPORT												6.6	3.0
HARTFORD							6.8	7.8	6.9	8.5	6.3	7.5	
MIDDLETOWN												5.5	1.2
NEW BRITAIN					3.2	5.9			3.2	5.8	7.3	8.6	
NEW FAIRFIELD			5.0	0.9	5.4	0.9						5.2	0.0
NEW HAVEN	6.0	2.9	5.1	1.9	6.2	5.2	5.6	3.6				5.5	5.1
NORWALK												5.1	2.4
WATERBURY	6.0	2.6			6.6	4.5	8.5	3.9	7.9	4.1	7.9	5.0	
WEST HAVEN												3.1	5.3

In the majority of cases, the districts that had students with no valid score in excess of 5 percent in 2001 improved substantially in 2002. The exceptions are Hartford, New Britain and West Haven where there is apparently an increase in the percentage of students without valid scores. The inclusion of all students in statewide testing will continue to increase in importance as the requirements of *No Child Left Behind* unfold.

VII. What is Being Done to Improve CMT Performance?

The achievement gaps in Connecticut continue to be troubling. Local, state and federal resources must be more focused on activities that reduce the gap: more preschool opportunities, earlier intervention, after-school and summer school, more instructional time, more one-to-one reading assistance, and more parent training and support. In recent years, many school districts have focused their efforts on closing these achievement gaps, and there are many encouraging success stories that need to be told. Urban districts, for example, have improved students' reading skills through the use of intensive remediation strategies. Increased hours of daily instruction in reading and mathematics, after school sessions and summer school have begun to translate into better readers and improvements on the CMT. The following table shows the increase in the percentage of ERG I elementary and middle schools offering supplemental instructional service programs in mathematics or English language arts.

**TABLE 16
ERG I ELEMENTARY AND MIDDLE SCHOOLS
OFFERING SUPPLEMENTAL INSTRUCTIONAL SERVICES 2000-01 AND 2001-02**

	2000-01		2001-02	
	Mathematics	English Language Arts	Mathematics	English Language Arts
Pull-out Remedial Instruction	35.4%	75.0%	39.2%	72.3%
In-class Tutorial	45.8%	59.0%	46.9%	66.4%
After School Program	63.9%	70.8%	73.4%	79.7%
Summer School	68.1%	85.4%	64.3%	85.3%
Other Programs	15.3%	22.9%	14.0%	17.5%
No Supplemental Services	15.9%	4.9%	12.6%	5.6%

New Haven Schools

One urban district, New Haven, showed increases in the percentage of students within the goal range in all areas of the CMT from 2000 through 2002. At three schools in New Haven: Woodward, Edgewood and East Rock Community, already high participation rates increased slightly or remained constant and scores on the test increased dramatically in all areas of the CMT. These schools showed increases in the percentage of students within the statewide goal between seven and thirty-three percentage points from 2000 to 2002 while testing the same or more students (see Tables 17, 18 and 19 below).

Woodward School:

There is a very strong literacy focus at this school. Teachers follow district initiatives in reading, writing and math, as well as a focus on meta-cognition and creating the best environment for learning. Bulletin boards and displays clearly portray what is important – students and student learning. The principal monitors instruction and attests to the fact that Woodward has an exceptional staff that is serious about student learning. Motivation, enthusiasm, excitement and great instruction contribute to their success.

**TABLE 17
NEW HAVEN'S WOODWARD SCHOOL RESULTS AND
PARTICIPATION RATES ON GRADE 4 STANDARD CMT 2000, 2001 AND 2002**

School	CMT Content Area	Year	% Within Goal Range	Participation Rate
Woodward	Mathematics	2000	22.0	100.0
		2001	33.3	96.4
		2002	54.5	93.6
	Reading	2000	16.7	96.0
		2001	11.1	96.4
		2002	34.1	93.6
	Writing	2000	36.7	98.0
		2001	48.1	96.4
		2002	50.0	93.6

Edgewood School:

The staff at Edgewood School has very high expectations for all their students. They will not accept less. Teachers “looped” with their students last year from Grade 5 to Grade 6. All staff follow district initiatives. They have a very strong working relationship with Central Office Curriculum Supervisors and Literacy Mentors. The inclusion model ensures that all children meet high standards by receiving district curriculum with appropriate modifications. The library/media specialist is integral to the success students experience in reading, research and writing.

**TABLE 18
NEW HAVEN'S EDGEWOOD SCHOOL RESULTS AND
PARTICIPATION RATES ON GRADE 6 STANDARD CMT 2000, 2001 AND 2002**

School	CMT Content Area	Year	% Within Goal Range	Participation Rate
Edgewood	Mathematics	2000	37.0	98.2
		2001	31.5	100.0
		2002	63.0	100.0
	Reading	2000	51.9	98.2
		2001	29.6	100.0
		2002	61.1	100.0
	Writing	2000	53.7	98.2
		2001	35.2	100.0
		2002	64.2	98.1

East Rock School:

The staff at East Rock carefully analyzes and plans from student-performance data. Students are regrouped according to abilities so that reading, writing and math instruction are individualized. There is a professional development and monitoring plan to ensure that teachers use best methodology and BEST instructional practices. Each child has an individual reading, writing and mathematics plan. Seventh grade students receive one-to-one support in writing. All staff are focused on improving student performance.

**TABLE 19
NEW HAVEN’S EAST ROCK COMMUNITY SCHOOL RESULTS AND
PARTICIPATION RATES ON GRADE 8 STANDARD CMT 2000, 2001 AND 2002**

School	CMT Content Area	Year	% Within Goal Range	Participation Rate
East Rock	Mathematics	2000	9.0	91.8
		2001	18.0	88.1
		2002	36.1	96.0
	Reading	2000	29.1	92.9
		2001	26.1	87.1
		2002	36.1	96.0
	Writing	2000	38.8	94.1
		2001	34.1	87.1
		2002	55.2	95.0

VIII. What Changes are Planned for the CMT Generation 4?

The CMT Generation 4 (CMT-4) will be administered to students beginning in school year 2005-06. This new generation of the CMT coincides with the implementation of the federal legislation, *No Child Left Behind*, which expands the test to include students in Grades 3 through 8 and, pending state legislation, the test administration will move from September to April.

Development has already begun for the CMT-4. CMT content advisory committees have been meeting to discuss test content and review potential test items for the CMT-4. Beginning this summer, Connecticut teachers will be involved in writing items for the CMT-4. While the CMT-4 represents a new generation of the test, it is not expected to change dramatically in content or format. For the CMT-4, students in Grades 3 through 8 will be tested in the areas of Mathematics, Reading and Writing. Science will be added in Grade 5 and 8 beginning in school year 2007-08.