SCIENCE INSTRUCTION

The Yolo County Governing Board believes that science education should focus on giving students an understanding of the biological and physical aspects of science, key scientific concepts, and methods of scientific inquiry and investigation. 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.

(cf. 0440 - District Technology Plan)
(cf. 5145.8 - Refusal to Harm or Destroy Animals)
(cf. 6142.92 - Mathematics Instruction)
(cf. 6143 - Courses of Study)
(cf. 6146.1 - High School Graduation Requirements)

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.

(cf. 6141.2 - Recognition of Religious Beliefs and Customs)

The Yolo County Office of Education’s academic standards for science instruction shall meet or exceed the California Next Generation Science Standards (CA-NGSS). The Yolo County Superintendent of Schools or designee shall ensure that curricula used in County Office schools are aligned with these standards and the state curriculum framework.

(cf. 6011 - Academic Standards)
(cf. 6141 - Curriculum Development and Evaluation)
(cf. 6161.1 - Selection and Evaluation of Instructional Materials)

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

(cf. 0460 - Local Control and Accountability Plan)

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

(cf. 4131 - Staff Development)
(cf. 4331 - Staff Development)
The County Superintendent or designee shall develop and implement appropriate safety measures for science laboratory classes, 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.

(cf. 3514.1 - Hazardous Substances)
(cf. 4119.42/4219.42/4319.42 - Exposure Control Plan for Bloodborne Pathogens)
(cf. 4157/4257/4357- Employee Safety)
(cf. 5142 - Safety)

The County Superintendent or designee shall regularly report to the County Board regarding the implementation and effectiveness of the science curriculum at each grade level. At a minimum, each report shall address the extent to which the program is aligned with the CA-NGSS, any applicable student assessment results, and feedback from students, parents/guardians, and staff regarding the program.

(cf. 0500 - Accountability)
(cf. 6162.51 - State Academic Achievement Tests)

Legal Reference:
EDUCATION CODE
8774  Residential outdoor science program
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
49340-49341 Hazardous substances education
51210  Areas of study, grades 1 through 6
51210.3  Elementary science coach
51220  Areas of study, grades 7 through 12
51225.3  High school graduation
52060-52077  Local control and accountability plan
60640-60649  California Assessment of Student Performance and Progress
CODE OF REGULATION, TITLE 5
14030  Science laboratories, design specifications
CODE OF REGULATIONS, TITLE 8
5191  Occupational exposure to hazardous chemicals in laboratories; chemical hygiene plan
SCIENCE INSTRUCTION (continued)

Management Resources:
CSBA PUBLICATIONS
Supporting Implementation of the California Next Generation Science Standards (CA-NGSS), Governance Brief, November 2016
CALIFORNIA DEPARTMENT OF EDUCATION PUBLICATIONS
Science Framework for California Public Schools: Kindergarten Through Grade Twelve, 2016
Next Generation Science Standards Systems Implementation Plan for California, 2014
California Next Generation Science Standards, 2013
WEB SITES
CSBA: http://www.csba.org
California Alliance for Next Generation Science Standards:
http://cdefoundation.org/stem/ca4ngss
California Department of Education: http://www.cde.ca.gov
California Science Teachers Association: http://www.cascience.org