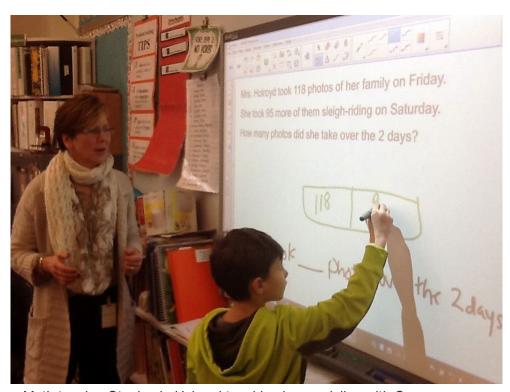
## Singapore math: Easton students learn problem-solving method

By by Tony Spinelli, Correspondent on January 19, 2015 in Connecticut, Latest News, Lead News, News, Schools · 1 Comments



Math teacher Stephanie Holroyd teaching bar modeling with Owen Demilo.

Improving problem-solving skills through a deeper experience of mathematics is the goal of a math resources program at Samuel Staples Elementary School being applied in kindergarten through fifth grade.

The books, known as Math in Focus, are based on the principles of Singapore math, a type of curriculum that has evolved over the past 30 years out of Singapore, a small island nation that is a world leader in children's math scores.

It is in its first year, bringing a wealth of materials to standard math that, it is hoped, will push students further along in their goal of what is known as Common Core, with all Connecticut public school students learning the same material well.

Stephanie Pierson Ugol, the assistant superintendent for curriculum, said things are going well.

"The first year is always an adjustment as we get students up to speed with new materials, with slightly different strategies," Ms. Pierson Ugol said. "We are pleased we have support from the Board of Education and have the new materials to support our curriculum."

Every year, part of the budget provides resources that support the curriculum, sometimes professional books, sometimes student resources or technology resources. The Math in Focus book purchase was a large order, Ms. Pierson Ugol said.

The students are very engaged in Math in Focus, said their math teacher, Stephanie Holroyd.



Math teacher Stephanie Holroyd works on Singapore math with Kyle Araujo.

"We're not using the true Singapore math, but the center of it is the problem solving. That's a huge focus for us," Ms. Holroyd said. "We want to have kids that persevere, that reason and communicate and can generalize, and this program is going to help us do that. We are seeing a lot of persevering, and that's one of our mathematical

practices, to try to work though and become a problem solver."

Here's an example of Singapore math principles at work in Math in Focus. The students learn to draw a bar diagram, to illustrate their math program, as well as solve it the traditional way. Here is the math problem: If there are 2,065 girls and 2,349 boys in a school, and 1,890 wear glasses, how many do not wear glasses?

The answer, of course, is obtained by first adding and then subtracting. However, the students graph the problem out with a bar model as well, helping to visualize the elements of the problem. This helps them experience the solution on a deep level.

"They create a visual model; looking at the word problem makes them think, and they visualize how you approach that problem," Ms. Holroyd said.

Supporters of Singapore math credit the Singaporean methods of instruction and curriculum for its students' success, according to Laura Lewis Brown, who wrote an article on Singapore math for the Website pbs.org.

While American math instruction often relies on drilling and memorization of many skills each year, Singapore math focuses on children not just learning but also truly mastering a limited number of concepts each school year, Ms.

Lewis Brown wrote. The goal is for children to perform well because they understand the material on a deeper level; they are not just learning it for the test.

Bar graphs are not the only visualization tool. There is also a number bond, a tool to represent numbers with parts and whole. "So that's a new way of looking at numbers and seeing their relationships," Ms. Holroyd said.