Science Instruction

Adopted: 12/08/1998 **| Last Revised**: 09/01/2026 **| Last Reviewed**: 09/01/2026

The Board of Education believes that science education should focus on giving students an understanding of the biological and physical aspects of science, including the place of humans in ecological systems, the causes and effects of the changing climates and the methods to mitigate and adapt to such changes, key scientific concepts, and methods of scientific inquiry and investigation through experiments and other activities that foster critical thinking. Students should become familiar with the natural world and the interrelationship of science, mathematics, technology, and engineering. As part of science instruction, students should learn how to apply scientific knowledge and reasoning.

Philosophical and religious theories that are based, at least in part, on faith and are not subject to scientific test and refutation shall not be discussed during science instruction.

The Board shall adopt academic standards for science that meet or exceed the California Next Generation Science Standards (CA-NGSS) and describe the knowledge and skills students are expected to possess at each grade level, with an instructional focus on understanding the process of science, the fundamental ideas within each discipline of science, and underlying themes that are common to all sciences. The Superintendent or designee shall ensure that curricula used in district schools are aligned with these standards and the state curriculum framework.

The Superintendent or designee shall ensure that students have access to and are enrolled in a broad course of study including science courses.

The Superintendent or designee shall provide certificated staff with opportunities to participate in professional development activities designed to enhance their knowledge of district-adopted academic standards, instructional strategies for teaching science, and changes in scientific theories.

The Superintendent or designee shall develop and implement appropriate safety measures for science laboratory classes in accordance with Board Rule 5142 – Safety, including, but not limited to, staff and student safety training, use of eye safety devices, hearing protection, first aid procedures, regular equipment maintenance, safe use of heat sources, safe use and disposal of hazardous chemicals, proper ventilation, prevention of exposure to bloodborne pathogens from sharp instruments, fire prevention and control, an emergency response plan, and evacuation procedures. Parents/guardians shall be informed of the types of science laboratory activities that will be conducted and encouraged to sign consent forms for their child's participation.

The Superintendent or designee shall report as necessary to the Board regarding the implementation and effectiveness of the science curriculum at each grade level.

Policy Reference Disclaimer:
These references are not intended to be part of the policy itself, nor do they indicate the basis or authority for the Board to enact this policy. Instead, they are provided as additional resources for those interested in the subject matter of the policy.

Legal References:

STATE

CALIFORNIA CODE OF REGULATIONS

5 CCR 14030 Preliminary procedure, planning and approval of school facilities

8 CCR 5191 Chemical hygiene plan

EDUCATION CODE

32030-32034 Eye safety

32255-32255.6 Student's right to refrain from harmful or destructive use of animals

33475-33475.5 Model curriculum on stem cell science

33548 Media and artificial intelligence literacy

49340-49341 Hazardous substances education

51210 Course of study for grades 1-6

51210.3 Elementary science coach

51220 Course of study for grades 7-12

51225.3 High school graduation requirements

52059.5-52077 Local control and accountability plan

60640-60648.5 California Assessment of Student Performance and Progress

8774 Residential outdoor science program

MANAGEMENT RESOURCES

CALIFORNIA DEPARTMENT OF EDUCATION PUBLICATIONS

Science Safety Handbook for California Public Schools, 2014

Science Framework for California Public Schools: Kindergarten Through Grade 12, 2016

California Next Generation Science Standards, 2013

CSBA PUBLICATIONS

Supporting STEM Access, Equity, and Effectiveness: Equitable Access to Rigorous STEAM Coursework, Oct. 2018

Supporting STEM Access, Equity, and Effectiveness: The Path to Full Implementation of the California Next Generation Science Standards, October 2018

Supporting STEM Access, Equity, and Effectiveness: Professional Learning is Essential to Next Generation Science Standards Implementation, October 2020

Supporting Implementation of the California Next Generation Science Standards (CA-NGSS), Governance Brief, November 2016

WEBSITES

Los Angeles County Office of Education, Introduction to Strategic Science Teaching (SST) https://sst.lacoe.edu/

Strategic Science Teaching, Grades K-12: A Sampler of Science Lessons Connecting Literature with the California Standards https://sst.lacoe.edu/

CSBA District and County Office of Education Legal Services https://legalservices.csba.org/

U.S. Department of Education, STEM Education http://www.ed.gov/stem

California Alliance for Next Generation Science Standards http://cdefoundation.org/stem/ca4ngss

California Science Teachers Association http://www.cascience.org/

CSBA http://www.csba.org/

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

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