

Common Core: Integrated approach will benefit San Jose students

By Chris D. Funk Special to the Mercury News San Jose Mercury News

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It is a disturbing fact that American 15-year-olds score 26th in the world on math achievement, according to the Program for International Student Assessment:

"Students in the United States have particular weaknesses in performing mathematics tasks with higher cognitive demands, such as taking real-world situations, translating them into mathematical terms, and interpreting mathematical aspects in real-world problems A successful implementation of the Common Core Standards would yield significant performance gains."

As superintendent of East Side Union High School District, it is my privilege and duty to support the transition to the Common Core State Standards.

East Side serves 24,000 high school students, many of whom are English learners, students living in poverty and students who have been traditionally underserved by public education.

Like all districts in California, we had to make the decision to implement the new Common Core math standards using the traditional name and sequence (Algebra 1, Geometry, and Algebra II) or the international approach, using the integrated math approach. Both require math teachers to completely shift the standards that were taught in the traditional Algebra and Geometry courses.

East Side Union adopted the international approach because it is to math instruction as the holistic health approach is to medicine.

The standards are changing the way students learn mathematics, what students are expected to be able to do with mathematics, and what mathematical concepts are taught at each grade level. The rigor expected at each grade level has increased, which requires the typical high school mathematics programs to change.

These standards emphasize learning mathematics in the context of real-world situations, to solve real problems while developing the mental habits that come from using mathematics skillfully and understanding math's conceptual framework. For example, the content of the first half of a traditional Algebra 1 course will now be taught in grade 8 along with some triangle proofs from Euclidian Geometry.

Regardless of what we call the courses, the Common Core standards require all high school students to develop an integrated understanding of algebra, geometry, statistics, functions, and number and quantity. This content shift in each course is significantly different from how math has been taught for the past two decades.

The University of California and the California State University systems recognize this shift in content and standards for mathematics and have steadfastly approved the shift in the traditional titles of mathematics in the integrated approach we're taking.

Additionally, in East Side, we have created the pathway for any student to take Calculus in their senior year.

The common core state math standards introduce a new way of teaching math and assessing students' learning as part of our commitment to providing our young people with the mental tools, skills and focus to contribute to and succeed in the 21st Century global economy.

For all of our incoming students from our seven feeder districts, we want to provide every student the opportunity to be successful in college and career. We are working with each of our feeder districts to help students to accelerate their STEM accomplishments.

With parental support and involvement, we believe this integrated approach will prepare every student for job opportunities right here in Silicon Valley.

Chris D. Funk is superintendent of the East Side Union High School District in San Jose. He wrote this for this newspaper.