SECOND REGULAR SESSION

HOUSE BILL NO. 1623

99TH GENERAL ASSEMBLY

INTRODUCED BY REPRESENTATIVE FITZWATER (49).

4635H.02I

D. ADAM CRUMBLISS, Chief Clerk

AN ACT

To amend chapters 170 and 620, RSMo, by adding thereto two new sections relating to elementary and secondary education.

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

Section A. Chapters 170 and 620, RSMo, are amended by adding thereto two new
2 sections, to be known as sections 170.018 and 620.2700, to read as follows:

170.018. 1. (1) For purposes of this subsection, "computer science course" means
2 **a course in which students study computers and algorithmic processes, including their**
3 **principles, their hardware and software designs, their implementation, and their impact**
4 **on society.**
5 **(2) The department of elementary and secondary education shall, before July 1,**
6 **2019, develop a high school graduation policy that allows a student to fulfill one unit of**
7 **academic credit with a district-approved computer science course for any math, science,**
8 **or practical arts unit required for high school graduation.**
9 **2. (1) Before July 1, 2019, the state board of education shall convene a work group**
10 **to develop and recommend academic performance standards relating to computer science.**
11 **The state board of education and the work group shall follow the procedures and conduct**
12 **the public hearings required by section 160.514. The state board of education shall develop**
13 **written curriculum frameworks relating to computer science that may be used by school**
14 **districts in accordance with section 160.514.**
15 **(2) The state board of education shall adopt and implement academic performance**
16 **standards relating to computer science beginning in the 2020-21 school year.**

17   **3. Before July 1, 2019, the state board of education shall develop a procedure by**
18 **which any teacher who holds a certificate of license to teach under section 168.021 and**
19 **demonstrates sufficient content knowledge of computer science, as determined by the state**
20 **board of education, shall receive a special endorsement on his or her license signifying his**
21 **or her specialized knowledge in computer science.**
22   **4. (1) For purposes of this subsection, "eligible entity" means:**
23   **(a) A local educational agency, or a consortium of local educational agencies, in the**
24 **state, including charter schools that have declared themselves local educational agencies;**
25   **(b) An institution of higher education in the state; or**
26   **(c) A nonprofit or private provider of nationally recognized and high-quality**
27 **computer science professional development, as determined by the state board of education.**
28   **(2) (a) There is hereby created in the state treasury the "Computer Science**
29 **Education Fund". The fund shall consist of all moneys that may be appropriated to it by**
30 **the general assembly and any gifts, contributions, grants, or bequests received from private**
31 **or other sources for the purpose of providing teacher professional development programs**
32 **relating to computer science. The state treasurer shall be custodian of the fund. In**
33 **accordance with sections 30.170 and 30.180, the state treasurer may approve**
34 **disbursements. The fund shall be a dedicated fund and, upon appropriation, moneys in**
35 **the fund shall be used solely for the administration of grants to eligible entities as described**
36 **in this section.**
37   **(b) Notwithstanding the provisions of section 33.080 to the contrary, any moneys**
38 **remaining in the fund at the end of the biennium shall not revert to the credit of the**
39 **general revenue fund.**
40   **(c) The state treasurer shall invest moneys in the fund in the same manner as other**
41 **funds are invested. Any interest and moneys earned on such investments shall be credited**
42 **to the fund.**
43   **(3) The state board of education shall award grants from the computer science**
44 **education fund to eligible entities for the purpose of providing teacher professional**
45 **development programs relating to computer science. An eligible entity wishing to receive**
46 **such a grant shall submit an application to the department of elementary and secondary**
47 **education addressing how the entity plans to:**
48   **(a) Reach new and existing teachers with little computer science background;**
49   **(b) Use effective practices for professional development;**
50   **(c) Focus the training on the conceptual foundations of computer science;**
51   **(d) Reach and support historically underrepresented students in computer science;**

52　　　　**(e)　Provide teachers with concrete experience with hands-on, inquiry-based**
53　**practices; and**

54　　　　**(f)　Accommodate the particular needs of students and teachers in each district and**
55　**school.**

56　　　　**5.　The department of elementary and secondary education shall promulgate rules**
57　**to implement the provisions of this section.　Any rule or portion of a rule, as that term is**
58　**defined in section 536.010, that is created under the authority delegated in this section shall**
59　**become effective only if it complies with and is subject to all of the provisions of chapter**
60　**536 and, if applicable, section 536.028.　This section and chapter 536 are nonseverable, and**
61　**if any of the powers vested with the general assembly pursuant to chapter 536 to review,**
62　**to delay the effective date, or to disapprove and annul a rule are subsequently held**
63　**unconstitutional, then the grant of rulemaking authority and any rule proposed or adopted**
64　**after August 28, 2018, shall be invalid and void.**

　　　　620.2700.　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 implement 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.　Before January 1, 2019, the department of elementary and secondary education**
11　**shall solicit proposals and select a provider for the online program.　The program selected**
12　**shall meet the following criteria:**

13　　　　**(1)　The program introduces students to a wide variety of STEM careers and**
14　**technologies, including a curriculum explicitly focused on more than eighty different**
15　**careers and technologies;**

16　　　　**(2)　The curriculum is organized around the concept of solving societal or**
17　**human-centered problems, instead of focusing solely on scientific concepts.　The**
18　**curriculum shall have at least ten different problems that emphasize different career**
19　**clusters;**

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

23   **(4) The curriculum demonstrates how math and language skills appropriate to**
24 **middle schools are used by STEM careers, making classroom instruction relevant to**
25 **students interested in STEM careers;**
26   **(5) The program uses game-based elements to encourage engagement and**
27 **competition with students and teams, including automated online leaderboards;**
28   **(6) The program rewards students, in the game format, for accomplishment in**
29 **demonstrating the application of math and language skills in the contexts of the STEM**
30 **careers and technologies;**
31   **(7) The program automatically produces analytic reports for individual students**
32 **and for classes, including analysis of performance against individual math and language**
33 **skills objectives;**
34   **(8) The curriculum is available in a self-paced format over the internet, allowing**
35 **access to students through individual student accounts anywhere that the students can**
36 **access the internet;**
37   **(9) The curriculum includes a narrative soundtrack accompanying and matching**
38 **all instructional text to assist students in developing reading skills in the context of STEM**
39 **careers;**
40   **(10) The program has a validation from a national, third-party nonprofit**
41 **organization that the program increases STEM career awareness and interest;**
42   **(11) The program shall be listed as a recommended STEM resource in ACT's**
43 **"Condition of STEM" 2015 report; and**
44   **(12) The program includes web-based professional development for school staff.**
45   **4. Notwithstanding subsections 2 and 3 of this section, the department of**
46 **elementary and secondary education may choose a third-party nonprofit entity to**
47 **implement the statewide program, solicit proposals, and select a provider as described**
48 **under subsection 3 of this section.**
49   **5. (1) There is hereby created in the state treasury the "STEM Career Awareness**
50 **Program Fund". The fund shall consist of any appropriations, gifts, bequests, or public**
51 **or private donations to such fund. The state treasurer shall be custodian of the fund. In**
52 **accordance with sections 30.170 and 30.180, the state treasurer may approve disbursements**
53 **of public moneys in accordance with distribution requirements and procedures developed**
54 **by the department of elementary and secondary education. The fund shall be a dedicated**
55 **fund and, upon appropriation, moneys in the fund shall be used solely for the**
56 **administration of this section.**

57   **(2) Notwithstanding the provisions of section 33.080 to the contrary, any moneys**
58 **remaining in the fund at the end of the biennium shall not revert to the credit of the**
59 **general revenue fund.**
60   **(3) The state treasurer shall invest moneys in the fund in the same manner as other**
61 **funds are invested. Any interest and moneys earned on such investments shall be credited**
62 **to the fund.**
63   **6. The department of elementary and secondary education may promulgate all**
64 **necessary rules and regulations for the administration of this section. Any rule or portion**
65 **of a rule, as that term is defined in section 536.010, that is created under the authority**
66 **delegated in this section shall become effective only if it complies with and is subject to all**
67 **of the provisions of chapter 536 and, if applicable, section 536.028. This section and**
68 **chapter 536 are nonseverable, and if any of the powers vested with the general assembly**
69 **pursuant to chapter 536 to review, to delay the effective date, or to disapprove and annul**
70 **a rule are subsequently held unconstitutional, then the grant of rulemaking authority and**
71 **any rule proposed or adopted after August 28, 2018, shall be invalid and void.**

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