SENATE BILL NO. 921

99TH GENERAL ASSEMBLY

INTRODUCED BY SENATOR RIZZO.

Read 1st time January 17, 2018, and ordered printed.

ADRIANE D. CROUSE, Secretary.

5885S.01I

AN ACT

To amend chapters 161 and 170, 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 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 **implement 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. Before January 1, 2019, the department of elementary and**
12 **secondary education shall solicit proposals and select a provider for**
13 **the online program. The program selected shall meet the following**
14 **criteria:**

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

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

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

26   **(4) The curriculum demonstrates how math and language skills**
27   **appropriate to middle schools are used by STEM careers, making**
28   **classroom instruction relevant to students interested in STEM careers;**

29   **(5) The program uses game-based elements to encourage**
30   **engagement and competition with students and teams, including**
31   **automated online leaderboards;**

32   **(6) The program rewards students, in the game format, for**
33   **accomplishment in demonstrating the application of math and language**
34   **skills in the contexts of the STEM careers and technologies;**

35   **(7) The program automatically produces analytic reports for**
36   **individual students and for classes, including analysis of performance**
37   **against individual math and language skills objectives;**

38   **(8) The curriculum is available in a self-paced format over the**
39   **internet, allowing access to students through individual student**
40   **accounts anywhere that the students can access the internet;**

41   **(9) The curriculum includes a narrative soundtrack**
42   **accompanying and matching all instructional text to assist students in**
43   **developing reading skills in the context of STEM careers;**

44   **(10) The program has a validation from a national, third-party**
45   **nonprofit organization that the program increases STEM career**
46   **awareness and interest;**

47   **(11) The program shall be listed as a recommended STEM**
48   **resource in ACT's "Condition of STEM" 2015 report; and**

49   **(12) The program includes web-based professional development**
50   **for school staff.**

51   **4. Notwithstanding subsections 2 and 3 of this section, the**
52   **department of elementary and secondary education may choose a third-**
53   **party nonprofit entity to implement the statewide program, solicit**
54   **proposals, and select a provider as described under subsection 3 of this**
55   **section.**

56   **5. (1) There is hereby created in the state treasury the "STEM**
57   **Career Awareness Program Fund". The fund shall consist of any**
58   **appropriations, gifts, bequests, or public or private donations to such**

59 fund. The state treasurer shall be custodian of the fund. In accordance
60 with sections 30.170 and 30.180, the state treasurer may approve
61 disbursements of public moneys in accordance with distribution
62 requirements and procedures developed by the department of
63 elementary and secondary education. The fund shall be a dedicated
64 fund and, upon appropriation, moneys in the fund shall be used solely
65 for the administration of this section.

66   **(2)** Notwithstanding the provisions of section 33.080 to the
67 contrary, any moneys remaining in the fund at the end of the biennium
68 shall not revert to the credit of the general revenue fund.

69   **(3)** The state treasurer shall invest moneys in the fund in the
70 same manner as other funds are invested. Any interest and moneys
71 earned on such investments shall be credited to the fund.

72   **6.** The department of elementary and secondary education may
73 promulgate all necessary rules and regulations for the administration
74 of this section. Any rule or portion of a rule, as that term is defined in
75 section 536.010, that is created under the authority delegated in this
76 section shall become effective only if it complies with and is subject to
77 all of the provisions of chapter 536 and, if applicable, section
78 536.028. This section and chapter 536 are nonseverable, and if any of
79 the powers vested with the general assembly pursuant to chapter 536
80 to review, to delay the effective date, or to disapprove and annul a rule
81 are subsequently held unconstitutional, then the grant of rulemaking
82 authority and any rule proposed or adopted after August 28, 2018, shall
83 be invalid and void.

1   **170.018. 1. (1)** For purposes of this subsection, "computer
2   science course" means a course in which students study computers and
3   algorithmic processes, including their principles, their hardware and
4   software designs, their implementation, and their 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 for any math, science, or practical arts unit
9   required for high school graduation.

10   **2. (1)** Before July 1, 2019, the state board of education shall
11 convene a work group to develop and recommend academic
12 performance standards relating to computer science. The state board

13   of education and the work group shall follow the procedures and
14   conduct the public hearings required by section 160.514. The state
15   board of education shall develop written curriculum frameworks
16   relating to computer science that may be used by school districts in
17   accordance with section 160.514.

18   (2) The state board of education shall adopt and implement
19   academic performance standards relating to computer science
20   beginning in the 2020-21 school year.

21   3. Before July 1, 2019, the state board of education shall develop
22   a procedure by which any teacher who holds a certificate of license to
23   teach under section 168.021 and demonstrates sufficient content
24   knowledge of computer science, as determined by the state board of
25   education, shall receive a special endorsement on his or her license
26   signifying his or her specialized knowledge in computer science.

27   4. (1) For purposes of this subsection, "eligible entity" means:

28   (a) A local educational agency, or a consortium of local
29   educational agencies, in the state, including charter schools that have
30   declared themselves local educational agencies;

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

32   (c) A nonprofit or private provider of nationally recognized and
33   high-quality computer science professional development, as determined
34   by the state board of education.

35   (2) (a) There is hereby created in the state treasury the
36   "Computer Science Education Fund". The fund shall consist of all
37   moneys that may be appropriated to it by the general assembly and any
38   gifts, contributions, grants, or bequests received from private or other
39   sources for the purpose of providing teacher professional development
40   programs relating to computer science. The state treasurer shall be
41   custodian of the fund. In accordance with sections 30.170 and 30.180,
42   the state treasurer may approve disbursements. The fund shall be a
43   dedicated fund and, upon appropriation, moneys in the fund shall be
44   used solely for the administration of grants to eligible entities as
45   described in this section.

46   (b) Notwithstanding the provisions of section 33.080 to the
47   contrary, any moneys remaining in the fund at the end of the biennium
48   shall not revert to the credit of the general revenue fund.

49   (c) The state treasurer shall invest moneys in the fund in the

50   same manner as other funds are invested. Any interest and moneys

51   earned on such investments shall be credited to the fund.

52   **(3) The state board of education shall award grants from the**

53   **computer science education fund to eligible entities for the purpose of**

54   **providing teacher professional development programs relating to**

55   **computer science. An eligible entity wishing to receive such a grant**

56   **shall submit an application to the department of elementary and**

57   **secondary education addressing how the entity plans to:**

58   **(a) Reach new and existing teachers with little computer science**

59   **background;**

60   **(b) Use effective practices for professional development;**

61   **(c) Focus the training on the conceptual foundations of computer**

62   **science;**

63   **(d) Reach and support historically underrepresented students in**

64   **computer science;**

65   **(e) Provide teachers with concrete experience with hands-on,**

66   **inquiry-based practices; and**

67   **(f) Accommodate the particular needs of students and teachers**

68   **in each district and school.**

69   **5. The department of elementary and secondary education shall**

70   **promulgate rules to implement the provisions of this section. Any rule**

71   **or portion of a rule, as that term is defined in section 536.010, that is**

72   **created under the authority delegated in this section shall become**

73   **effective only if it complies with and is subject to all of the provisions**

74   **of chapter 536 and, if applicable, section 536.028. This section and**

75   **chapter 536 are nonseverable, and if any of the powers vested with the**

76   **general assembly pursuant to chapter 536 to review, to delay the**

77   **effective date, or to disapprove and annul a rule are subsequently held**

78   **unconstitutional, then the grant of rulemaking authority and any rule**

79   **proposed or adopted after August 28, 2018, shall be invalid and void.**

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