

INSTRUCTION

SUBJECT: Mathematics Instruction

The Governing Board 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.

(cf. 6143 - Courses of Study)

(cf. 6146.1 - High School Graduation Requirements)

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.

(cf. 6011 - Academic Standards)

(cf. 6141 - Curriculum Development and Evaluation)

The Superintendent or designee shall develop protocols to ensure that students are appropriately placed in mathematics courses and are not unnecessarily required to repeat a course that they have successfully completed in an earlier grade level.

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.

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.

(cf. 4131 - Staff Development)

(cf. 4331 - Staff Development)

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.

(cf. 0440 - District Technology Plan)

(cf. 1312.2 - Complaints Concerning Instructional Materials)

(cf. 1312.4 - Williams Uniform Complaint Procedures)

(cf. 6161.1 - Selection and Evaluation of Instructional Materials)

(cf. 6161.11 - Supplementary Instructional Materials)

(cf. 6163.1 - Library Media Centers)

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.

(cf. 0460 - Local Control and Accountability Plan)

(cf. 0500 - Accountability)

(cf. 6162.5 - Student Assessment)

(cf. 6162.51 - State Academic Achievement Tests)

(cf. 6162.52 - High School Exit Examination)

(cf. 6190 - Evaluation of the Instructional Program)

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>