

**COMPUTER SCIENCE INITIATIVE FOR PUBLIC
SCHOOLS**

2016 GENERAL SESSION

STATE OF UTAH

Chief Sponsor: Howard A. Stephenson

House Sponsor: _____

LONG TITLE

General Description:

This bill provides for computer science instruction in public schools.

Highlighted Provisions:

This bill:

- defines terms;
- creates the computer science initiative for public schools;
- requires the STEM Action Center Board and the State Board of Education to collaborate to develop and implement the initiative; and
- requires the STEM Action Center Board to include information on the initiative in the board's annual report to the Education Interim Committee.

Money Appropriated in this Bill:

This bill appropriates:

- to the Governor's Office of Economic Development - STEM Action Center, as an ongoing appropriation:
 - from the General Fund, \$2,070,000.

Other Special Clauses:

This bill provides a special effective date.

Utah Code Sections Affected:

ENACTS:



28 **63N-12-213**, Utah Code Annotated 1953

29
30 *Be it enacted by the Legislature of the state of Utah:*

31 Section 1. Section **63N-12-213** is enacted to read:

32 **63N-12-213. Computer science initiative for public schools.**

33 (1) As used in this section:

34 (a) "Computational thinking" means the set of problem-solving skills and techniques
35 that software engineers use to write programs that underlie computer applications, including
36 decomposition, pattern recognition, pattern generalization, and algorithm design.

37 (b) "Computer coding" means the process of writing script for a computer program or
38 mobile device.

39 (c) "Educator" means the same as that term is defined in Section [53A-6-103](#).

40 (d) "Endorsement" means a stipulation, authorized by the State Board of Education and
41 appended to a license, that specifies the areas of practice to which the license applies.

42 (e) "License" means the same as that term is defined in Section [53A-6-103](#).

43 (2) On behalf of the board, the staff of the board and the staff of the State Board of
44 Education shall collaborate to develop and implement a computer science initiative for public
45 schools by:

46 (a) creating an online repository that:

47 (i) is available for school districts and charter schools to use as a resource; and

48 (ii) includes high quality computer science instructional resources that are designed to
49 teach students in all grade levels:

50 (A) computational thinking skills; and

51 (B) computer coding skills;

52 (b) providing for professional development on teaching computer science by:

53 (i) including resources for educators related to teaching computational thinking and
54 computer coding in the STEM education high quality professional development application
55 described in Section [63N-12-210](#);

56 (ii) providing statewide or regional professional development institutes; and

57 (iii) distributing grants to school districts and charter schools, in accordance with this
58 section, that may be used to provide professional development, including to provide incentives

for an educator to earn a computer science endorsement;

(c) selecting one or more providers to provide a comprehensive computer coding instructional software solution described in Subsection (3); and

(d) encouraging schools to partner with technology companies for student and teacher mentoring opportunities.

(3) Through a request for proposals process conducted in accordance with Title 63G, Chapter 6a, Utah Procurement Code, on behalf of the board, the staff of the board and the staff of the State Board of Education shall collaborate and select one or more providers to provide a comprehensive computer coding instructional software solution that includes:

(a) licenses for computer coding instructional software that may be on-premises or cloud-based;

(b) professional development for educators related to the use of the software;

(c) real-time technical and instructional support for educators; and

(d) real-time coding support for students.

(4) In evaluating provider proposals, the staff of the board and the staff of the State Board of Education shall ensure that the evaluation criteria weighs the extent to which the:

(a) software:

(i) includes activities that are designed to teach professional computer science and engineering skills through computer coding;

(ii) engages students in the design and coding of an original digital project from conception through publication;

(iii) offers sequential learning opportunities for a coding pathway across multiple grades;

(iv) is designed as an engaging product for the school context;

(v) provides collaborative learning capabilities;

(vi) provides opportunities for frequent and informal assessments and includes an embedded progress monitoring tool and mechanisms for regular feedback to students and teachers; and

(vii) can be integrated into the core curriculum; and

(b) proposed provider has demonstrated efficacy:

(i) in a variety of educational contexts, including rural, urban, and suburban; and

(ii) with a variety of students, including low-income students, high achieving students, and struggling students.

(5) (a) To apply for a grant described in Subsection (2)(b)(iii), a school district or charter school shall submit a plan to the board for the use of the grant, including:

(i) a statement of purpose that describes the learning objectives, goals, and measurable outcomes the school district or charter school will accomplish by providing professional development on teaching computer science; and

(ii) a description of how the school district or charter school will provide high quality professional development for educators, including incentives for an educator to earn a computer science endorsement.

(b) To apply for the comprehensive software solution described in Subsection (3), a school district or charter school shall submit a plan to the board for the use of the software solution, including:

(i) a statement of purpose that describes the learning objectives, goals, and measurable outcomes the school district or charter school will accomplish by using the software; and

(ii) a commitment to use the software for a sufficient amount of instructional time to achieve the learning objectives described in the statement of purpose.

(c) A school district or charter school may enter into an interlocal agreement with one or more school districts or charter schools to jointly apply for:

(i) a grant under Subsection (5)(a); or

(ii) the comprehensive software solution under Subsection (5)(b).

(6) On behalf of the board, the staff of the board and the staff of the State Board of Education shall:

(a) award the grants described in Subsection (2)(b)(iii) to school districts and charter schools on a competitive basis; and

(b) make the comprehensive software solution described in Subsection (3) available to school districts and charter schools on a competitive basis, giving priority to applicants who commit to providing sequential learning opportunities for a coding pathway across multiple grades.

(7) The board and the State Board of Education shall encourage schools to independently pursue computer science and coding initiatives, subject to local school board or

charter school governing board approval, based on the unique needs of the school's students.

(8) Through a request for proposals process conducted in accordance with Title 63G, Chapter 6a, Utah Procurement Code, on behalf of the board, the staff of the board and the staff of the State Board of Education shall collaborate and select an independent evaluator to annually evaluate the comprehensive software solution described in Subsection (3), using criteria established by the State Board of Education.

(9) The board shall include information on the status of the computer science initiative, including the results of the evaluation described in Subsection (8) as available, in the annual report described in Section [63N-12-208](#).

Section 2. **Appropriation.**

Under the terms and conditions of Title 63J, Chapter 1, Budgetary Procedures Act, for the fiscal year beginning July 1, 2016, and ending June 30, 2017, the following sums of money are appropriated from resources not otherwise appropriated, or reduced from amounts previously appropriated, out of the funds or amounts indicated. These sums of money are in addition to amounts previously appropriated for fiscal year 2017.

To Governor's Office of Economic Development — STEM Action Center

From General Fund

\$2,070,000

Schedule of Programs:

STEM Action Center

\$2,070,000

The Legislature intends that:

(1) the Governor's Office of Economic Development use:

(a) up to \$1,500,000 of the appropriation provided in this section for licenses for the comprehensive computer coding instructional software solution described in Subsection [63N-12-213\(3\)](#);

(b) at least \$320,000 of the appropriation provided in this section for professional development on teaching computer science as described in Subsection [63N-12-213\(2\)\(b\)](#);

(c) up to \$150,000 of the appropriation provided in this section for administration of the initiative described in Section [63N-12-213](#); and

(d) up to \$100,000 of the appropriation provided in this section for the evaluation described in Subsection [63N-12-213\(8\)](#); and

(2) the appropriation provided in this section is:

152 (a) ongoing; and

153 (b) nonlapsing.

154 Section 3. **Effective date.**

155 If approved by two-thirds of all the members elected to each house, this bill takes effect

156 upon approval by the governor, or the day following the constitutional time limit of Utah

157 Constitution, Article VII, Section 8, without the governor's signature, or in the case of a veto,

158 the date of veto override.

Legislative Review Note
Office of Legislative Research and General Counsel