

AMENDED IN ASSEMBLY APRIL 21, 2014

AMENDED IN ASSEMBLY MARCH 25, 2014

CALIFORNIA LEGISLATURE—2013–14 REGULAR SESSION

ASSEMBLY BILL

No. 2110

Introduced by Assembly Member Ting
(Coauthors: Assembly Members Ammiano, Brown, and Gonzalez)

February 20, 2014

An act to add Section 51211 to the Education Code, relating to pupil instruction.

LEGISLATIVE COUNSEL'S DIGEST

AB 2110, as amended, Ting. Pupil instruction: computer science.

Existing law requires the Instructional Quality Commission to recommend, and the State Board of Education to adopt, curriculum frameworks, as provided. Existing law defines “curriculum framework” as an outline of the components of a given course of study designed to provide state direction to school districts in the provision of instructional programs. Existing law prohibits the state board from adopting instructional materials until the 2015–16 school year, except as provided.

This bill would require the ~~state board~~ *commission* to ~~incorporate~~ *consider incorporating* computer science curriculum content into the mathematics, science, history-social science, and language arts curriculum frameworks, as it deems appropriate, when those frameworks are next revised. The bill would require computer science curriculum to ~~be consistent with recognized computer science standards and~~ focus on foundational concepts in computer science by integrating basic skills in technology with simple ideas about computational thinking, communication, and collaboration, and being responsible citizens in a

changing digital world, as specified. The bill would require the ~~state board~~ *commission* to consult with classroom teachers to ensure the age-appropriateness of ~~instructional material~~ *the computer science curriculum*. ~~The bill would, upon the incorporation of~~ *If* computer science curriculum content *is incorporated* into the curriculum frameworks *at their next revision, the bill would* require the Superintendent of Public Instruction to identify and post on the State Department of Education’s Internet Web site professional development resources for teaching computer science curriculum content. The bill would require its provisions to be implemented in a manner that does not result in new duties or programs being imposed on local educational agencies, as specified.

Vote: majority. Appropriation: no. Fiscal committee: yes.
 State-mandated local program: no.

The people of the State of California do enact as follows:

1 SECTION 1. Section 51211 is added to the Education Code,
 2 to read:
 3 51211. (a) ~~The state board shall incorporate~~ *Instructional*
 4 *Quality Commission shall consider incorporating* computer science
 5 curriculum content into the mathematics, science, history-social
 6 science, and language arts curriculum frameworks, as it deems
 7 appropriate, when those frameworks are next revised. This
 8 curriculum ~~shall be consistent with recognized computer science~~
 9 ~~standards and shall~~ focus on foundational concepts in computer
 10 science by integrating basic skills in technology with simple ideas
 11 about computational thinking, communication, and collaboration,
 12 and being responsible citizens in a changing digital world.
 13 (b) ~~Computer science instruction~~ *For purposes of this section,*
 14 *computer science curriculum shall be designed to help pupils learn*
 15 *promote an understanding of* all of the following:
 16 (1) Computational thinking, including, but not limited to, using
 17 technology resources to solve age-appropriate problems,
 18 understanding and using basic steps of algorithmic problem solving
 19 with computer-free exercises, demonstrating that a string of bits
 20 can be used to represent alphanumeric information, recognizing
 21 that software is created to control computer operations, and
 22 understanding the connections between computer science and other
 23 fields.

1 (2) Collaboration, including, but not limited to, gathering
2 information and communicating electronically, and using
3 age-appropriate technology resources and tools to participate in
4 collaborative problem-solving activities for the purpose of
5 developing solutions or products.

6 (3) Computer practice, including, but not limited to, using
7 age-appropriate technology resources to gather, organize, and
8 manipulate data, using technology tools for individual and
9 collaborative writing, communication, and publishing activities,
10 constructing a set of step-by-step instructions to be acted out, and
11 identifying a wide range of jobs that require knowledge or use of
12 computing.

13 (4) Computers and communication devices, including, but not
14 limited to, demonstrating an appropriate level of proficiency with
15 input and output devices, understanding the pervasiveness of
16 computers in daily life, and identifying factors that distinguish
17 humans from machines.

18 (5) Community, global, and ethical impacts, including, but not
19 limited to, practicing responsible digital citizenship in the use of
20 technology, identifying the social and ethical impacts of technology
21 on personal life and society, and evaluating the accuracy, relevance,
22 and biases of electronic information sources.

23 (c) In implementing this section, ~~the state board~~ *Instructional*
24 *Quality Commission* shall consult with classroom teachers to ensure
25 the age-appropriateness of ~~instructional material~~ *the computer*
26 *science curriculum*.

27 ~~Upon incorporating~~ *If* computer science curriculum content
28 *is incorporated* into the mathematics, science, history-social
29 science, and language arts curriculum frameworks at their next
30 revision, the Superintendent shall identify and post on the
31 department's Internet Web site professional development resources
32 for teaching computer science curriculum content.

33 (e) This section shall be implemented in a manner that does not
34 result in new duties or programs being imposed on local
35 educational agencies. In that regard, the Legislature finds and
36 declares that this section does not mandate costs to local
37 educational agencies, and that materials used to comply with this
38 subdivision shall be part of the normal instructional materials

- 1 purchased by local educational agencies in their normal course of
- 2 business and purchasing cycles.

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