

**Instruction****Mathematics Instruction**

The Board of Education desires to offer a rigorous mathematics program that progressively develops the knowledge and skills students will need to succeed in college and career. The district's mathematics program shall be designed to teach mathematical concepts in the context of real-world situations and to help students gain a strong conceptual understanding, a high degree of procedural skill and fluency, and ability to apply mathematics to solve problems.

For each grade level, the Board shall adopt academic standards for mathematics that meet or exceed the Common Core State Standards. The Superintendent or designee shall develop or select curricula that are aligned with these standards and the state curriculum framework.

The district's mathematics program shall address the following standards for mathematical practices which are the basis for mathematics instruction and learning:

1. Overarching habits of mind of a productive mathematical thinker: Making sense of problems and persevering in solving them; attending to precision
2. Reasoning and explaining: Reasoning abstractly and quantitatively; constructing viable arguments and critiquing the reasoning of others
3. Modeling and using tools: Modeling with mathematics; using appropriate tools strategically
4. Seeing structure and generalizing: Looking for and making use of structure; looking for and expressing regularity in repeated reasoning

In addition, the program shall be aligned with grade-level standards for mathematics content.

For grades K-8, content shall address, at appropriate grade levels, counting and cardinality, operations and algebraic thinking, number and operations in base ten, fractions, measurement and data, geometry, ratios and proportional relationships, functions, expression and equations, the number system, and statistics and probability. Students shall learn the concepts and skills that prepare them for the rigor of higher mathematics.

For higher mathematics, the district shall offer a pathway of courses through which students shall be taught concepts that address number and quantity, algebra, functions, modeling, geometry, and statistics and probability. Students entering ninth grade will be placed in a mathematics course based on teacher recommendation and multiple objective academic measures of pupil performance including, but not limited to 8<sup>th</sup> grade Smarter Balanced Assessment results, semester grades, and performance on the end-of-course final test in 8<sup>th</sup> grade.

Within the first month of the school year, with teacher recommendation, a placement checkpoint will occur to determine whether students are successful in their mathematics class placements and whether additional supports are needed.

Parents or legal guardians questioning or objecting to the placement of their pupil in mathematics courses shall inform the Superintendent or designee in writing within the first 30 days of the school year or enrollment if starting mid-year. A meeting will be convened to discuss the placement and placement

options will be considered. Participants will include parents/guardians, administration, and mathematics teachers.

This mathematics instruction policy will be posted on the District website. (SB 359: California Mathematics Placement Act of 2015)

The Superintendent or designee shall ensure that certificated staff have opportunities to participate in professional development activities designed to increase their knowledge and skills in effective mathematics teaching practices.

The Superintendent or designee shall ensure that students have access to sufficient instructional materials, including manipulatives and technology, to support a balanced, standards-aligned mathematics program.

The Superintendent or designee shall provide the Board with data from state and district mathematics assessments and program evaluations to enable the Board to monitor program effectiveness. The Superintendent or designee will also examine pupil placement data to ensure that students are not held back in a disproportionate manner on the basis of their race, ethnicity, gender, or socioeconomic background

Legal Reference:

EDUCATION CODE

51210 Areas of study, grades 1-6

51220 Areas of study, grades 7-12

51224.5 Algebra in course of study for grades 7-12

51225.3 High school graduation requirements

51284 Financial literacy

60605 State-adopted content and performance standards in core curricular areas

60605.8 Common Core standards

Management Resources:

CSBA PUBLICATIONS

Governing to the Core, Governance Briefs

CALIFORNIA DEPARTMENT OF EDUCATION PUBLICATIONS

Mathematics Framework for California Public Schools: Kindergarten Through Grade Twelve, 2013

California Common Core State Standards: Mathematics, rev. January 2013

COMMON CORE STATE STANDARDS INITIATIVE PUBLICATIONS

Appendix A: Designing High School Mathematics Courses Based on the Common Core State Standards

WEB SITES

CSBA: <http://www.csba.org>

California Department of Education: <http://www.cde.ca.gov>

Common Core State Standards Initiative: <http://www.corestandards.org/math>

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