

1 **COMPUTER SCIENCE INITIATIVE FOR PUBLIC**
2 **SCHOOLS**

3 2015 GENERAL SESSION

4 STATE OF UTAH

5 **Chief Sponsor: Howard A. Stephenson**

6 House Sponsor: Bradley G. Last

8 **LONG TITLE**

9 **General Description:**

10 This bill provides for computer science instruction in public schools.

11 **Highlighted Provisions:**

12 This bill:

- 13 ▶ defines terms;
- 14 ▶ creates the computer science initiative for public schools;
- 15 ▶ requires the STEM Action Center Board and the State Board of Education to
- 16 collaborate to develop and implement the initiative by:
- 17 • creating an online repository of computer science instructional resources;
 - 18 • providing for professional development on teaching computer science; and
 - 19 • selecting one or more providers, through a request for proposals process, to
- 20 provide a comprehensive computer coding instructional software solution;
- 21 ▶ specifies criteria for a school district or charter school to participate in certain
- 22 elements of the initiative;
- 23 ▶ provides for review and evaluation of the initiative; and
- 24 ▶ requires the STEM Action Center Board and the State Board of Education to
- 25 annually report on the initiative to the Education Interim Committee.

26 **Money Appropriated in this Bill:**

27 This bill appropriates in fiscal year 2016:



28 ▶ to the Governor's Office of Economic Development - STEM Action Center, as an
29 ongoing appropriation:

- 30 • from the General Fund, \$2,070,000.

31 **Other Special Clauses:**

32 This bill provides a special effective date.

33 **Utah Code Sections Affected:**

34 ENACTS:

35 **63M-1-3212**, Utah Code Annotated 1953



37 *Be it enacted by the Legislature of the state of Utah:*

38 Section 1. Section **63M-1-3212** is enacted to read:

39 **63M-1-3212. Computer science initiative for public schools.**

40 (1) As used in this section:

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

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

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

49 (a) creating an online repository that:

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

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

53 (A) computational thinking skills; and

54 (B) computer coding skills;

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

56 (i) including resources for teachers and administrators related to teaching
57 computational thinking and computer coding in the STEM education high quality professional
58 development application described in Section **63M-1-3209**;

59 (ii) providing statewide or regional professional development institutes; and
60 (iii) distributing grants to school districts and charter schools, in accordance with this
61 section, that may be used to provide incentives for teachers to earn a secondary computer
62 science endorsement;

63 (c) selecting one or more providers, through a request for proposals process in
64 accordance with this section, to provide a comprehensive computer coding instructional
65 software solution described in Subsection (3); and

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

68 (3) On behalf of the board, the staff of the board and the staff of the State Board of
69 Education shall collaborate and select one or more providers, through a request for proposals
70 process, to provide a comprehensive computer coding instructional software solution that
71 includes:

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

74 (b) professional development for teachers and administrators related to the use of the
75 software;

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

77 (d) real-time coding support for students.

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

80 (a) software:

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

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

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

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

88 (v) provides collaborative learning capabilities;

89 (vi) provides opportunities for frequent and informal assessments and includes an

90 embedded progress monitoring tool and mechanisms for regular feedback to students and
 91 teachers; and

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

93 (b) proposed provider has demonstrated efficacy:

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

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

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

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

102 (ii) a description of how the school district or charter school will provide high-quality
 103 professional development for teachers and administrators.

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

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

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

110a **Ŝ→ (c) A school district or charter school may enter into an interlocal agreement with one or**
 110b **more school districts or charter schools to jointly apply for:**

110c **(i) a grant under Subsection (5)(a); or**

110d **(ii) the comprehensive software solution under Subsection (5)(b). ←Ŝ**

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

113 (a) award the grants described in Subsection (2)(b)(iii) to school districts and charter
 114 schools on a competitive basis, giving priority to applicants whose plans are timely and well
 115 developed; and

116 (b) make the comprehensive software solution described in Subsection (3) available to
 117 school districts and charter schools on a competitive basis, giving priority to applicants:

118 (i) whose plans are timely and well developed; and

119 (ii) who commit to providing sequential learning opportunities for a coding pathway
 120 across multiple grades.

121 (7) The board and the State Board of Education shall encourage schools to
122 independently pursue computer science and coding initiatives, subject to local school board or
123 charter school governing board approval, based on the unique needs of the school's students.

124 (8) (a) On or before November 1, 2015, and on or before November 1 each year
125 thereafter, the board and the State Board of Education shall collaborate to provide a verbal and
126 written report to the Education Interim Committee on the status of the initiative.

127 (b) (i) On behalf of the board, the staff of the board and the staff of the State Board of
128 Education shall collaborate and select an independent evaluator, through a request for
129 proposals process, to act as an independent contractor to evaluate the comprehensive software
130 solution described in Subsection (3).

131 (ii) The independent evaluator shall:

132 (A) evaluate the comprehensive software solution using criteria established by the
133 board and the State Board of Education; and

134 (B) report the results of the evaluation to the Education Interim Committee by the
135 Education Interim Committee's October 2018 meeting.

136 Section 2. **Appropriation.**

137 Under the terms and conditions of Title 63J, Chapter 1, Budgetary Procedures Act, for
138 the fiscal year beginning July 1, 2015, and ending June 30, 2016, the following sums of money
139 are appropriated from resources not otherwise appropriated, or reduced from amounts
140 previously appropriated, out of the funds or accounts indicated. These sums of money are in
141 addition to any amounts previously appropriated for fiscal year 2016.

142 To Governor's Office of Economic Development — STEM Action Center
143 From General Fund \$2,070,000

144 Schedule of Programs:

145 STEM Action Center \$2,070,000

146 The Legislature intends that:

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

148 (a) ~~at least~~ up to ~~at least~~ \$1,500,000 of the appropriation provided in this section for
148a licenses for the

149 comprehensive computer coding instructional software solution described in Subsection
150 [63M-1-3212\(3\)](#);

151 (b) at least \$320,000 of the appropriation provided in this section for professional

152 development on teaching computer science as described in Subsection 63M-1-3212(2)(b);
153 (c) up to \$150,000 of the appropriation provided in this section for administration of
154 the initiative described in Section 63M-1-3212; and

155 (d) up to \$100,000 of the appropriation provided in this section for the evaluation
156 described in Subsection 63M-1-3212 ~~§~~ → [(7)] (8) ← ~~§~~ (b); and

157 (2) the appropriation provided in this section is:

158 (a) ongoing; and

159 (b) non-lapsing.

160 **Section 3. Effective date.**

161 (1) Except as provided in Subsection (2), if approved by two-thirds of all the members
162 elected to each house, this bill takes effect upon approval by the governor, or the day following
163 the constitutional time limit of Utah Constitution, Article VII, Section 8, without the governor's
164 signature, or in the case of a veto, the date of veto override.

165 (2) Uncodified Section 2, Appropriation, takes effect on July 1, 2015.

Legislative Review Note
as of 1-15-15 11:18 AM

Office of Legislative Research and General Counsel