

Council Rock Math Specialists

Citizens for Education recently sat down with Joy McClendon, Director of Elementary Education/Curriculum Services, and Mrs. Charyl Hills, Math Specialist, to understand the role of the math specialist and the impact that resulted from reducing the number of math specialists from 7 to 6 in Council Rock School District this year.

Math specialists perform a number of responsibilities, including those outlined below.

Responsibilities of Elementary School Math Specialists in CRSD
<ul style="list-style-type: none">• Provide math-related professional development for building/district staff• Provide math-related consultations to staff as needed• Teach Math Enrichment, Grades 4-6• Administer eligibility testing for Math Enrichment• Teach Math Remediation (Math Club), Grades 4-6• Oversee math pilot programs, and assist in implementing further rollout• Run Math Olympiad team(s) in each elementary school• Implement special programs, such as Family Math Night

Supporting Classroom Teachers and Students

Math specialists offer professional development and/or consultations to teachers and assist teachers by conducting math instruction to entire classrooms. This may occur when a particular concept is being taught, a new math curriculum is being piloted, or a new teacher is brought onboard. Math specialists also provide “push in” programs to upper grades and, when time allows, assist in the primary grades (1-3). In the course of a typical day, a math specialist may work with 120 children at one or two schools.

Math Enrichment

Students with innate or divergent math ability can be recommended for Math Enrichment by teachers or parents at the end of third grade, or any subsequent elementary year. These students are then evaluated through a 2-tier test program. The first test is conducted at grade level. The second round is conducted 2-3 levels above grade level via the School & College Ability Test (SCAT). Students reaching preset criteria qualify for the Math Enrichment program. As participants, students are pulled out from their regular classroom math to meet as a smaller group with the math specialist two times per week for the entire school year. These students are also eligible to participate, along with other high-average math students, on Math Olympiad teams run by the math specialist.

Math Remediation

Students in grades 4-6 who are struggling with a particular math concept, or whose PSSA results indicate that additional instruction is required are eligible for math remediation, also known as Math Club. (This includes students with PSSA math scores of Basic or Below Basic, or Proficient with teacher recommendation.) Students receive special assistance from the math specialist during lunch, recess, or before/after school. These students remain in the

regular classroom for their math instruction, and can come and go to Math Club on an as-needed basis throughout the year. The emphasis in Math Club is to strengthen the student's math skills through added practice and individualized or small-group instruction time with the math specialist.

New Math Curriculum Being Piloted

This year a new math program, EnVision Math by Pearson, is being piloted in 22 classrooms throughout the district. The timing of the full rollout of this program has not yet been decided and is dependent on budgetary constraints. The district is hoping to phase it in at two or three grade levels. However, less than full implementation would mean some students who have been in pilot classrooms this year may switch back to the older math program next year. Reduction in math specialist staffing could hinder the amount of support needed for a comprehensive implementation of the new curriculum.

History

Council Rock has included math specialists in the elementary schools for over 20 years. The highest number on staff was about 14 years ago, when there was one assigned full time to each of the elementary schools (9 at the time). Since then, the numbers have dwindled. This year, Council Rock reduced the number of math specialists from 7 to 6 at the 10 elementary schools. The chart below outlines how math specialist time has been cut. Per Joy McClendon, the allocation of math specialists to each school is determined by: the number of students being served, the size of groups within a grade level, the professional development goals of the school, and other factors.

STAFFING ALLOCATIONS AND ENROLLMENTS FOR 2008-2009

<u>School</u>	<u>Math specialist staffing level</u>		<u>Diff.</u>	<u>Grade 4-6 population</u>		<u>Diff.</u>	<u># of students in Math enrichment</u>		<u>Diff</u>
	<u>08-09</u>	<u>09-10</u>		<u>08-09</u>	<u>09-10</u>		<u>08-09</u>	<u>09-10</u>	
Churchville	0.7	0.6	-0.1	295	306	+11	24	24	0
Goodnoe	0.8	0.7	-0.1	353	387	+34	45	42	-3
Hillcrest	0.6	0.5	-0.1	256	272	+16	26	28	+2
Holland	0.7	0.6	-0.1	249	232	-17	40	35	-5
MM Welch	0.7	0.6	-0.1	312	359	+47	42	35	-7
Newtown	0.8	0.7	-0.1	325	308	-17	56	53	-3
Richboro	0.7	0.7	0	220	227	7	36	40	+4
Rolling Hills	0.6	0.5	-0.1	198	194	-4	30	15	-15
S. Feinstone	1.0	0.7	-0.3	370	396	+26	66	67	+1
Wrightstown	0.4	0.4	0	182	178	-4	27	20	-7
TOTAL	7.0	6.0	-1.0	2760	2859	+99	392	359	-33

Need for Additional Math Specialists

Math specialists have the ability to pinpoint district and PSSA testing data down to a school's individual classroom. When that analysis shows that a grade level or individual classroom in their assigned school is having difficulty with a math concept, they provide support with professional development to the teacher and/or by giving instruction to the entire classroom. In the 2008-09 PSSA testing, the aggregate elementary scores in Advanced went down in 8 out of the 10 schools and the percentage of students scoring Below Basic went up in half the schools, as compared to the prior school year. **These testing results add empirical evidence to the need for more math support at each school rather than less.** The chart below details the differences, by school, in PSSA results for 2007-2008 vs. 2008-2009 for grades 3-6. Cells that are bolded indicate areas where performance levels have dropped.

ELEMENTARY MATH PSSA SCORES FOR 2007-2008 and 2008-2009

Testing Year	School	% Advanced	% Proficient	% Basic	% Below Basic
2007-2008	Churchville	57.7	28.4	8.6	5.3
2008-2009	Churchville	49.1	35.9	10.1	4.8
2007-2008	Goodnoe	63.2	27.5	6.8	2.4
2008-2009	Goodnoe	69.0	24.0	5.2	1.7
2007-2008	Hillcrest	64.6	28.5	5.1	1.8
2008-2009	Hillcrest	61.0	33.7	4.3	0.9
2007-2008	Holland	59.2	26.1	10.8	3.9
2008-2009	Holland	51.5	34.4	7.4	6.7
2007-2008	MM Welch	64.0	27.0	6.7	2.4
2008-2009	MM Welch	59.8	30.6	7.4	2.2
2007-2008	Newtown	68.9	23.5	3.2	4.3
2008-2009	Newtown	64.5	25.5	5.2	4.8
2007-2008	Richboro	58.5	27.5	9.6	4.5
2008-2009	Richboro	52.9	32.2	9.0	5.9
2007-2008	Rolling Hills	61.1	27.9	8.5	2.5
2008-2009	Rolling Hills	54.4	30.9	11.0	3.7
2007-2008	S. Feinstone	64.4	24.3	8.0	3.3
2008-2009	S. Feinstone	66.7	25.5	4.6	3.2
2007-2008	Wrightstown	69.2	27.2	2.7	0.9
2008-2009	Wrightstown	67.7	25.4	5.2	1.7

On days when the math specialists are split between two schools, the specialist is allotted 30-40 minutes for travel. **Adding math specialist(s) with a goal to reduce travel time**

will help take resources that are being spent on the road and instead give more time for teachers to be in front of students. This year every math specialist spends a portion of his/her week (either 1 or 2 days) traveling.

A math specialist's "face time" at each school is important to foster communication among teachers and between math specialists and students. Under the current allocation, Holland and Maureen M. Welch are served by two different math specialists each, for only a day and a half of instruction.

Math specialist Charyl Hills is splitting her time between Goodnoe and Maureen M. Welch this year. Based on her experience from when there was one math specialist per school, she feels that having a full time math specialist in every school is ideal because it eliminates the travel between schools and allows each math specialist to fully service and focus on the needs of a particular school.

Planning for Next Year

It is the goal of Joy McClendon to restore this year's eliminated math specialist position as soon as budgetary considerations allow, hopefully in the 2010-11 school year. With the district in a restrictive budgetary environment, adding back additional math specialist position(s) will take parental advocacy, full administrative support, and school board approval. **Citizens for Education believes that restoring the math specialist staff back to at least the 2008-09 level of 7 full-time individuals will be a good first step and is in the best interest of CRSD students.**