Eve Samples: Martin County schools are among the best in the state — but that's not enough in a global economy

By Eve Samples

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Martin County has one of the highest-performing school districts in Florida.

Public school students here score better on standardized tests than most of their peers across the state.

And yet 40 percent of them were not proficient in science last year; 17 percent were not proficient in math, according to 2010 Florida Comprehensive Assessment Test results.

That's not good enough to compete in a global economy.

That's why the Education Foundation of Martin County wants to help the district improve those numbers.

Enter Mark Love. Every day this week, the traffic engineer from New Hampshire has been introducing his Socratic method to students from Jensen Beach to Indiantown. The foundation paid for his trip to Martin County as part of an initiative that aims to make math more engaging and practical for local students.

On Tuesday morning at Hidden Oaks Middle School, Love started with a question.

"What are two words that describe engineering?" he asked 25 eighth-graders in Mrs. Tracey Hurt's class.

The students perked up.

"Have fun!" responded one boy.

Love cracked a smile. Having fun is central to his lesson, but that wasn't the answer he was looking for.

"Solve problems!" blurted out another student.

That's right, Love said. Then he and the class spent the next 90 minutes doing just that.

The work focused on traffic, Love's area of expertise. He posted a picture of a busy intersection on the overhead projector.

You have 90 seconds to get all of the cars through, he told the students. How much time do you give to each of the three light phases?

"No pencils. No calculators," Love instructed, prompting a couple of groans. "You're going to make this distribution in your head as fairly as possible."

Later, when the students crunched the numbers with their calculators, they discovered their estimates were accurate within a second.

"Use your computer as a tool," Love told them. "Don't let the computer think for you."

Love led the students through increasingly complex traffic problems, challenging them to get as many cars through the intersection in as little time as possible — and safely.

"Is this hard?" Love asked as they added and divided and multiplied.

"No!" the students said in unison.

Though he was teaching algebra, Love didn't use a single x, y or z until the end of the class.

That's when he posted an alphabet soup of formulas and variables on the overhead projector.

"If you're me, and you had to do 50,000 of these (calculations), would you do it from scratch every time?" Love asked.

"No!" the class answered.

"Want a better way? Thank you, algebra," Love said. "I had the nerve to think when I was your age that algebra was a waste of time."

Like that, complex math became a real-life solution. And it was fun. The 90 minutes flew by (even for this columnist, who hasn't attempted a serious math problem since college calculus class).

"The more math skills you have, the easier your lives will be," Love told the students.

Indeed, 15 of the 20 fastest-growing jobs in the next decade will be math- and science-related, according to the U.S. Bureau of Labor Statistics.

At the top of the list: biomedical engineers. The number of people working as biomedical engineers is expected to increase by 72 percent from 2008 to 2018.

"We obviously want to target those areas," said Lisa Rhodes, executive director of the Education Foundation of Martin County.

Love's math program is part of the foundation's STEAM Initiative (an acronym for Science, Technology, Engineering, the Arts and Math), which is covered by grants from the Kantner Foundation, the state and other donors.Rhodes would like to expand on what Love is doing this week by enlisting local engineers who can visit classrooms more regularly.

Students are constantly asking Mrs. Hunt for real life examples of the algebra and geometry skills she teaches.

"When are we going to use this?" they want to know.

Love's visit literally showed them the answer — and that will be the key to keeping our community, and our country, competitive.