
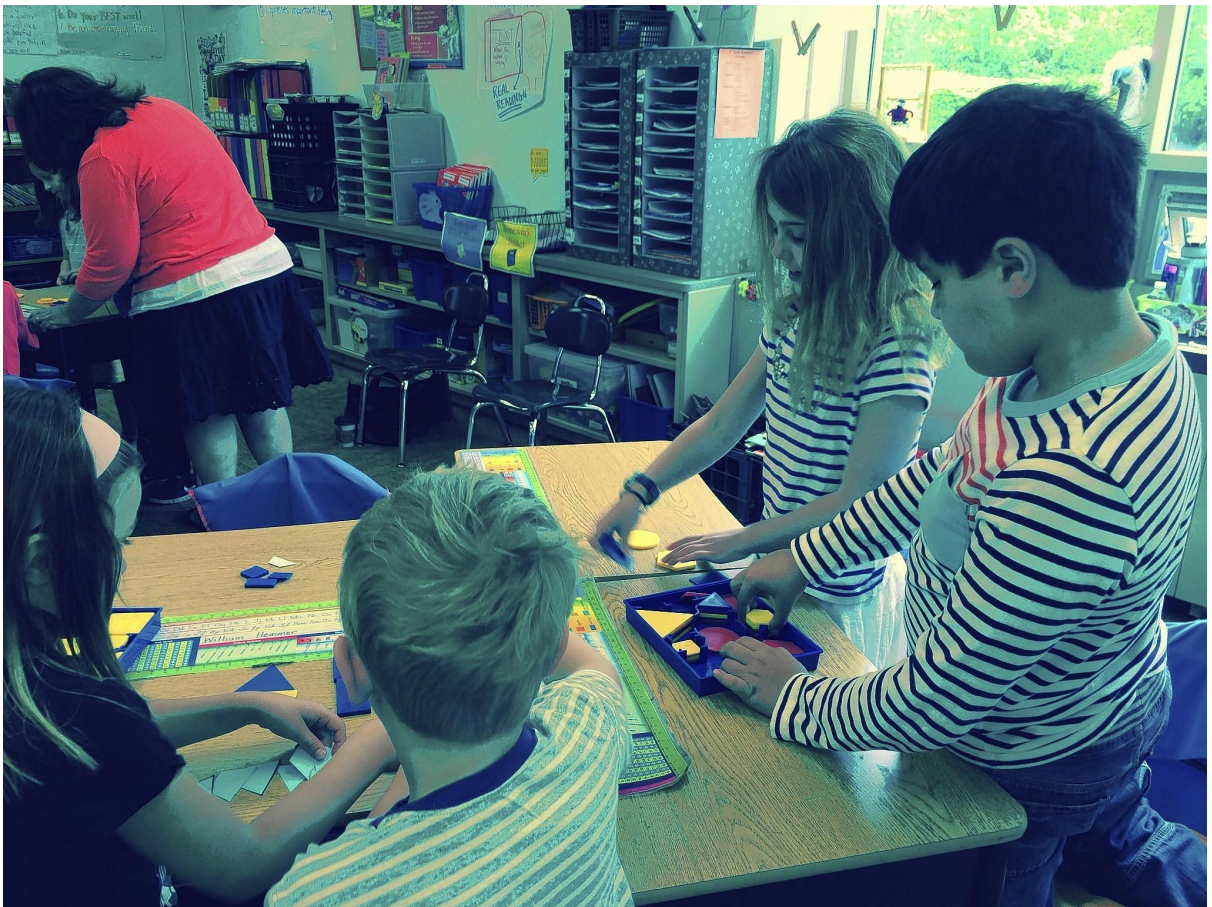


# District 38 puts new math program into effect

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## Curriculum modeled on one developed in Singapore

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At Joseph Sears School in Kenilworth, second grade teacher Allison Lopuszynski's students work with shapes as part of the hands-on instruction with District 38's new Math in Focus program, which is based on a math curriculum in Singapore. (Karen Ann Cullotta, Chicago Tribune)

On a recent Wednesday morning at Joseph Sears School in Kenilworth, second-grade teacher Allison Lopuszynski had a mathematical situation on her hands.

"There's a trapezoid shortage," warned Lopuszynski, handing her students an assortment of paper shapes to use as "manipulatives" – a hands-on approach to learning reflected in a new District 38 mathematics curriculum called Math in Focus, often referred to as Singapore Math.

Within seconds, one of Lopuszynski's students has discovered a solution - an extra trapezoid can be easily created by fitting together three triangles.

The children soon are immersed in crafting pictures out of the myriad shapes scattered on their pint-sized desks – a hands-on lesson in what is in essence, Euclidian geometry.

"Math is not dull when students are talking about it and exploring it together, as well as working on their own," Lopuszynski added.

While the district's new math program echoes a curriculum first developed by Singapore's Ministry of Education in the late 1980s, the District 38 program for students in kindergarten through 5th grade also dovetails with the state's new Common Core standards, which espouse teaching students fewer mathematical concepts, but in greater detail and depth.

"It's not just a matter of students knowing that seven times five is 35," said Janice Matthews, principal at Joseph Sears School, "but they need to have the evidence and be able to go back and prove it."

Faye Tatel, a mathematics consultant hired by District 38 to help coordinate a Math in Focus pilot program during the 2012-2013 school year, said the curriculum relies upon three steps when teaching new concepts, starting with the concrete, moving to the pictorial, and lastly, focusing on the abstract.

In addition to helping students develop math strategies by tackling complex story problems with written narratives, the program also relies on a concept known as "bar modeling," a graphic method of problem-solving, said Tatel, who has served as a teacher, administrator or educational consultant for nearly five decades.

"We all have heard the saying that in the United States, the curriculum is a mile wide and an inch deep," Tatel said. "With Math in Focus and Common Core, there are fewer standards and you go deeper, with much more mastery."

Still, Tatel said there is not one perfect math curriculum, and hence, teachers in Kenilworth were urged to also hold onto their own best methods in the classroom.

"In my opinion, there is no one textbook that has everything you can do with children to help them understand math concepts...you couldn't carry the book," Tatel said. "I always tell teachers, don't throw anything out, because you might need that great math game you've used for years."

For 4<sup>th</sup>-grade teacher Kathy Lowell, the district's new math program helps her students develop critical thinking skills that go beyond rote memorization of factors and algorithms.

"Years ago, when I took math in school, the teachers said, 'here's how you do it, and now, go do it,'" Lowell said. "Now, when students arrive at an answer, they need to know, why is it right? Sometimes it doesn't matter so much if they got the wrong answer, as long as they understand the process of how they got there."

Fourth-grader Lucia McConnell, 10, said she is enjoying the school's new Math in Focus program, "because it's really good how they teach you different techniques."

"It kind of explains what to do, and why it makes sense to do it that way," Lucia said.

"Math in Focus is easier, because it shows you how to solve the problems more creatively," added Jesper Snow, 10.

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