

2008 CMT Scores Data Analysis



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March 2008 CMT Scores as Reported by the State Department of Education (SDE)

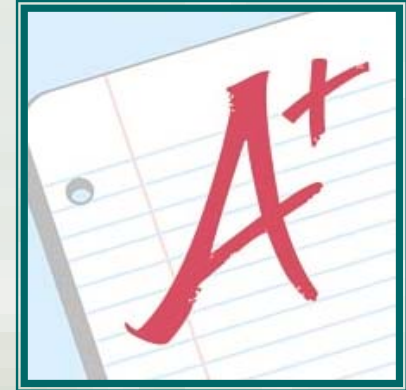
Grade	Mathematics			Reading			Writing		
	Goal	Prof.	Adv.	Goal	Prof.	Adv.	Goal	Prof.	Adv.
3	79	93	29	66	80	22	82	92	26
4	74	93	29	75	85	24	78	94	27
5	87	96	37	82	91	30	84	97	20
6	87	95	55*	86	92	40*	76	91	23
7	88	98	47*	86	92	42*	80	93	22
8	91	98	55*	87	94	40*	84	98	41*

March 2008 CMT SCIENCE

Grade	Science		
	Met Goal	Met Proficiency	Advanced
5	81	96	26
8	84	93	41

Science was new to the CMT in 2008, and the SDE was unsure what to expect. Schools were told to be cautiously optimistic and warned that a low number of students might make goal at the onset. Canton teachers had studied the new Connecticut State Science Standards and the National Grade 8 NAEP Test and revised their curriculum in advance of the first Science CMT. As a result, our students did very well.

“Advanced Band ” Scores



- NCLB emphasizes the percentage of students score “At or Above Proficient.”
- However, in 2006 when the CMT was released, Dr. Betty Sternberg, then Connecticut Commissioner of Education, emphasized that *Connecticut* school districts should apply “a laser-like focus” on those students “At or Above Goal” and “At Advanced,” which represent *only the two highest* bands in scoring. **Advanced Band scores are shown in Green on the previous slide.**
- **Remarkable in the Advanced Band:**
 - An average of **53%** of the students in 6th, 7th, and 8th grade **scored in the Advanced band in Math**
 - An average of **41%** of the students in 6th, 7th, and 8th grade **scored in the Advanced band in Reading**
 - **8th Graders’ Advanced band scores were 55% in Math, 40% in Reading, 41% in Writing, and 41% in Science.**

Tracking the students and their scores can be tricky because by the time the CMT report is written, the students have advanced one grade. Use this chart to help with the data in the following slides.

Grade when tested 3/2008	Grade in September 2008, i.e. “incoming”	Class of ...
Grade 3	Grade 4	2017
Grade 4	Grade 5	2016
Grade 5	Grade 6	2015
Grade 6	Grade 7	2014
Grade 7	Grade 8	2013
Grade 8	Grade 9	2012

Grade 3 (Class of 2017)

We continue to analyze and modify instruction for our youngest group of test takers. For last year's Grade 3 students, this was their first experience with the CMT, so their short-term test preparation as well as their test-taking endurance play a factor in their success.

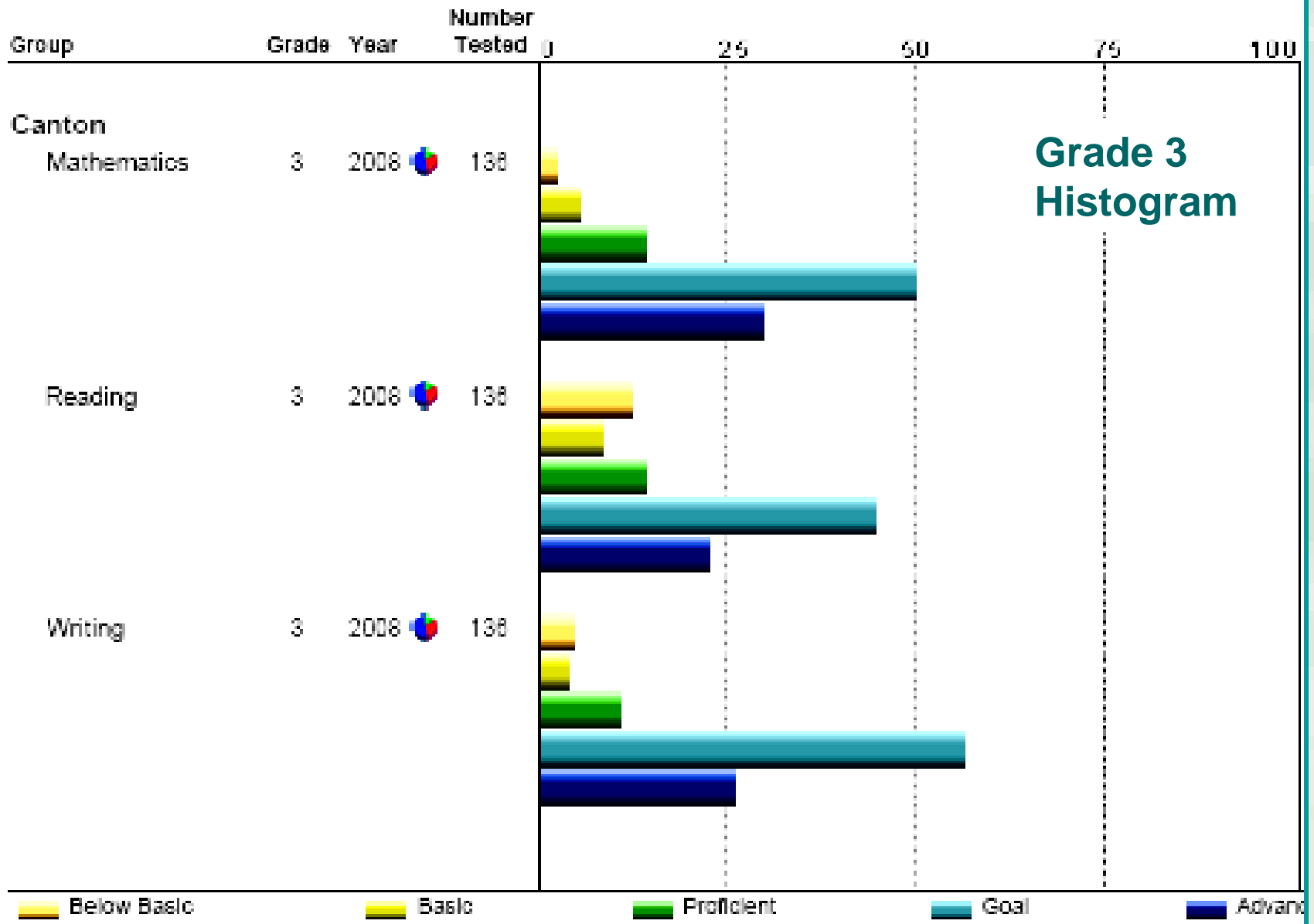
	Mathematics		Reading		Writing	
	Goal	Prof.	Goal	Prof.	Goal	Prof.
CBPS March 2008	79%	93%	66%	80%	82%	92%
	+ 19	+ 12	+ 14	+ 12	+ 18	+ 9
CT State Results	60%	81%	52%	68%	64%	83%



Grade 3 (Class of 2017): Reading

- The Reading Score, which was the lowest of the three content areas for these students, is divided into four strands, as shown below. On a positive note, “Interpretation,” which asks students to analyze what they have read, make predictions, and infer meaning was quite high.
- Canton’s students, as do students across the state, continue to struggle with making meaningful connections between what they read and their own experiences, or making connections between two different texts. Over the past 3 years, the 3rd grade score in “Connections” has improved from 48% in 2006 to 51% in 2007 to its current 56%.
- “Examining Content and Structure” expects students to critique the text.
- The DRP goal is 47; Canton’s 3rd Graders averaged 54.3 on the DRP. Their data will be analyzed by 3rd and 4th grade teachers in the fall.

	Reading			
	Forming a General Understanding	Developing an Interpretation	Making Reader/Text Connections	Examining Content and Structure
CBPS March 2008	73%	88%	56%	60%



Grade 3 Historical Comparison Data

(for Canton's 3rd graders over the past three years)

	Mathematics		Reading		Writing	
	Goal	Prof.	Goal	Prof.	Goal	Prof.
March 2006	67%	90%	79%	89%	82%	95%
March 2007	66%	88%	72%	85%	81%	92%
	+ 13	+ 5	- 6	- 5	+ 1	--
March 2008	79%	93%	66%	80%	82%	92%

Third graders have been tested through the CMT for only three years. Data over this time period shows a substantial increase in Math, which was a major focus area this year, *but* a decrease in Reading. Writing has remained consistent for three years.

Grade 3 (Class of 2017)

The teachers use a variety of formative assessments to track students' progress. The in-house DRA proves to be good indicator of how well these students are progressing and shows that they made growth from Fall 2007 to the end of this year.

March 2008 CMT	Below Basic	Basic	Proficient	Goal	Advanced
	12%	8%	14%	44%	22%
			At or Above Proficient = 80%		
				At or Above Goal = 66%	
In-house DRA	Remedial Level	Intervention Level	At Goal or Above		
Fall 2007	20%	33%	52%		
Winter 2008	11%	30%	59%		
Spring 2008 (post-CMT)	11%	26%	63%		

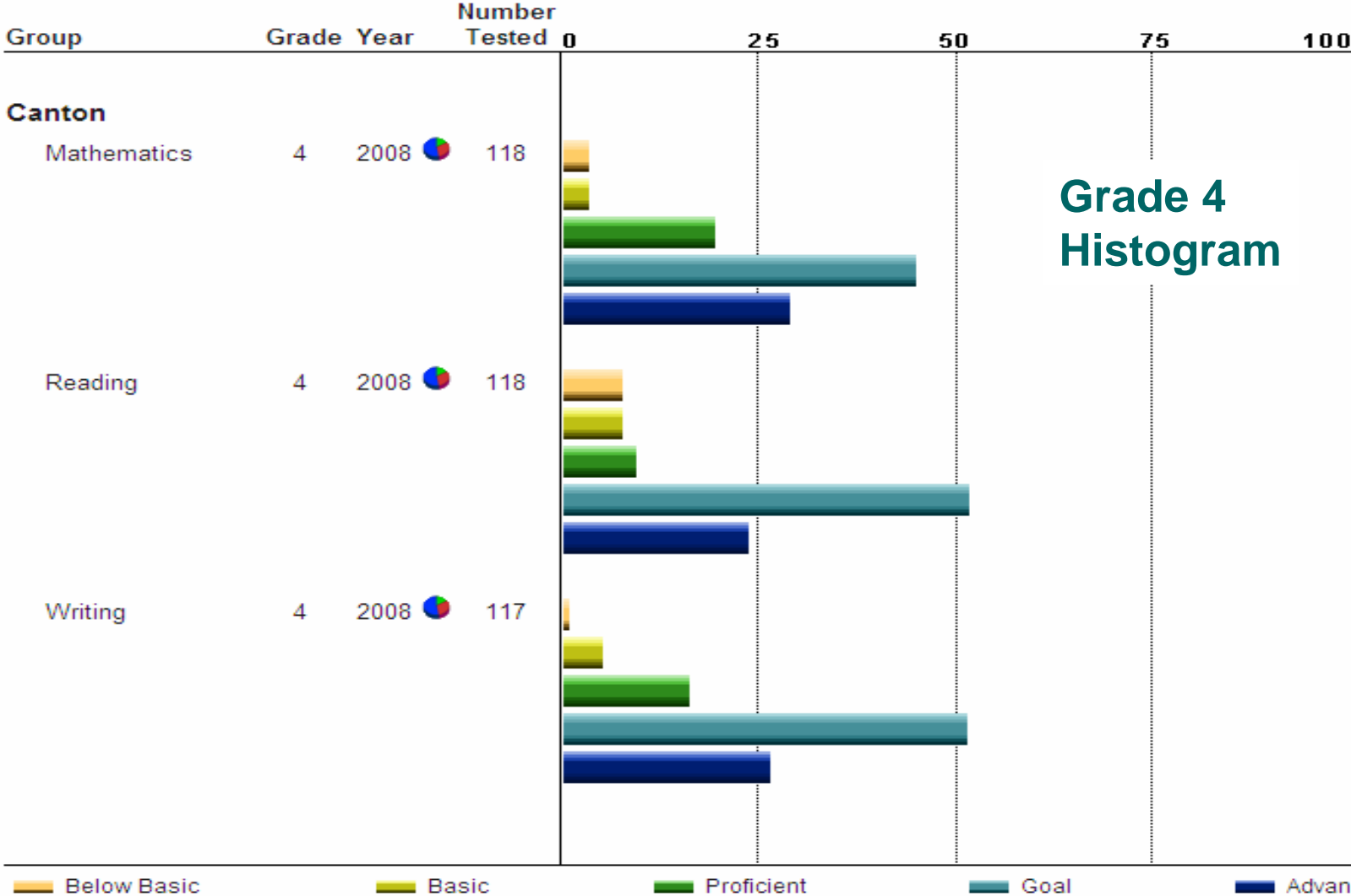
close prediction

Grade 4 (Class of 2016):

- This year these students made significant gains in Math, improving by 8%, but they slipped a small degree, - 3%, in Writing at Goal. The percentage of students gaining proficiency in Writing improved a little.
- Their success with Math will continue to be fostered, while their Reading and Writing needs will continue to be addressed.

	Mathematics		Reading		Writing	
	Goal	Proficient	Goal	Proficient	Goal	Proficient
March 2008	74%	93%	75%	85%	78%	94%
	+ 8	+ 5	+ 3	--	- 3	+ 2
March 2007 (as 3rd graders)	66%	88%	72%	85%	81%	92%

**Percent of Student Below Basic, Basic, Proficient, Goal, Advanced
Students Included: All**



Grade 5 (Class of 2015):

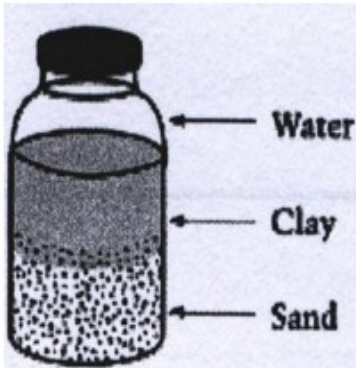


- This class achieved a 7% increase in Math, a 7% increase in Reading, and an 6% increase in Writing.
- In addition, they took the first Grade 5 Science CMT and did very well; 80% reached Goal and 95 reached Proficiency. Two sample Science items, typical of this new test, follow on the next slide.

	Mathematics		Reading		Writing		Science	
	Goal	Prof.	Goal	Prof.	Goal	Prof.	Goal	Prof.
March 2008	87%	96%	82%	91%	84%	97%	80%	95%
	+ 7	+ 3	+ 7	+ 6	+ 6	+ 4		
March 2007 (as 4 th graders)	74%	93%	75%	85%	78%	94%	--	--

3. A green tree frog lives in a forest. How does the frog's green color help it to survive?

- A) By helping the frog find other frogs
- B) By keeping the frog cool
- C) By making the frog hard to see when sitting on leaves
- D) By allowing the frog to make its own food



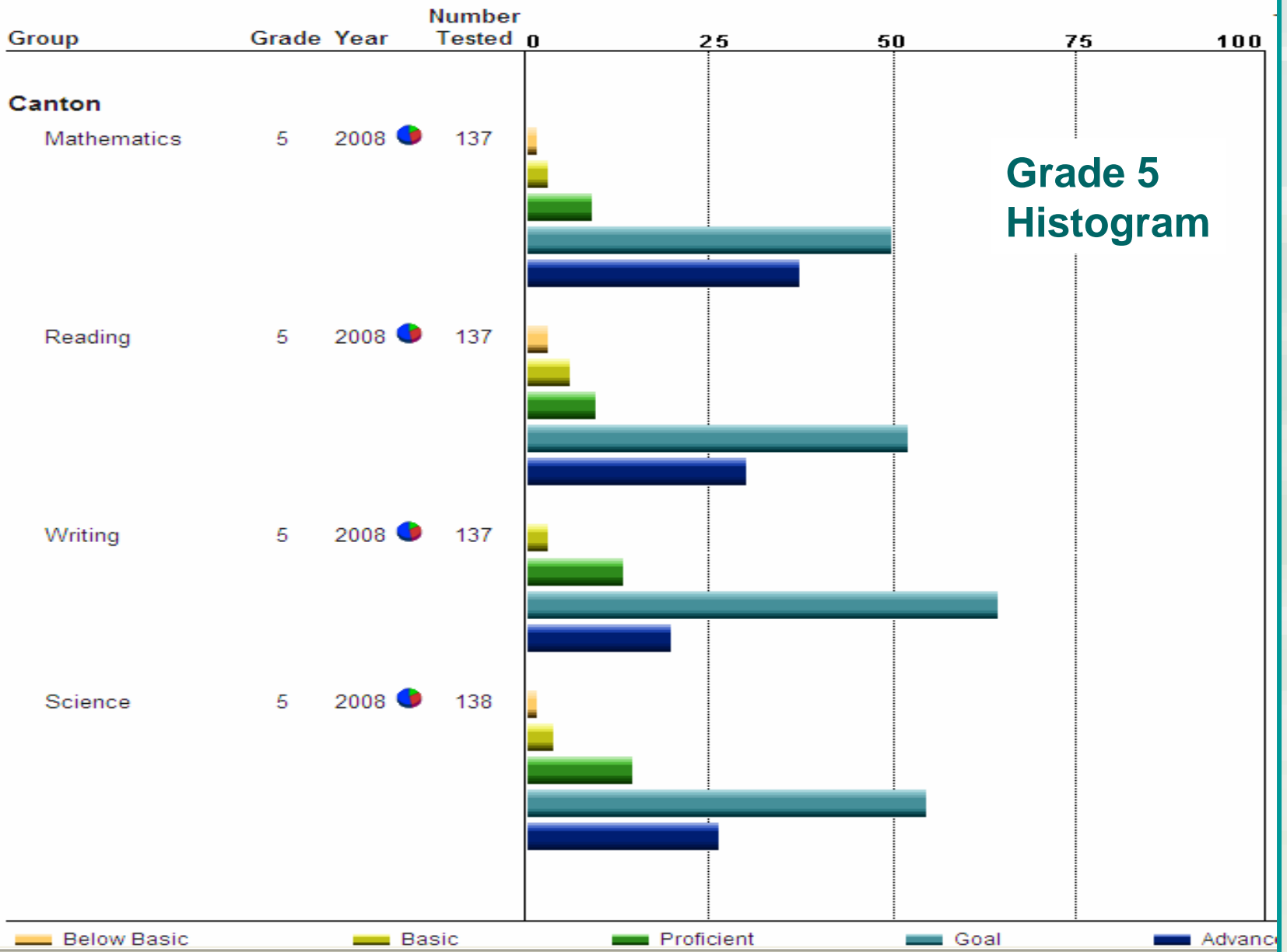
4. A student put some sand, clay and water into a bottle and shook the bottle. Then he put the bottle down.

After two hours, the bottle looked like the drawing above. What can the student conclude based on what he sees in the bottle?

- The water is heavier than the grains of clay and the grains of sand.
- The grains of clay are heavier than the grains of sand and the water.
- The grains of sand are heavier than the water and the grains of clay.
- The water, grains of clay, and grains of sand are all of equal weight.

Sample CMT-style Science Questions from Canton's own Grade 5 Practice Test

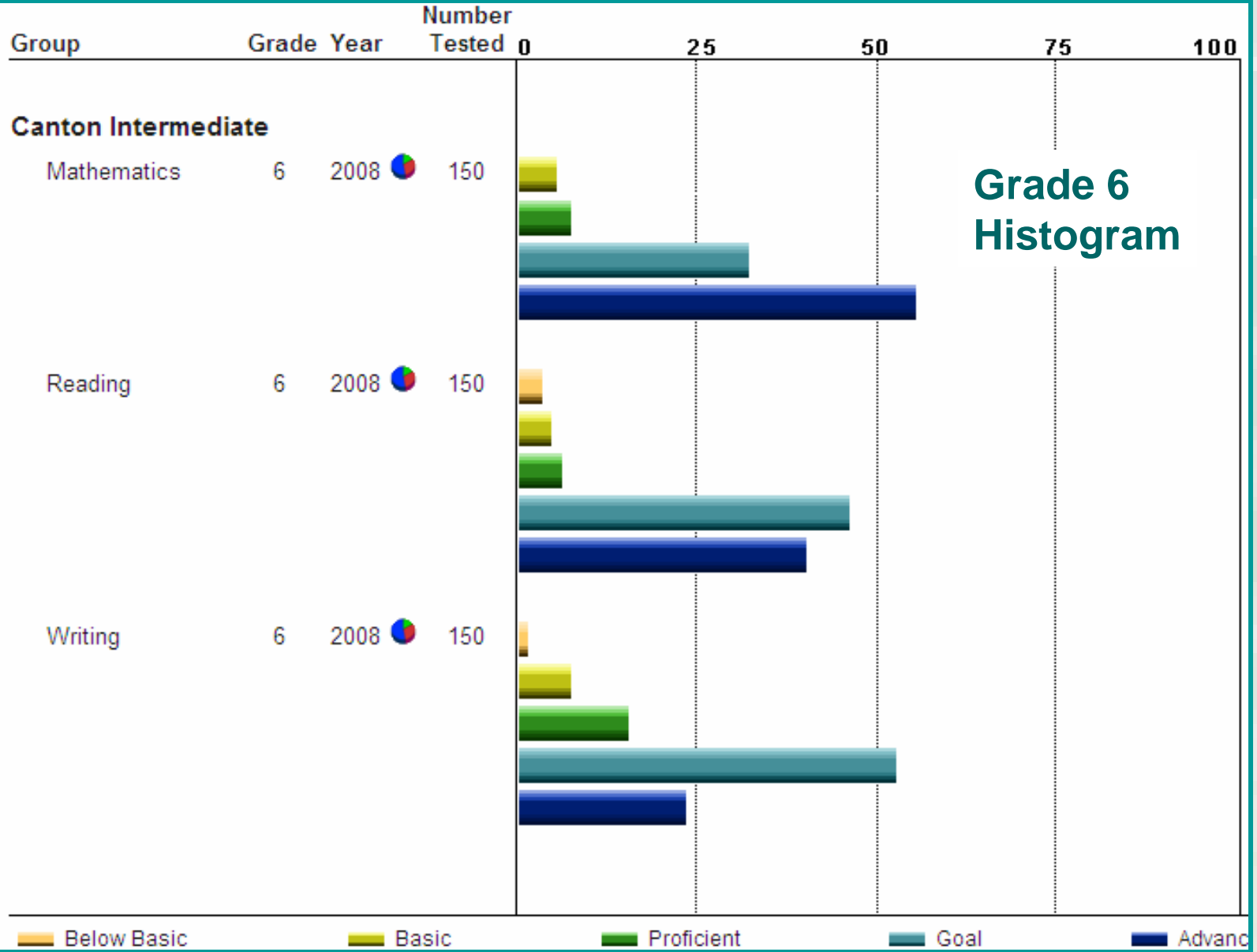
Grade 5 Histogram



Grade 6 (Class of 2014):

- The Grade 6 test takers had an unexpected dip in their Writing scores. This result will be a focus for both the 6th and 7th grade teachers.
- On the other hand, their Math and reading scores continue to be extremely strong.
- Their **55% in the Advanced band in Math** and their **40% in the Advanced band in Reading** is outstanding. (See Slide #2)

	Mathematics		Reading		Writing	
	Goal	Prof.	Goal	Prof.	Goal	Prof.
March 2008 6th graders	87%	95%	86%	92%	76%	91%
	--	--	+ 7	+ 4	- 8	- 4
March 2007 (as 5th graders)	86%	95%	79%	88%	84%	95%



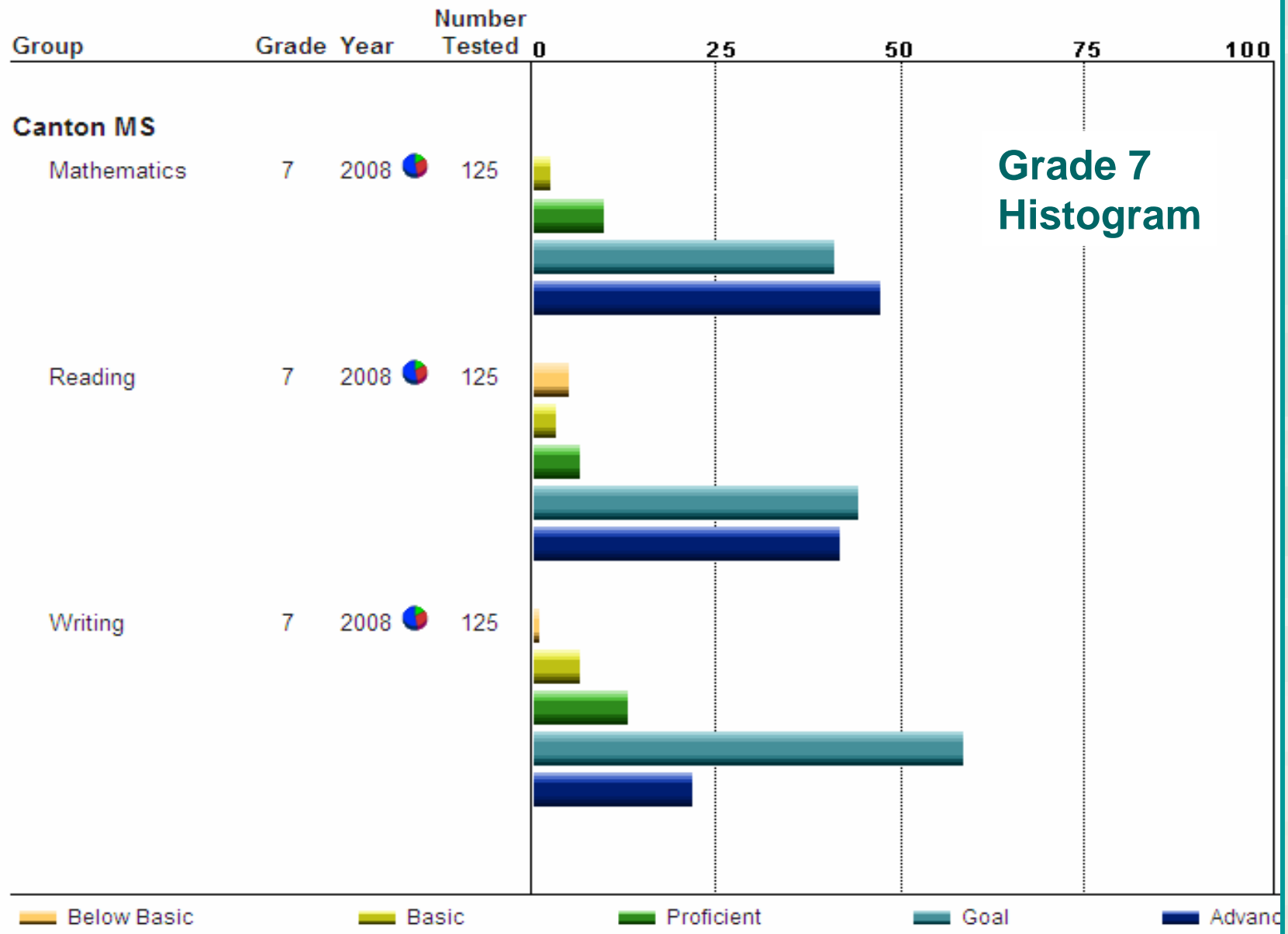
Grade 7 (Class of 2013):

- This class continues to be very strong in Math and Reading at Goal, with 47% of the test takers scoring in the Advanced band in Math, and 42% in Advanced in Reading.
- But they saw a dip in their Writing scores, and in their Writing scores in the Advanced band.



	Mathematics		Reading		Writing	
	Goal	Prof.	Goal	Prof.	Goal	Prof.
March 2008 – 7th graders	88%	98%	86%	92%	80%	93%
	--	+ 2	+ 5	+ 2	+ 1	- 5
March 2007 – (as 6th graders)	87%	96%	81%	90%	79%	98%

NOTE: When the scores are strong, i.e. already in the 80's and 90's, the potential for growth occurs in increasingly smaller increments.



Grade 8 (Class of 2012):

- A continued strong performance in Math was accompanied by this class' 55% in the Advanced band.
- In addition, they performed very well on their Science test, with 41% in the Advanced band.



	Mathematics		Reading		Writing		Science	
	Goal	Prof.	Goal	Prof.	Goal	Prof.	Goal	Prof.
March 2008 – 8 th graders	91%	98%	87%	94%	84%	98%	84%	93%
	--	+ 1	--	+ 2	- 3	+ 2		
March 2007 – (as 7 th graders)	91%	97%	87%	92%	87%	96%		

NOTE: When the scores are strong, i.e. already in the 80's and 90's, the potential for growth occurs in increasingly smaller increments.

Canton MS

Mathematics 8 2008 141

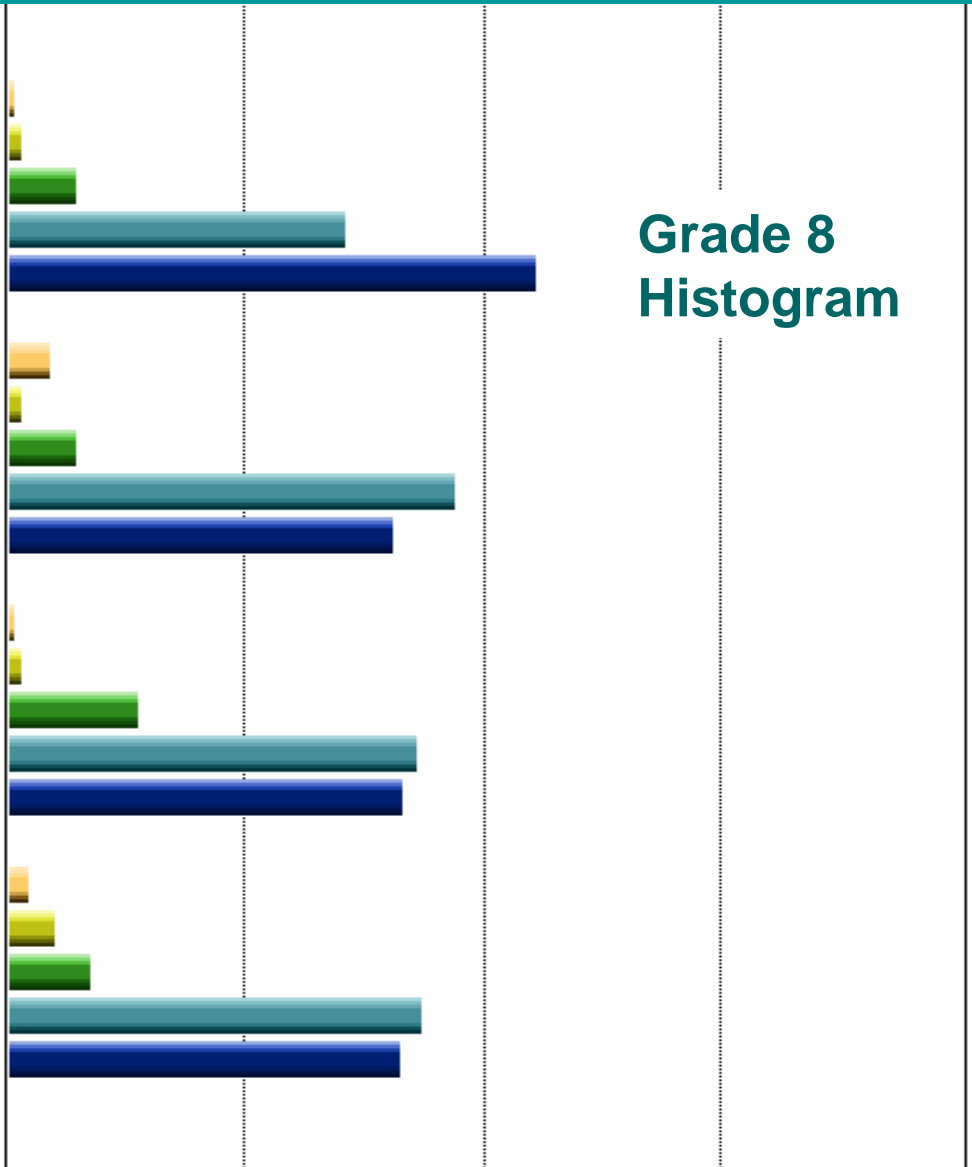
Reading 8 2008 141

Writing 8 2008 140

Science 8 2008 141

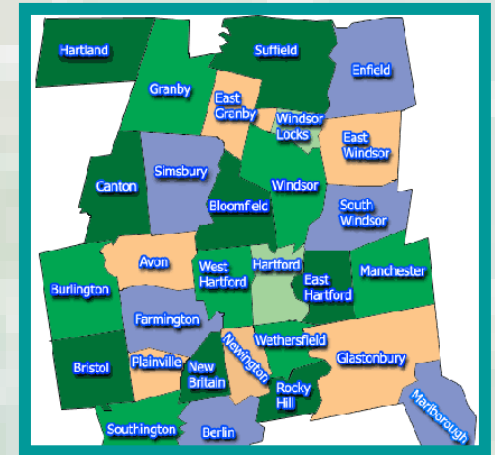
Grade 8 Histogram

Below Basic Basic Proficient Goal Advance



DRG C Comparisons

- There are 26 Elementary districts in Canton's DRG (Demographic Reference Group). There are only 22 DRG C Middle Schools (7th and 8th grades). This discrepancy is caused by some regionalization in the upper grades.
- Often the difference between one place and another is half a percentage point.
- When you look at Canton Intermediate's and Canton Middle School's achievements as a whole, the students *consistently* scored very well. Combined percentages across *all* the subjects and *all* 3 grades at CIS rank the school as 5th in the DRG overall. Other districts did well in one or two areas or in one grade, but not in the others.
- Canton Middle School ranks 1st when you combine percentages across *all* subjects and *both* grades.



Elementary Schools' DRG C Comparison

There are 26 elementary districts in Canton's DRG (Demographic Reference Group). These include towns such as Barkhamsted, Ellington, Suffield, Region 10, Somers, and Tolland. The chart below shows how well Canton's students scored in the DRG.

In Science, the 5th graders were 5th in the DRG.

	Math		Reading		Writing	
	Goal	DRG / out of 26	Goal	DRG / out of 26	Goal	DRG / out of 26
Grade 3	79	9 th	66	13 th	82	3 rd
Grade 4	74	14 th	75	7 th	78	11 th
Grade 5	87	5 th	82	5 th	84	4 th
Grade 6	87	9 th	85	7 th	76	11 th

Middle School DRG C Comparison

- When compared to other 7th and 8th grades in Canton's DRG, (Demographic Reference Group), Canton Middle School students performed very well again this year.
- On average, they scored in the top 25% of the DRG across all subjects.
- In the one area where Canton's students scored in the middle of the group (7th grade Reading), the highest district score was 90% and the top *half* of the scores were clustered within 5 points of each other.

	Math		Reading		Writing		Science	
	Goal	DRG / out of 22	Goal	DRG / out of 22	Goal	DRG / out of 22		
Grade 7	88%	2 nd	86%	13 th	80%	7 th	Goal	DRG / out of 22
Grade 8	91%	2 nd	87%	6 th	84%	6 th	84%	5 th

District-wide Curricular Issues: Math

- District-wide we have common curricular issues in Math in Strands #11 “Estimating” and #25 “Applications**,” except in Grades 4, 5, and 7 where students scored 81%, 87%, and 82% in Applications respectively.
- Other than those two patterns, teachers at each grade level will have to examine the Math results to analyze each class’s particular strengths and weaknesses.



** Applications are complex, multi-step word problems; an interesting example for Grade 3 follows on the next slide. (An example for Grades 6 and 8 is found at the end of this report.)

**Grade 3 -- MATH
Strand #25 –
“Applications”**

Geno's mother has 5 kinds of shoes in her closet.

There are:

- sneakers, flip-flops, boots, dress shoes, and clogs
- 18 pairs of shoes in all
- **twice** as many pairs of flip-flops as pairs of boots
- 3 pairs of sneakers
- 2 **more** pairs of clogs than pairs of boots

Use the information above to show how many pairs of each kind of shoe Geno's mother could have in her closet. Then show another way his mother could have pairs of each kind of shoe in her closet. Fill in the table below with your answers.

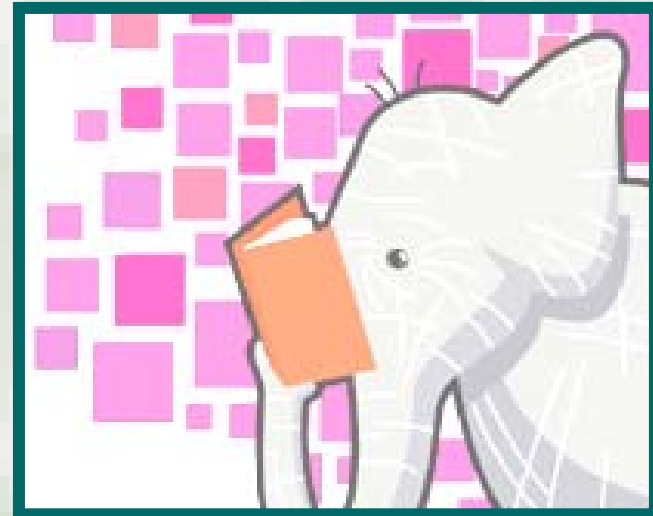
Shoes in the Closet

Kind of Shoes	Number of Pairs	
	One Way	Another Way
Sneakers		
Flip-flops		
Boots		
Dress Shoes		
Clogs		
Total		

District-wide Curricular Issues: Reading

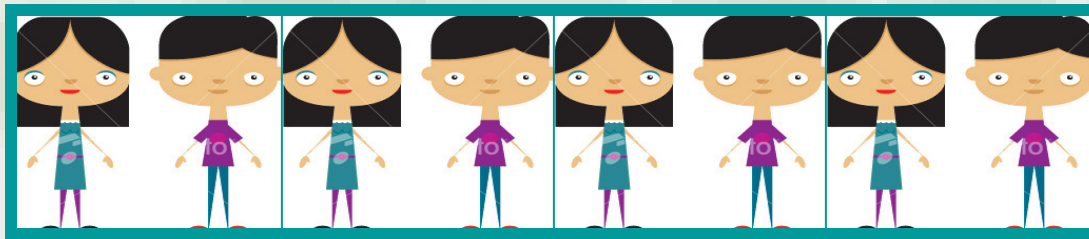
- District-wide Canton's students scored lower than we had anticipated in one of the four strands of the Reading test, **Strand #3 "Connections**."**
- Even though they made gains in the "Connections" strand (Grade 3 improved 5% over the 2007 score, Grade 4 improved 12%, Grade 5, 15%, and Grade 6, 19%), their scores on this strand sometimes fell 25% - 30% below their average for the other three Reading strands.
- 8th graders scored an 88% in the "Connections" strand, a score about equal to the other three strands.

**** Strand #3 – "Making Connections" requires students to meaningfully connect what they have read in a sample passage to their own lives or to other texts they have read.**



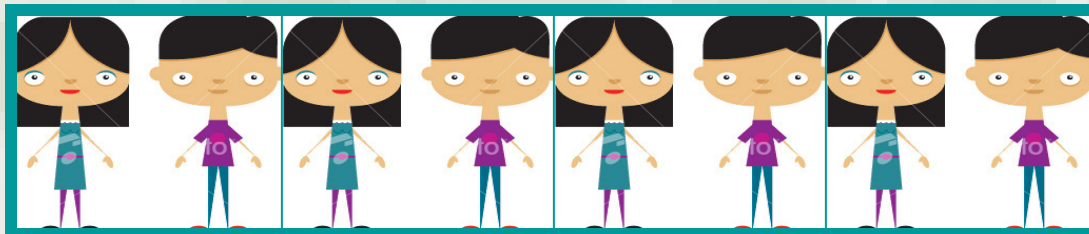
District-wide Curricular Issues: Gender Gap

- Canton is experiencing some gender-related gaps. The most significant occurs in Writing where females outscored males by 9 points in Grade 3, 16 points in Grade 4, 10 points in Grade 5, 12 points in Grade 6, 25 points in Grade 7, and 8 points in Grade 8.
- Across all grades, there is less difference in Reading scores. Females outscored males by 4 points in Grade 3, 5 points in Grade 4, 7 points in Grade 5, 3 points in Grade 6, 1 points in Grade 7, and 9 points in Grade 8.



District-wide Curricular Issues: Gender Gap

- In Math, the females did better than the males by 6 points in Grade 3 and scored the same in grades 5 and 8. However, males did better than females by 17 points in Grade 4, 12 points in Grade 6, and 6 points in Grade 7.
- In Science, males did better than females by 9 points in Grade 5. They scored the same in Grade 8.
- Additional differences are evident when females' and males' scores are compared at the Advanced band vs. Goal. Grade level teams will analyze these results.



CMT Data Report – Tracking Growth Over Time

	Mathematics		Reading		Writing	
	GOAL	PROF	GOAL	PROF	GOAL	PROF
Class of 2012 – Incoming 9th Graders						
March 2008 – 8 th	91	98	87	94	84	98
March 2007 – 7 th	91	97	87	92	87	96
March 2006 – 6 th	89	96	87	93	84	98
Fall 2003 – 4 th	79	92	79	90	81	90
Class of 2013 – Incoming 8th Graders						
March 2008 – 7 th	88	98	86	92	80	93
March 2007 – 6 th	91	97	87	91	85	96
March 2006 – 5 th	86	96	84	91	81	94
Fall 2004 – 4 th	59	81	54	66	67	85

CMT Data Report – Tracking Growth Over Time

	Mathematics		Reading		Writing	
	GOAL	PROF	GOAL	PROF	GOAL	PROF
Class of 2014 – Incoming 7th Graders						
March 2008 – 6 th	87	95	86	92	76	91
March 2007 – 5 th	86	95	79	88	84	95
March 2006 – 4 th	77	93	75	86	71	93
Class of 2015 – Incoming 6th Graders						
March 2008 – 5 th	87	96	82	91	84	97
March 2007 – 4 th	83	94	77	85	80	96
March 2006 – 3 rd	67	90	79	89	82	96

CMT Data Report – Tracking Growth Over Time

	Mathematics		Reading		Writing	
	GOAL	PROF	GOAL	PROF	GOAL	PROF
Class of 2016 – Incoming 5th Graders						
March 2008 – 4 th	74	93	75	85	78	94
March 2007 – 3 rd	66	88	72	85	81	92
Class of 2017 – Incoming 4th Graders						
March 2007 – 3 rd	79	93	66	80	82	92

**Grade 6 -- MATH
Strand #25 --
“Applications”**

The Relay Race

Tom, Bob, and Vic are racing against each other in a 100 meter dash. In how many different orders could they finish the race, assuming that ties are possible.

That is, one finishing order could be Bob, then Tom, and then Vic; another could be Tom and Vic in a tie, and then Bob.

Show all the different orders in which the race could end – including possible ties.



**Grade 8 -- MATH
Strand #25 --
“Applications”**

School Growth

The table below shows the student enrollment at Eastside High School for five different years from 1960 to 2000.

<u>Year</u>	<u>Enrollment</u>
1960	185
1970	315
1980	577
1990	930
2000	1362

- Construct a scatter plot of the data in the table.
- Based on the pattern in your graph, what do you predict the school's enrollment will be in 2001?
- Explain how you arrived at your prediction.

