HOUSE BILL NO. 3

99TH GENERAL ASSEMBLY

INTRODUCED BY REPRESENTATIVE FITZWATER.

6879H.01P

D. ADAM CRUMBLISS, Chief Clerk

AN ACT

To amend chapters 161 and 170, RSMo, by adding thereto two new sections relating to 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 two new
2 sections, to be known as sections 161.261 and 170.018, to read as follows:

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

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

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

14   **(1)   The program introduces students to a wide variety of STEM careers and**
15   **technologies;**
16   **(2)   The curriculum is designed for flexible implementation in a wide variety of**
17   **classrooms, including science, math, English, and social studies, through lessons that**
18   **emphasize the application of STEM careers in such contexts;**
19   **(3)   The curriculum demonstrates how math and language arts skills appropriate**
20   **to middle schools are used by STEM careers, making classroom instruction relevant to**
21   **students interested in STEM careers;**
22   **(4)   The program produces analytic reports for individual students and for classes,**
23   **including an analysis of performance against individual math and language arts skills**
24   **objectives;**
25   **(5)   The curriculum is available in a self-paced online format; and**
26   **(6)   The program includes web-based professional development for school staff.**
27   **4.   Notwithstanding subsections 2 and 3 of this section, the department of**
28   **elementary and secondary education may choose a third-party nonprofit entity to**
29   **implement the statewide program, solicit proposals, and select a provider as described**
30   **under subsection 3 of this section.**
31   **5.   There is hereby created in the state treasury the "STEM Career Awareness**
32   **Program Fund". The fund shall consist of any appropriations, gifts, bequests, or public**
33   **or private donations to such fund. The state treasurer shall be custodian of the fund. In**
34   **accordance with sections 30.170 and 30.180, the state treasurer may approve disbursements**
35   **of public moneys in accordance with distribution requirements and procedures developed**
36   **by the department of elementary and secondary education. The fund shall be a dedicated**
37   **fund and, upon appropriation, moneys in the fund shall be used solely for the**
38   **administration of this section. Notwithstanding the provisions of section 33.080 to the**
39   **contrary, any moneys remaining in the fund at the end of the biennium shall not revert to**
40   **the credit of the general revenue fund. The state treasurer shall invest moneys in the fund**
41   **in the same manner as other funds are invested. Any interest and moneys earned on such**
42   **investments shall be credited to the fund.**
43   **6.   The department of elementary and secondary education may promulgate all**
44   **necessary rules and regulations for the administration of this section. Any rule or portion**
45   **of a rule, as that term is defined in section 536.010, that is created under the authority**
46   **delegated in this section shall become effective only if it complies with and is subject to all**
47   **of the provisions of chapter 536 and, if applicable, section 536.028. This section and**
48   **chapter 536 are nonseverable, and if any of the powers vested with the general assembly**
49   **pursuant to chapter 536 to review, to delay the effective date, or to disapprove and annul**

50 **a rule are subsequently held unconstitutional, then the grant of rulemaking authority and**
51 **any rule proposed or adopted after the effective date of this section shall be invalid and**
52 **void.**

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

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

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

21   **(4) The department of elementary and secondary education and the department of**
22 **higher education shall cooperate in developing and implementing academic requirements**
23 **for computer science courses offered in any grade or grades not lower than the ninth nor**
24 **higher than the twelfth grade.**

25   **2. (1) The department of elementary and secondary education shall convene a work**
26 **group to develop and recommend rigorous academic performance standards relating to**
27 **computer science for students in kindergarten and in each grade not higher than the**
28 **twelfth grade. The work group shall include, but not be limited to, educators providing**
29 **instruction in kindergarten or in any grade not higher than the twelfth grade and**
30 **representatives from the department of elementary and secondary education, the**
31 **department of higher education, business and industry, and institutions of higher**
32 **education. The department of elementary and secondary education shall develop written**

33 curriculum frameworks relating to computer science that may be used by school districts.
34 The requirements of section 160.514 shall not apply to this section.
35   (2) The state board of education shall adopt and implement academic performance
36 standards relating to computer science beginning in the 2019-20 school year.
37   3. Before July 1, 2019, the department of elementary and secondary education shall
38 develop a procedure by which any teacher who holds a certificate of license to teach under
39 section 168.021 and demonstrates sufficient content knowledge of computer science shall
40 receive a special endorsement on his or her license signifying his or her specialized
41 knowledge in computer science.
42   4. (1) For purposes of this subsection, "eligible entity" means:
43   (a) A local educational agency, or a consortium of local educational agencies, in the
44 state, including charter schools that have declared themselves local educational agencies;
45   (b) An institution of higher education in the state; or
46   (c) A nonprofit or private provider of nationally recognized and high-quality
47 computer science professional development, as determined by the department of
48 elementary and secondary education.
49   (2) There is hereby created in the state treasury the "Computer Science Education
50 Fund". The fund shall consist of all moneys that may be appropriated to it by the general
51 assembly and any gifts, contributions, grants, or bequests received from private or other
52 sources for the purpose of providing teacher professional development programs relating
53 to computer science. The state treasurer shall be custodian of the fund. In accordance
54 with sections 30.170 and 30.180, the state treasurer may approve disbursements. The fund
55 shall be a dedicated fund and, upon appropriation, moneys in the fund shall be used solely
56 for the administration of grants to eligible entities as described in this section.
57 Notwithstanding the provisions of section 33.080 to the contrary, any moneys remaining
58 in the fund at the end of the biennium shall not revert to the credit of the general revenue
59 fund. The state treasurer shall invest moneys in the fund in the same manner as other
60 funds are invested. Any interest and moneys earned on such investments shall be credited
61 to the fund.
62   (3) The state board of education shall award grants from the computer science
63 education fund to eligible entities for the purpose of providing teacher professional
64 development programs relating to computer science. An eligible entity wishing to receive
65 such a grant shall submit an application to the department of elementary and secondary
66 education addressing how the entity plans to:
67   (a) Reach new and existing teachers with little computer science background;
68   (b) Use effective practices for professional development;

69   **(c) Focus the training on the conceptual foundations of computer science;**

70   **(d) Reach and support historically underrepresented students in computer science;**

71   **(e) Provide teachers with concrete experience with hands-on, inquiry-based**

72 **practices; and**

73   **(f) Accommodate the particular needs of students and teachers in each district and**

74 **school.**

75   **5. The department of elementary and secondary education shall promulgate rules**

76 **to implement the provisions of this section. Any rule or portion of a rule, as that term is**

77 **defined in section 536.010, that is created under the authority delegated in this section shall**

78 **become effective only if it complies with and is subject to all of the provisions of chapter**

79 **536 and, if applicable, section 536.028. This section and chapter 536 are nonseverable, and**

80 **if any of the powers vested with the general assembly pursuant to chapter 536 to review,**

81 **to delay the effective date, or to disapprove and annul a rule are subsequently held**

82 **unconstitutional, then the grant of rulemaking authority and any rule proposed or adopted**

83 **after the effective date of this section shall be invalid and void.**

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