

FIRST EXTRAORDINARY SESSION OF THE
SECOND REGULAR SESSION

SENATE BILL NO. 1

99TH GENERAL ASSEMBLY

INTRODUCED BY SENATORS LIBLA, RIZZO, ROMINE, AND SCHAAF.

Read 1st time September 10, 2018, and ordered printed.

ADRIANE D. CROUSE, Secretary.

6881S.02I

AN ACT

To amend chapters 161 and 170, RSMo, by adding thereto two new sections relating to computer science education.

Be it enacted by the General Assembly of the State of Missouri, as follows:

Section A. Chapters 161 and 170, RSMo, are amended by adding thereto
2 two new sections, to be known as sections 161.261 and 170.018, to read as follows:

161.261. 1. **Subject to appropriation, the department of**
2 **elementary and secondary education shall establish a statewide**
3 **program to be known as the "STEM Career Awareness Program" to**
4 **increase STEM career awareness among students in grades six through**
5 **eight. For purposes of this section, "STEM" means science, technology,**
6 **engineering, and mathematics.**

7 2. **The department of elementary and secondary education shall**
8 **promote the statewide program beginning in the 2019-20 school**
9 **year. The program shall introduce students to a wide variety of STEM**
10 **careers and technology through an online-based STEM curriculum.**

11 3. **By January 1, 2019, the department of elementary and**
12 **secondary education shall solicit proposals for the online program. By**
13 **March 1, 2019, the department of elementary and secondary education**
14 **shall select a provider for the online program. The program selected**
15 **shall meet a majority of the following criteria:**

16 (1) **The program introduces students to a wide variety of STEM**
17 **careers and technologies;**

18 (2) **The curriculum is designed for flexible implementation in a**
19 **wide variety of classrooms, including science, math, English, and social**
20 **studies, through lessons that emphasize the application of STEM**
21 **careers in such contexts;**

22 **(3) The curriculum demonstrates how math and language arts**
23 **skills appropriate to middle schools are used by STEM careers, making**
24 **classroom instruction relevant to students interested in STEM careers;**

25 **(4) The program produces analytic reports for individual**
26 **students and for classes, including an analysis of performance against**
27 **individual math and language arts skills objectives;**

28 **(5) The curriculum is available in a self-paced online format; and**

29 **(6) The program includes web-based professional development**
30 **for school staff.**

31 **4. Notwithstanding subsections 2 and 3 of this section, the**
32 **department of elementary and secondary education may choose a third-**
33 **party nonprofit entity to implement the statewide program, solicit**
34 **proposals, and select a provider as described under subsection 3 of this**
35 **section.**

36 **5. There is hereby created in the state treasury the "STEM**
37 **Career Awareness Program Fund". The fund shall consist of any**
38 **appropriations, gifts, bequests, or public or private donations to such**
39 **fund. The state treasurer shall be custodian of the fund. In accordance**
40 **with sections 30.170 and 30.180, the state treasurer may approve**
41 **disbursements of public moneys in accordance with distribution**
42 **requirements and procedures developed by the department of**
43 **elementary and secondary education. The fund shall be a dedicated**
44 **fund and, upon appropriation, moneys in the fund shall be used solely**
45 **for the administration of this section. Notwithstanding the provisions**
46 **of section 33.080 to the contrary, any moneys remaining in the fund at**
47 **the end of the biennium shall not revert to the credit of the general**
48 **revenue fund. The state treasurer shall invest moneys in the fund in**
49 **the same manner as other funds are invested. Any interest and moneys**
50 **earned on such investments shall be credited to the fund.**

51 **6. The department of elementary and secondary education may**
52 **promulgate all necessary rules and regulations for the administration**
53 **of this section. Any rule or portion of a rule, as that term is defined in**
54 **section 536.010, that is created under the authority delegated in this**
55 **section shall become effective only if it complies with and is subject to**
56 **all of the provisions of chapter 536, and, if applicable, section**
57 **536.028. This section and chapter 536 are nonseverable, and if any of**
58 **the powers vested with the general assembly pursuant to chapter 536**

59 to review, to delay the effective date, or to disapprove and annul a rule
60 are subsequently held unconstitutional, then the grant of rulemaking
61 authority and any rule proposed or adopted after the effective date of
62 this section shall be invalid and void.

170.018. 1. (1) For purposes of this section, "computer science
2 course" means a course in which students study computers and
3 algorithmic processes, including their principles, hardware and
4 software designs, implementation, and impact on society.

5 (2) The department of elementary and secondary education shall,
6 before July 1, 2019, develop a high school graduation policy that allows
7 a student to fulfill one unit of academic credit with a district-approved
8 computer science course meeting the standards of subsection 2 of this
9 section for any mathematics, science, or practical arts unit required for
10 high school graduation. The policy shall require that all students have
11 either taken all courses that require end-of-course examinations for
12 math and science or are on track to take all courses that require end-
13 of-course examinations for math and science under the Missouri school
14 improvement program in order to receive credit toward high school
15 graduation under this subsection.

16 (3) A school district shall communicate to students electing to
17 use a computer science course for a mathematics unit that some
18 institutions of higher education may require four units of academic
19 credit in mathematics for college admission. The parent, guardian, or
20 legal custodian of each student who chooses to take a computer science
21 course to fulfill a unit of academic credit in mathematics shall sign and
22 submit to the school district a document containing a statement
23 acknowledging that taking a computer science course to fulfill a unit
24 of academic credit in mathematics may have an adverse effect on
25 college admission decisions.

26 (4) The department of elementary and secondary education and
27 the department of higher education shall cooperate in developing and
28 implementing academic requirements for computer science courses
29 offered in any grade or grades not lower than the ninth nor higher than
30 the twelfth grade.

31 2. (1) The department of elementary and secondary education
32 shall convene a work group to develop and recommend rigorous
33 academic performance standards relating to computer science for

34 students in kindergarten and in each grade not higher than the twelfth
35 grade. The work group shall include, but not be limited to, educators
36 providing instruction in kindergarten or in any grade not higher than
37 the twelfth grade and representatives from the department of
38 elementary and secondary education, the department of higher
39 education, business and industry, and institutions of higher
40 education. The department of elementary and secondary education
41 shall develop written curriculum frameworks relating to computer
42 science that may be used by school districts. The requirements of
43 section 160.514 shall not apply to this section.

44 (2) The state board of education shall adopt and implement
45 academic performance standards relating to computer science
46 beginning in the 2019-20 school year.

47 3. Before July 1, 2019, the department of elementary and
48 secondary education shall develop a procedure by which any teacher
49 who holds a certificate of license to teach under section 168.021 and
50 demonstrates sufficient content knowledge of computer science shall
51 receive a special endorsement on his or her license signifying his or
52 her specialized knowledge in computer science.

53 4. (1) For purposes of this subsection, "eligible entity" means:

54 (a) A local educational agency, or a consortium of local
55 educational agencies, in the state, including charter schools that have
56 declared themselves local educational agencies;

57 (b) An institution of higher education in the state; or

58 (c) A nonprofit or private provider of nationally recognized and
59 high-quality computer science professional development, as determined
60 by the department of elementary and secondary education.

61 (2) There is hereby created in the state treasury the "Computer
62 Science Education Fund". The fund shall consist of all moneys that may
63 be appropriated to it by the general assembly and any gifts,
64 contributions, grants, or bequests received from private or other
65 sources for the purpose of providing teacher professional development
66 programs relating to computer science. The state treasurer shall be
67 custodian of the fund. In accordance with sections 30.170 and 30.180,
68 the state treasurer may approve disbursements. The fund shall be a
69 dedicated fund and, upon appropriation, moneys in the fund shall be
70 used solely for the administration of grants to eligible entities as

71 described in this section. Notwithstanding the provisions of section
72 33.080 to the contrary, any moneys remaining in the fund at the end of
73 the biennium shall not revert to the credit of the general revenue
74 fund. The state treasurer shall invest moneys in the fund in the same
75 manner as other funds are invested. Any interest and moneys earned
76 on such investments shall be credited to the fund.

77 (3) The state board of education shall award grants from the
78 computer science education fund to eligible entities for the purpose of
79 providing teacher professional development programs relating to
80 computer science. An eligible entity wishing to receive such a grant
81 shall submit an application to the department of elementary and
82 secondary education addressing how the entity plans to:

83 (a) Reach new and existing teachers with little computer science
84 background;

85 (b) Use effective practices for professional development;

86 (c) Focus the training on the conceptual foundations of computer
87 science;

88 (d) Reach and support historically underrepresented students in
89 computer science;

90 (e) Provide teachers with concrete experience with hands-on,
91 inquiry-based practices; and

92 (f) Accommodate the particular needs of students and teachers
93 in each district and school.

94 5. The department of elementary and secondary education shall
95 promulgate rules to implement the provisions of this section. Any rule
96 or portion of a rule, as that term is defined in section 536.010, that is
97 created under the authority delegated in this section shall become
98 effective only if it complies with and is subject to all of the provisions
99 of chapter 536 and, if applicable, section 536.028. This section and
100 chapter 536 are nonseverable, and if any of the powers vested with the
101 general assembly pursuant to chapter 536 to review, to delay the
102 effective date, or to disapprove and annul a rule are subsequently held
103 unconstitutional, then the grant of rulemaking authority and any rule
104 proposed or adopted after the effective date of this section shall be
105 invalid and void.