

**First Regular Session
Seventy-first General Assembly
STATE OF COLORADO**

INTRODUCED

LLS NO. 17-0202.01 Brita Darling x2241

HOUSE BILL 17-1184

HOUSE SPONSORSHIP

Duran,

SENATE SPONSORSHIP

Grantham,

House Committees
Education

Senate Committees

A BILL FOR AN ACT

101 **CONCERNING DEVELOPING ADDITIONAL RESOURCES FOR MODERN**
102 **TECHNOLOGY EDUCATION IN PUBLIC SCHOOLS.**

Bill Summary

(Note: This summary applies to this bill as introduced and does not reflect any amendments that may be subsequently adopted. If this bill passes third reading in the house of introduction, a bill summary that applies to the reengrossed version of this bill will be available at <http://leg.colorado.gov/>.)

Under current law, the state board of education (state board) must, by July 1, 2018, review and revise, as necessary, the state academic standards. The bill directs the state board, in the course of revising the academic standards, to incorporate into the standards for each subject skills relating to the use of information and communications technologies to find, evaluate, create, and communicate information.

Shading denotes HOUSE amendment. Double underlining denotes SENATE amendment.
Capital letters indicate new material to be added to existing statute.
Dashes through the words indicate deletions from existing statute.

The bill directs the department of education (department) to create a publicly available resource bank of materials pertaining to computer science programs, including model standards, samples of curricula, and materials for professional educator development. The department must work with experts in creating and compiling the information. The resource bank is to be available by July 1, 2018. Each school district, charter school, and board of cooperative services may choose whether to provide computer science courses and whether to use the materials in the resource bank.

In addition, the bill creates a grant program in the department that awards grants that will enable a teacher or teachers in a school district to teach computer science courses. The bill defines computer science education.

A school district may apply for a grant on behalf of a teacher or teachers. The grant may be used for tuition, fees, training program costs, and books for postsecondary computer science course work that leads to mastery in a computer science content area, computer science training programs, computer science degrees, or industry-recognized certificates in computer science. A grant may also be awarded to the school district for high-quality training programs offered to teachers in the district that enable those teachers to teach computer science courses.

The department will administer the grant program pursuant to rules adopted by the state board relating to the application process, the amount and duration of the grants, and the uses of the grant money.

The department will accept and review grant applications and make recommendations to the state board concerning the award of grants. In awarding grants, the state board may give priority to school districts that meet certain qualifications specified in the bill.

If money is appropriated for the grant program, the state board shall award grants pursuant to the program rules.

The department shall report annually to the education committees of the general assembly concerning the implementation of the grant program.

1 *Be it enacted by the General Assembly of the State of Colorado:*

2 **SECTION 1. Legislative declaration.** (1) The general assembly
3 finds that:

4 (a) The ability to use and understand technology is a critical skill
5 that students need to achieve success in school, in the workplace, and in
6 their personal lives. While the state board of education has developed and

1 adopted robust state academic standards in ten subjects, these standards
2 have not been updated with guidelines for digital literacy.

3 (b) School districts and public schools that choose to offer
4 computer science courses and teachers who teach these courses do not
5 have access to a set of rigorous grade-level expectations for mastery of
6 this discrete subject area;

7 (c) Computer science is a critical area of growth for Colorado's
8 economy, and thousands of computing jobs with businesses in the state
9 remain unfilled each year. Providing rigorous standards for computer
10 science courses and increasing access to high-quality computer science
11 training programs will help ensure that more students master the
12 computer science skills that can lead to rewarding, high-paying, and
13 in-demand careers.

14 (d) Many students do not have access to technology and computer
15 science training, which results in a lack of gender and ethnic diversity in
16 science, technology, engineering, and mathematics (STEM) careers. In
17 Colorado, Hispanic workers comprise only six percent of the employees
18 in computer, engineering, and science occupations. Also, men are more
19 than twice as likely to be employed in STEM jobs than women. Women
20 are forty-six percent of the Colorado workforce, but less than a third of
21 those working in STEM jobs. Providing voluntary model standards and
22 materials to school districts, boards of cooperative services, and charter
23 schools will help provide more equitable access to computer science
24 courses in public schools throughout the state.

25 (e) In order to increase students' access to technology and
26 computer science education, public school teachers must have the
27 opportunity to obtain additional postsecondary education, including

1 computer science degrees, industry-recognized certificates, or other
2 rigorous computer science training, that enables the teachers to teach
3 computer science courses in public schools.

4 (2) The general assembly finds, therefore, that it is in the best
5 interests of the people of the state of Colorado to include guidelines
6 relating to the use of information and communications technologies
7 within the state academic standards and to direct the department of
8 education to provide a publicly available resource bank of model
9 academic content standards in computer science and model course
10 materials for computer science courses for voluntary use by school
11 districts, boards of cooperative services, charter schools, and the public.
12 The general assembly further finds that it is appropriate to create a grant
13 program that provides public school teachers with financial resources to
14 pay for additional postsecondary education that enables the teachers to
15 teach computer science courses in public schools.

16 **SECTION 2.** In Colorado Revised Statutes, 22-7-1005, **amend**
17 (3)(e) as follows:

18 **22-7-1005. Preschool through elementary and secondary**
19 **education - aligned standards - adoption - revisions.** (3) The state
20 board in adopting the preschool through elementary and secondary
21 education standards shall:

22 (e) Ensure that, in addition to measuring a student's subject matter
23 knowledge, the standards, to the extent practicable, will require a student
24 to develop and demonstrate creativity and innovation skills;
25 critical-thinking and problem-solving skills; communication and
26 collaboration skills; social and cultural awareness; civic engagement;
27 initiative and self-direction; flexibility; productivity and accountability;

1 character and leadership; ~~information technology application skills~~ THE
2 ABILITY TO USE INFORMATION AND COMMUNICATIONS TECHNOLOGIES TO
3 FIND, EVALUATE, CREATE, AND COMMUNICATE INFORMATION; and other
4 skills critical to preparing students for the twenty-first-century workforce
5 and for active citizenship; and

6 **SECTION 3.** In Colorado Revised Statutes, **add 22-2-127.5** as
7 follows:

8 **22-2-127.5. Computer science programs - resource bank.**

9 (1) (a) THE DEPARTMENT SHALL CREATE AND MAINTAIN A PUBLICLY
10 AVAILABLE RESOURCE BANK OF MATERIALS PERTAINING TO COMPUTER
11 SCIENCE COURSES AND PROGRAMS. AT A MINIMUM, THE RESOURCE BANK
12 MUST INCLUDE MODEL ACADEMIC CONTENT STANDARDS FOR COMPUTER
13 SCIENCE EDUCATION, MODEL PROGRAMS OF INSTRUCTION FOR COMPUTER
14 SCIENCE, SAMPLES OF MODEL COMPUTER SCIENCE CURRICULA, AND MODEL
15 MATERIALS FOR PROFESSIONAL EDUCATOR DEVELOPMENT IN TEACHING
16 COMPUTER SCIENCE. THE DEPARTMENT SHALL ENSURE THAT THE
17 MATERIALS INCLUDED IN THE RESOURCE BANK REPRESENT THE BEST
18 PRACTICES IN TEACHING COMPUTER SCIENCE AND SHALL SEEK INPUT FROM
19 EXPERTS IN THE AREA OF COMPUTER SCIENCE IN CREATING AND COMPILING
20 THE MATERIALS.

21 (b) THE DEPARTMENT SHALL ENSURE THAT THE RESOURCE BANK
22 IS AVAILABLE FOR ACCESS BY SCHOOL DISTRICTS, CHARTER SCHOOLS,
23 BOARDS OF COOPERATIVE SERVICES, AND THE PUBLIC BY JULY 1, 2018.

24 (c) THE DEPARTMENT SHALL IMPLEMENT THE PROVISIONS OF THIS
25 SECTION TO THE FULLEST DEGREE POSSIBLE WITHIN EXISTING RESOURCES.
26 THE DEPARTMENT MAY CONTRACT WITH ONE OR MORE ENTITIES IN
27 IMPLEMENTING THIS SECTION.

1 (4) "GRANT PROGRAM" MEANS THE GRANT PROGRAM ESTABLISHED
2 PURSUANT TO SECTION 22-97-102.

3 (5) "PUBLIC SCHOOL" HAS THE SAME MEANING AS PROVIDED IN
4 SECTION 22-1-101 AND INCLUDES, BUT IS NOT LIMITED TO, A DISTRICT
5 CHARTER SCHOOL, AN INSTITUTE CHARTER SCHOOL, AND AN ONLINE
6 SCHOOL, AS DEFINED IN SECTION 22-30.7-102 (9.5).

7 (6) "SCHOOL DISTRICT" MEANS A SCHOOL DISTRICT AUTHORIZED
8 BY SECTION 15 OF ARTICLE IX OF THE STATE CONSTITUTION AND
9 ORGANIZED PURSUANT TO ARTICLE 30 OF THIS TITLE 22. "SCHOOL
10 DISTRICT" ALSO INCLUDES A BOARD OF COOPERATIVE SERVICES CREATED
11 PURSUANT TO ARTICLE 5 OF THIS TITLE 22, IF IT IS OPERATING A PUBLIC
12 SCHOOL; A DISTRICT CHARTER SCHOOL; AN INSTITUTE CHARTER SCHOOL;
13 AND AN ONLINE SCHOOL, AS DEFINED IN SECTION 22-30.7-102 (9.5).

14 (7) "STATE BOARD" MEANS THE STATE BOARD OF EDUCATION
15 CREATED AND EXISTING PURSUANT TO SECTION 1 OF ARTICLE IX OF THE
16 STATE CONSTITUTION.

17 **22-97-102. Computer science education grants for teachers -**
18 **creation.** (1) THERE IS CREATED IN THE DEPARTMENT A GRANT PROGRAM
19 FOR ELIGIBLE TEACHERS WHO WISH TO PURSUE ADDITIONAL
20 POSTSECONDARY EDUCATION IN ORDER TO PROVIDE COMPUTER SCIENCE
21 EDUCATION TO STUDENTS IN PUBLIC SCHOOLS. A SCHOOL DISTRICT OR A
22 SCHOOL DISTRICT ON BEHALF OF AN ELIGIBLE TEACHER OR TEACHERS MAY
23 APPLY FOR A GRANT.

24 (2) THE DEPARTMENT SHALL ADMINISTER THE GRANT PROGRAM IN
25 ACCORDANCE WITH STATE BOARD RULES. THE DEPARTMENT SHALL
26 ACCEPT AND REVIEW GRANT APPLICATIONS RECEIVED FROM SCHOOL
27 DISTRICTS OR SCHOOL DISTRICTS ON BEHALF OF AN ELIGIBLE TEACHER OR

1 TEACHERS AND SHALL MAKE RECOMMENDATIONS TO THE STATE BOARD
2 FOR THE AWARD OF GRANTS. IN MAKING ITS RECOMMENDATIONS, THE
3 DEPARTMENT MAY CONSIDER THE PRIORITIES CONTAINED IN SUBSECTION
4 (4) OF THIS SECTION.

5 (3) PURSUANT TO ARTICLE 4 OF TITLE 24, THE STATE BOARD SHALL
6 PROMULGATE RULES NECESSARY FOR THE IMPLEMENTATION OF THE GRANT
7 PROGRAM, INCLUDING RULES RELATING TO:

8 (a) THE APPLICATION PROCESS, INCLUDING APPLICATION
9 REQUIREMENTS AND DEADLINES;

10 (b) CRITERIA FOR THE AWARD OF GRANTS, INCLUDING THE
11 PRIORITIES FOR AWARDING GRANTS CONTAINED IN SUBSECTION (4) OF THIS
12 SECTION;

13 (c) THE AMOUNT AND DURATION OF THE GRANTS; AND

14 (d) THE APPROVED USES OF THE GRANT, INCLUDING TUITION, FEES,
15 TRAINING PROGRAM COSTS, AND BOOKS AND MATERIALS.

16 (4) IN AWARDING GRANTS, THE STATE BOARD MAY:

17 (a) GIVE PRIORITY TO GRANT APPLICATIONS THAT BENEFIT A
18 TEACHER OR TEACHERS IN A SCHOOL DISTRICT THAT SERVES:

19 (I) A HIGH-POVERTY STUDENT POPULATION;

20 (II) A HIGH NUMBER OF MINORITY STUDENTS; OR

21 (III) STUDENTS IN RURAL AREAS;

22 (b) GIVE PRIORITY TO GRANT APPLICATIONS THAT BENEFIT A
23 TEACHER OR TEACHERS WHO INTEND TO CONTINUE TEACHING IN PUBLIC
24 SCHOOLS IN COLORADO AFTER COMPLETING POSTSECONDARY EDUCATION
25 OBTAINED THROUGH THE GRANT PROGRAM; AND

26 (c) GIVE PRIORITY TO GRANT APPLICATIONS FOR POSTSECONDARY
27 COURSE WORK OR TRAINING THAT ENABLES A TEACHER TO TEACH

1 COMPUTER SCIENCE, INCLUDING CONCURRENT ENROLLMENT COURSES IN
2 COMPUTER SCIENCE, AND THAT APPLIES TOWARD THE COMPLETION OF A
3 DEGREE IN COMPUTER SCIENCE, THE COMPLETION OF AN
4 INDUSTRY-RECOGNIZED CERTIFICATE IN COMPUTER SCIENCE, OR THE
5 COMPLETION OF A HIGH-QUALITY TRAINING PROGRAM, OR THAT RESULTS
6 IN THE MASTERY OF A TEACHING CONTENT AREA IN COMPUTER SCIENCE.

7 (5) THE STATE BOARD MAY AWARD GRANTS TO SCHOOL DISTRICTS
8 FOR HIGH-QUALITY TRAINING PROGRAMS OFFERED TO TEACHERS IN THE
9 DISTRICT THAT ENABLE THE TEACHERS TO TEACH COMPUTER SCIENCE
10 COURSES.

11 (6) SUBJECT TO AVAILABLE APPROPRIATIONS, THE STATE BOARD
12 SHALL ANNUALLY AWARD GRANTS.

13 **22-97-103. Reporting.** (1) NO LATER THAN JANUARY 1, 2018,
14 AND NO LATER THAN EACH JANUARY 1 THEREAFTER IF THE STATE BOARD
15 HAS AWARDED A GRANT DURING THE PREVIOUS CALENDAR YEAR, THE
16 DEPARTMENT SHALL REPORT TO THE EDUCATION COMMITTEES OF THE
17 HOUSE OF REPRESENTATIVES AND THE SENATE, OR ANY SUCCESSOR
18 COMMITTEES.

19 (2) AT A MINIMUM, THE REPORT MUST INCLUDE:

20 (a) THE NUMBER OF GRANTS AWARDED DURING THE PREVIOUS
21 CALENDAR YEAR;

22 (b) THE AMOUNT OF THE GRANTS;

23 (c) THE NUMBER OF TEACHERS IN EACH SCHOOL DISTRICT WHO
24 BENEFITTED FROM THE GRANT; AND

25 (d) THE USES OF THE GRANT, INCLUDING THE POSTSECONDARY
26 COURSES, DEGREES, TRAINING PROGRAMS, OR INDUSTRY-RECOGNIZED
27 CERTIFICATES COMPLETED AND THE EDUCATION PROVIDER PROVIDING THE

1 EDUCATION.

2 (3) NOTWITHSTANDING SECTION 24-1-136 (11)(a)(I), THE REPORT
3 REQUIRED IN THIS SECTION CONTINUES INDEFINITELY.

4 **SECTION 5. Act subject to petition - effective date.** This act
5 takes effect at 12:01 a.m. on the day following the expiration of the
6 ninety-day period after final adjournment of the general assembly (August
7 9, 2017, if adjournment sine die is on May 10, 2017); except that, if a
8 referendum petition is filed pursuant to section 1 (3) of article V of the
9 state constitution against this act or an item, section, or part of this act
10 within such period, then the act, item, section, or part will not take effect
11 unless approved by the people at the general election to be held in
12 November 2018 and, in such case, will take effect on the date of the
13 official declaration of the vote thereon by the governor.