Second Regular Session
Seventieth General Assembly
STATE OF COLORADO

INTRODUCED

LLS NO. 16-0774.01 Jerry Barry x4341 **HOUSE BILL 16-1198**

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A BILL FOR AN ACT

CONCERNING COMPUTER SCIENCE COURSES FULFILLING CERTAIN GRADUATION REQUIREMENTS.

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://www.leg.state.co.us/billsummaries.)

The bill encourages school districts to count a computer science or coding course as fulfilling a graduation requirement in a mathematics or science subject area.

It directs the state board of education, when revising the preschool through elementary and secondary education standards in mathematics and science, to include knowledge and skills in computer science.

Finally, the bill directs the department of education to create and maintain a resource bank including national model standards, model programs of instruction, model curricula, and model materials for professional educator development.

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

SECTION 1. In Colorado Revised Statutes, **add** 22-32-133.5 as follows:

22-32-133.5. Computer science courses - legislative declaration. (1) THE GENERAL ASSEMBLY FINDS THAT:

(a) COMPUTER SCIENCE AND COMPUTER CODING SKILLS ARE WIDELY RECOGNIZED AS VALUABLE ASSETS IN THE CURRENT AND FUTURE JOB MARKET;

(b) STUDENTS IN COLORADO WOULD BENEFIT FROM TAKING COMPUTER SCIENCE AND CODING COURSES IN HIGH SCHOOL;

(c) HIGH SCHOOL STUDENTS WHO ARE EXPOSED TO COMPUTER SCIENCE AND CODING COURSES IN HIGH SCHOOL ARE MORE LIKELY TO TAKE SUCH COURSES IN COLLEGE;

(d) MANY HIGH SCHOOL STUDENTS ARE NOT TAKING COMPUTER SCIENCE AND CODING COURSES BECAUSE THEY ARE ELECTIVE COURSES AND DO NOT COUNT TOWARD GRADUATION REQUIREMENTS;

(e) ACCORDING TO THE CODE.ORG ADVOCACY COALITION, IN STATES THAT COUNT A COMPUTER SCIENCE COURSE AS EITHER A MATH OR SCIENCE CREDIT TOWARD GRADUATION, THE AVERAGE CLASS SIZE IS FIFTY-THREE PERCENT BIGGER THAN IN STATES WHERE COMPUTER SCIENCE IS ONLY AN ELECTIVE; AND

(f) MORE HIGH SCHOOL STUDENTS WOULD TAKE COMPUTER SCIENCE AND CODING COURSES IF THEY FULFILLED A GRADUATION

REQUIREMENT IN MATHEMATICS OR SCIENCE.

(2) ALL SCHOOL DISTRICTS ARE ENCOURAGED TO OFFER IN EVERY HIGH SCHOOL ONE OR MORE COURSES IN COMPUTER SCIENCE AND CODING.

(3) ALL SCHOOL DISTRICTS ARE ENCOURAGED TO AND MAY ELECT TO TREAT COMPUTER SCIENCE AND CODING COURSES AS A MATHEMATICS OR SCIENCE COURSE AND COUNT COMPLETION OF A COMPUTER SCIENCE OR CODING COURSE TOWARD THE FULFILLMENT OF ANY MATHEMATICS OR SCIENCE GRADUATION REQUIREMENT.

SECTION 2. In Colorado Revised Statutes, 22-7-1005, **add** (2) (d) as follows:

22-7-1005. Preschool through elementary and secondary education - aligned standards - adoption - revisions. (2) (d) WHEN THE STATE BOARD REVIEWS AND ADOPTS REVISIONS TO THE PRESCHOOL THROUGH ELEMENTARY AND SECONDARY EDUCATION STANDARDS IN MATHEMATICS OR SCIENCE AFTER THE EFFECTIVE DATE OF THIS PARAGRAPH (d), THE STATE BOARD SHALL INCLUDE KNOWLEDGE AND SKILLS RELATED TO COMPUTER SCIENCE, INCLUDING COMPUTER CODE WRITING.

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

22-2-127.5. Computer science - resource bank - technical assistance - definitions. (1) AS USED IN THIS SECTION, "COMPUTER SCIENCE" MEANS THE STUDY OF HOW COMPUTERS AND COMPUTER SYSTEMS WORK, AND HOW THEY ARE DESIGNED AND PROGRAMMED, INCLUDING COMPUTER CODE WRITING.

(2) THE STATE BOARD SHALL CREATE AND MAINTAIN A RESOURCE BANK OF MATERIALS PERTAINING TO COMPUTER SCIENCE. AT A MINIMUM,

THE RESOURCE BANK MUST INCLUDE NATIONAL MODEL STANDARDS FOR COMPUTER SCIENCE, MODEL PROGRAMS OF INSTRUCTION FOR COMPUTER SCIENCE, MODEL COMPUTER SCIENCE CURRICULA, AND MODEL MATERIALS FOR PROFESSIONAL EDUCATOR DEVELOPMENT IN TEACHING COMPUTER SCIENCE. THE RESOURCE BANK MUST ALSO INCLUDE A LIST OF THE AVAILABLE TEXTBOOKS THAT CONTAIN SUBSTANTIVE PROVISIONS ON COMPUTER SCIENCE, INCLUDING OPERATING SYSTEMS, COMPUTATIONAL SCIENCE, PROGRAMMING LANGUAGE, ARCHITECTURE, INFORMATION STORAGE AND RETRIEVAL, AND SIMILAR COMPUTER SCIENCE TOPICS. THE STATE BOARD SHALL ENSURE THAT THE MATERIALS INCLUDED IN THE RESOURCE BANK REPRESENT THE BEST PRACTICES IN THE TEACHING OF COMPUTER SCIENCE. THE MATERIALS IN THE RESOURCE BANK MUST BE AVAILABLE TO SCHOOL DISTRICTS NO LATER THAN MARCH 15, 2017.

(3) UPON THE REQUEST OF A SCHOOL DISTRICT OR A CHARTER SCHOOL, THE DEPARTMENT SHALL PROVIDE TECHNICAL ASSISTANCE TO THE SCHOOL DISTRICT OR CHARTER SCHOOL IN DESIGNING A CURRICULUM OF COMPUTER SCIENCE.

(4) THE DEPARTMENT SHALL IMPLEMENT THE PROVISIONS OF THIS SECTION TO THE FULLEST DEGREE POSSIBLE WITHIN EXISTING RESOURCES. THE DEPARTMENT SHALL CONTRACT WITH ONE OR MORE ENTITIES FOR THE IMPLEMENTATION OF THIS SECTION.

(5) THE GENERAL ASSEMBLY HEREBY FINDS AND DECLARES THAT, FOR PURPOSES OF SECTION 17 OF ARTICLE IX OF THE STATE CONSTITUTION, CREATION OF A RESOURCE BANK OF MATERIALS PERTAINING TO COMPUTER SCIENCE IS AN IMPORTANT ELEMENT OF AN ACCOUNTABLE PROGRAM TO MEET STATE ACADEMIC STANDARDS AND MAY THEREFORE RECEIVE FUNDING FROM THE STATE EDUCATION FUND CREATED IN SECTION 17 (4)

OF ARTICLE IX OF THE STATE CONSTITUTION.

(6) THE DEPARTMENT IS AUTHORIZED TO ACCEPT AND EXPEND ANY GIFTS, GRANTS, OR DONATIONS THAT MAY BE AVAILABLE FROM ANY PRIVATE OR PUBLIC SOURCES FOR THE IMPLEMENTATION OF THIS SECTION. ALL PRIVATE AND PUBLIC MONEY RECEIVED THROUGH GIFTS, GRANTS, OR DONATIONS PURSUANT TO THIS SUBSECTION (6) MUST BE TRANSMITTED TO THE STATE TREASURER, WHO SHALL CREDIT THE SAME TO THE COMPUTER SCIENCE CASH FUND, WHICH FUND IS CREATED AND REFERRED TO IN THIS SUBSECTION (6) AS THE "FUND". THE MONEY IN THE FUND IS SUBJECT TO ANNUAL APPROPRIATION BY THE GENERAL ASSEMBLY FOR THE DIRECT AND INDIRECT COSTS ASSOCIATED WITH THE IMPLEMENTATION OF THIS SECTION. ANY MONEY IN THE FUND NOT EXPENDED FOR THE PURPOSES OF THIS SECTION MAY BE INVESTED BY THE STATE TREASURER AS PROVIDED BY LAW. ALL INTEREST AND INCOME DERIVED FROM THE INVESTMENT AND DEPOSIT OF MONEY IN THE FUND MUST BE CREDITED TO THE FUND. ANY UNEXPENDED AND UNENCUMBERED MONEY REMAINING IN THE FUND AT THE END OF A FISCAL YEAR REMAINS IN THE FUND AND SHALL NOT BE CREDITED OR TRANSFERRED TO THE GENERAL FUND OR ANOTHER FUND.

SECTION 4. Safety clause. The general assembly hereby finds, determines, and declares that this act is necessary for the immediate preservation of the public peace, health, and safety.