



Upcoming Meeting Dates

Superintendent Memo re Math Instruction, 10/9/15

Policy Committee Agenda, 10/12/15

October 1, 2015 FPS Enrollment



UPCOMING MEETING DATES

- October 12** **4:15 PM – Board of Education Meeting**
Policy Committee
501 Kings Hwy East
Superintendent’s Conference Room
- October 15** **9:30 AM – Board of Education Meeting**
Re-districting Committee
501 Kings Hwy East
Board Conference Room
- October 20** **7:30 PM – Board of Education Meeting**
Regular Meeting
501 Kings Hwy East
2nd Floor Board Conference Room



S u p e r i n t e n d e n t M e m o r a n d u m

To: Board of Education Members
Date: October 9, 2015
Re: Math Instruction, Resources and Achievement

At recent public meetings the issues of math instruction, resources and achievement have been discussion topics. Because we are working to prepare the full Status Update on PreK-12 Mathematics for April, we thought it prudent to share some student performance data in Mathematics. This is not intended to be a full report, and it does not include data from the most recent Smarter Balanced Assessments.

At the elementary level, teachers use a variety of resources to implement the curriculum. We continue to examine new materials, both supplemental and textbook, to determine if their purchase is a wise investment of the district’s resources. Student learning, of course, is the goal of any curriculum and associated resources. Table 1 shows the percentage of students achieving at the Goal and Advanced levels in Grade 5 over the 8-year history of the CMT, which was discontinued after 2013. Because this test had been given in March of Grade 5, it is a good proxy for the elementary program.

Table 1: *Gr 5 CMT Mathematics Goal and Advanced Results*

	2006	2007	2008	2009	2010	2011	2012	2013
Goal	37.7	38.4	32.7	38.3	34.5	36.5	32.7	33.3
Advanced	36.4	43.7	49.9	46.5	51.5	51	53.9	56.3
Goal/Advanced	74.2	82.1	82.5	84.8	86	87.5	86.6	89.7

Table 1 shows that, over the 8 years, the percentage of students at the Advanced level has increased substantially, from 36.4 percent in 2006 to 56.3 percent in 2013. The percent at Goal/Advanced has also increased, from 74.2 percent in 2006 to 89.7 percent in 2013.

Concerns have also been raised about the number and percentages of students moving from Grade 5 to Grade 6 Transition to Pre-Algebra (advanced math). Table 2 displays the percentage of students in Grade 5 who have been recommended for placement in this advanced math class in Grade 6 over the past seven years. The percentage of students moving into advanced math has been steadily rising, from 33% in 2009-2010 to 49% in 2015-2016.

Table 2: *Percentage of 5th Grade Students Recommended for Transition to Pre-Algebra*

School Year	Percent of Students
2015-2016	49%
2014-2015	40%
2013-2014	40%
2012-2013	32%
2011-2012	30%
2010-2011	35%
2009-2010	33%

A much smaller group of students qualify for “double advanced.” Table 3 shows those figures over the past seven years. While small, the percentage of students recommended for placement from Grade 5 Math directly into Pre-Algebra (Grade 7 Math) has increased since 2009, from 1.3 percent to 3.9 percent.

Table 3: *Percent of 5th Grade Students Recommended for Pre-Algebra-7*

School Year	Percent of Students
2015-2016	3.9%
2014-2015	2.6%
2013-2014	2.1%
2012-2013	1.8%
2011-2012	2.0%
2010-2011	1.5%
2009-2010	1.3%

Given that both the Grade 5 Math program and the Grade 6 Math program have been made more rigorous over the years, Tables 2 and 3 illustrate that we have more students recommended for advanced math with higher standards.

At the secondary level, concerns have been raised about the cohort of students in Algebra 1 who received a pilot textbook, in addition to the standard textbook, in 2012-2013. We have

been able to follow these students who took Algebra 1 in either 8th or 9th grade in 2012-2013 and compared their achievement to students in Algebra 1 in each of the prior two school years.

Table 4 displays the SAT results for the 9th grade Algebra 1 students from 2012-13 compared to the SAT results of the 9th grade Algebra 1 students in the previous two years. All three cohorts received the same curriculum; the difference is that the 2012-2013 cohort had the pilot textbook with the standard textbook as a supplement. All cohorts took Algebra 1 in 9th grade and then took the SAT two years later, as juniors.

Table 4: SAT Performance for 9th Grade Algebra 1 Cohorts

	2012-2013 Algebra 1 SAT in 2015	2011-2012 Algebra 1 SAT in 2014	2010-2011 Algebra 1 SAT in 2013
Average	513	510	502
State Average	495	510	512
Difference	+18	0	-10

This table shows that the cohort of students from 2012-2013 outperformed the other two cohorts on the SAT. In addition, unlike the other cohorts, the 2012-2013 cohort outperformed the State average on the SAT this past year – the state average dropped dramatically but our students who had the pilot/standard textbook combination improved over prior cohorts.

The Algebra 1 students in 8th grade in 2012-2013 have not yet taken the SAT, but we are able to track their grades in Geometry (taken in 9th grade) and Algebra 2 (taken in 10th grade). We compared their Grade Point Averages to those of the two previous cohorts in the same courses.

Table 5 shows the GPA of the 8th grade students who had the pilot/standard textbook for Algebra 1 in 2012-2013 and the two previous cohorts of students, who had the same curriculum but with the standard textbook. The cohort in 2012-2013 outperformed the previous two cohorts in Grade 8 Algebra 1 and in Grade 10 when they took Algebra 2. The GPA's were virtually the same in Geometry.

Table 5: GPA Cohort Comparison: Algebra 1, Geometry, Algebra 2

Grade	Course	2012-2013 GPA	2011-2012 GPA	2010-2011 GPA
8	Algebra 1	3.55	3.39	3.19
9	Geometry	3.39	3.39	3.42
10	Algebra 2	3.55	3.14	3.48

Table 6 shows the same results for the 9th grade students who took Algebra I in 2012-2013 with the pilot/standard combination. In 9th grade, all 3 cohorts had similar GPA's, but the 2012-2013 cohort had a higher GPA in Geometry and Algebra 2 in subsequent years.

Table 6: GPA Cohort Comparison: Algebra 1, Geometry, Algebra 2

Grade	Course	2012-2013 GPA	2011-2012 GPA	2010-2011 GPA
9	Algebra 1	2.51	2.55	2.49
10	Geometry	2.64	2.49	2.43
11	Algebra 2	2.46	2.23	2.16

In summary, all indications are that students who received the pilot/standard text combination in Algebra I for the 2012-2013 school year have met or exceeded the academic performance of the two previous cohorts of students. This is true whether or not these students had the pilot text/standard combination in 8th or 9th grade, and is true not only by looking at GPA data, but also by looking at SAT results.

In the 2013-2014 school year, new textbooks were selected to implement the newly approved Mathematics curriculum. In addition, SBAC replaced the CMT. We are administering the PSAT in October and will have that data to analyze as well. We are continuing to research student performance on all of our assessments over time and will have the full report ready for the April Board of Education meeting.

FAIRFIELD PUBLIC SCHOOLS

Policy Committee Agenda

October 12, 2015

4:15 PM

501 Kings Highway East, Suite 210
Superintendent's Conference Room

1. Call to Order
2. Approval of Minutes
 - June 15, 2015
 - August 31, 2015
3. Discussion of Board of Education Handbook (*DRAFT, Revised May 7, 2015*)
4. Public Comment
5. Adjournment

Next Meeting: November 9

October 1, 2015

FAIRFIELD PUBLIC SCHOOLS ENROLLMENT - ELEMENTARY

	PRE-K	KIND	1	2	3	4	5	TOTAL
Burr		21	19	17	22	21	22	
		21	19	18	23	22	23	
	15	20	19	18	23	21	22	
	15			17				
	30	62	57	70	68	64	67	418
Dwight		16	16	16	16	21	24	
		15	18	16	18	21	24	
	18	16	16	18	18	21		
	7							
	25	47	50	50	52	63	48	335
Holland Hill		22	17	19	18	19	21	
		23	16	20	19	19	21	
		22	17	19	19	19	20	
			16		19	20		
	67	66	58	75	77	62		405
Jennings		22	16	18	20	20	18	
		21	16	19	21	17	19	
			17	19		20	18	
						19		
	43	49	56	41	76	55		320
McKinley		19	18	20	17	18	16	
		21	19	20	17	18	19	
		19	18	20	18	19	18	
			17	19	18	19	19	
	59	72	79	70	74	72		426
Mill Hill		15	22	19	21	22	22	
		16	22	20	20	22	23	
		15	21	17	20	21	22	
						22		
	46	65	56	61	87	67		382
No. Stratfield		16	22	17	22	22	19	
		18	22	17	22	20	20	
		16	22	17	22	21	21	
				17		20	22	
	50	66	68	66	83	82		415
Osborn Hill		22	18	22	20	24	23	
		21	17	23	21	23	23	
		21	16	23	20	24	22	
			17	23	20	23	23	
	64	68	91	81	94	91		489
Riverfield		22	22	23	21	21	20	
		22	20	22	22	21	22	
		23	21	22	20	21	22	
						21		
	67	63	67	63	84	64		408

1-Oct-2015

FAIRFIELD PUBLIC SCHOOLS ENROLLMENT - ELEMENTARY

	PRE-K	KIND	1	2	3	4	5	TOTAL
Sherman		20	22	18	19	23	24	
		21	21	19	20	22	24	
		21	21	19	22	23	23	
		21		19	19	21		
				17				
		83	64	92	80	89	71	479
Stratfield		19	18	17	25	19	24	
		18	17	17	23	19	23	
		20	17	18	24	19	24	
			17	18		20	24	
			57	69	70	72	77	95
ECC	103							103
TOTAL PRE-K-5	158	645	689	757	729	868	774	4,620

FAIRFIELD PUBLIC SCHOOLS ENROLLMENT - SECONDARY

	6	7	8	9	10	11	12	TOTAL
Fairfield Woods	288	302	297					887
Ludlowe	274	256	273					803
Tomlinson	203	257	225					685
TOTAL 6-8	765	815	795					2,375
FWHS				394	373	368	387	1,522
Walter Fitzgerald Campus				2	4	7	3	16
FLHS				385	391	356	380	1,512
Walter Fitzgerald Campus				2	3	3	5	13
TOTAL 9-12				783	771	734	775	3,063

SUMMARY	Pre-K - 5	6 - 8	9 - 12	TOTAL
Current:	4,620	2,375	3,063	10,058
Difference: Current - October 1, 2014	(90)	(66)	54	(102)
October 1, 2014	4,710	2,441	3,009	10,160

** Please inform the Supt. Office of any discrepancies at 255-8371.