Effective 7/1/2019

Part 1
Stem Action Center

9-22-101 Title.

This chapter is known as the "STEM Action Center."

Renumbered and Amended by Chapter 487, 2019 General Session

9-22-102 Definitions.

As used in this chapter:

(1) "Computing partnerships" means a set of skills, knowledge, and aptitudes used in computer science, information technology, or computer engineering courses and career options.
(2) "Director" means the director appointed by the STEM board to oversee the administration of the STEM Action Center.
(3) "Educator" means the same as that term is defined in Section 53E-6-102.
(4) "Foundation" means a foundation established as described in Subsections 9-22-104(3) and (4).
(5) "Fund" means the STEM Action Center Foundation Fund created in Section 9-22-105.
(6) "Grant program" means the Computing Partnerships Grants program created in this part.
(7) "High quality professional development" means professional development that meets high quality standards developed by the State Board of Education.
(8) "Institution of higher education" means an institution listed in Section 53B-1-102.
(9) "K-16" means kindergarten through grade 12 and post-secondary education programs.
(10) "Provider" means a provider selected on behalf of the STEM board by the staff of the STEM board and the staff of the State Board of Education:
  (a) through a request for proposals process; or
  (b) through a direct award or sole source procurement process for a pilot described in Section 9-22-107.
(11) "Review committee" means the committee established under Section 9-22-114.
(12) "Stacked credentials" means credentials that:
  (a) an individual can build upon to access an advanced job or higher wage;
  (b) are part of a career pathway system;
  (c) provide a pathway culminating in the equivalent of an associate's or bachelor's degree;
  (d) facilitate multiple exit and entry points; and
  (e) recognize sub-goals or momentum points.
(13) "STEM" means science, technology, engineering, and mathematics.
(14) "STEM Action Center" means the center described in Section 9-22-106.
(15) "STEM board" means the STEM Action Center Board created in Section 9-22-103.
(16) "Talent Ready Program" means the Talent Ready Utah Program created in Section 53B-34-103.

Amended by Chapter 282, 2021 General Session

9-22-103 STEM Action Center Board creation -- Membership.

(1) There is created the STEM Action Center Board, composed of the following members:
  (a) seven private sector members who represent business, appointed by the governor;
  (b) the state superintendent of public instruction or the state superintendent's designee;

(c) the commissioner of higher education or the commissioner's designee;
(d) one member appointed by the governor;
(e) a member of the State Board of Education, chosen by the chair of the State Board of Education;
(f) the executive director of the department or the executive director's designee; and
(g) the executive director of the Department of Workforce Services or the executive director's designee.

(2)
(a) The private sector members appointed by the governor in Subsection (1)(a) shall represent a business or trade association whose primary focus is science, technology, or engineering.
(b) Except as required by Subsection (2)(c), members appointed by the governor shall be appointed to four-year terms.
(c) The length of terms of the members shall be staggered so that approximately half of the committee is appointed every two years.
(d) The members may not serve more than two full consecutive terms except where the governor determines that an additional term is in the best interest of the state.
(e) When a vacancy occurs in the membership for any reason, the replacement shall be appointed for the unexpired term.

(3) Attendance of a simple majority of the members constitutes a quorum for the transaction of official committee business.
(4) Formal action by the STEM board requires a majority vote of a quorum.
(5) A member may not receive compensation or benefits for the member's service, but may receive per diem and travel expenses in accordance with:
(a) Section 63A-3-106;
(b) Section 63A-3-107; and
(c) rules made by the Division of Finance under Sections 63A-3-106 and 63A-3-107.
(6) The governor shall select the chair of the STEM board to serve a two-year term.
(7) The executive director of the department or the executive director's designee shall serve as the vice chair of the STEM board.

Amended by Chapter 160, 2023 General Session

9-22-104 STEM Action Center Board -- Duties.

(1) The STEM board shall:
(a) establish a STEM Action Center to:
(i) coordinate STEM activities in the state among the following stakeholders:
(A) the State Board of Education;
(B) school districts and charter schools;
(C) the Utah Board of Higher Education;
(D) institutions of higher education;
(E) parents of home-schooled students;
(F) other state agencies; and
(G) business and industry representatives;
(ii) align public education STEM activities with higher education STEM activities; and
(iii) create and coordinate best practices among public education and higher education;
(b) with the advice and consent of the Senate, appoint a director to oversee the administration of the STEM Action Center;
(c) select a physical location for the STEM Action Center;

(d) strategically engage industry and business entities to cooperate with the STEM board:
(i) to support high quality professional development and provide other assistance for educators and students; and
(ii) to provide private funding and support for the STEM Action Center;
(e) give direction to the STEM Action Center and the providers selected through a request for proposals process pursuant to this part; and
(f) work to meet the following expectations:
(i) that at least 50 educators are implementing best practice learning tools in classrooms;
(ii) performance change in student achievement in each classroom participating in a STEM Action Center project; and
(iii) that students from at least 50 schools in the state participate in the STEM competitions, fairs, and camps described in Subsection 9-22-106(2)(d).

(2) The STEM board may:
(a) enter into contracts for the purposes of this part;
(b) apply for, receive, and disburse funds, contributions, or grants from any source for the purposes set forth in this part;
(c) employ, compensate, and prescribe the duties and powers of individuals necessary to execute the duties and powers of the STEM board;
(d) prescribe the duties and powers of the STEM Action Center providers; and
(e) in accordance with Title 63G, Chapter 3, Utah Administrative Rulemaking Act, make rules to administer this part.

(3) The STEM board may establish a foundation to assist in:
(a) the development and implementation of the programs authorized under this part to promote STEM education; and
(b) implementation of other STEM education objectives described in this part.

(4) A foundation established by the STEM board under Subsection (3):
(a) may solicit and receive contributions from a private organization for STEM education objectives described in this part;
(b) shall comply with the requirements described in Section 9-22-105;
(c) does not have power or authority to incur contractual obligations or liabilities that constitute a claim against public funds;
(d) may not exercise executive or administrative authority over the programs or other activities described in this part, except to the extent specifically authorized by the STEM board;
(e) shall provide the STEM board with information detailing transactions and balances associated with the foundation; and
(f) may not:
(i) engage in lobbying activities;
(ii) attempt to influence legislation; or
(iii) participate in any campaign activity for or against:
(A) a political candidate; or
(B) an initiative, referendum, proposed constitutional amendment, bond, or any other ballot proposition submitted to the voters.

Amended by Chapter 352, 2020 General Session
Amended by Chapter 365, 2020 General Session

9-22-105 STEM Action Center Foundation Fund.

(1) There is created an expendable special revenue fund known as the "STEM Action Center Foundation Fund."
(2) The director shall administer the fund under the direction of the STEM board.
(3) Money may be deposited into the fund from a variety of sources, including transfers, grants, private foundations, individual donors, gifts, bequests, legislative appropriations, and money made available from any other source.
(4) Money collected by a foundation described in Subsections 9-22-104(3) and (4) shall be deposited into the fund.
(5) Any portion of the fund may be treated as an endowment fund such that the principal of that portion of the fund is held in perpetuity on behalf of the STEM Action Center.
(6) The state treasurer shall invest the money in the fund according to the procedures and requirements of Title 51, Chapter 7, State Money Management Act, except that all interest or other earnings derived from those investments shall be deposited into the fund.
(7) The director, under the direction of the STEM board, may expend money from the fund for the purposes described in this part.

Renumbered and Amended by Chapter 487, 2019 General Session

9-22-106 STEM Action Center.

(1) The STEM board shall:
  (a) establish a STEM Action Center;
  (b) ensure that the STEM Action Center:
    (i) is accessible to the public; and
    (ii) includes the components described in Subsection (2);
  (c) work cooperatively with the State Board of Education to:
    (i) further STEM education; and
    (ii) ensure best practices are implemented as described in Sections 9-22-107 and 9-22-108;
  (d) engage private entities to provide financial support or employee time for STEM activities in schools in addition to what is currently provided by private entities; and
  (e) work cooperatively with stakeholders to support and promote activities that align STEM education and training activities with the employment needs of business and industry in the state.
(2) As funding allows, the director of the STEM Action Center shall:
  (a) support high quality professional development for educators regarding STEM education;
  (b) ensure that the STEM Action Center acts as a research and development center for STEM education through a request for proposals process described in Section 9-22-107;
  (c) review and acquire STEM education related materials and products for:
    (i) high quality professional development;
    (ii) assessment, data collection, analysis, and reporting; and
    (iii) public school instruction;
  (d) facilitate participation in interscholastic STEM related competitions, fairs, camps, and STEM education activities;
  (e) engage private industry in the development and maintenance of the STEM Action Center and STEM Action Center projects;
  (f) use resources to bring the latest STEM education learning tools into public education classrooms;
  (g) identify at least 10 best practice innovations used in Utah that have resulted in a measurable improvement in student performance or outcomes in STEM areas;

(h) identify best practices being used outside the state and, as appropriate, develop and implement selected practices through a pilot program;
(i) identify:
(i) learning tools for kindergarten through grade 6 identified as best practices; and
(ii) learning tools for grades 7 through 12 identified as best practices;
(j) collect data on Utah best practices, including best practices from public education, higher education, the Utah Education and Telehealth Network, and other STEM related entities;
(k) keep track of the following items related to best practices described in Subsection (2)(j):
(i) how the best practices data are being used; and
(ii) how many individuals are using the data, including the demographics of the users, if available;
(l) as appropriate, join and participate in a national STEM network;
(m) work cooperatively with the State Board of Education to designate schools as STEM schools, where the schools have agreed to adopt a plan of STEM implementation in alignment with criteria set by the State Board of Education and the board;
(n) support best methods of high quality professional development for STEM education in kindergarten through grade 12, including methods of high quality professional development that reduce cost and increase effectiveness, to help educators learn how to most effectively implement best practice learning tools in classrooms;
(o) recognize achievement in the STEM competitions, fairs, and camps described in Subsection (2)(d);
(p) send student results from STEM competitions, fairs, and camps described in Subsection (2)(d) to media and ask the media to report on them;
(q) develop and distribute STEM information to parents of students in the state;
(r) support targeted high quality professional development for improved instruction in STEM education, including:
(i) improved instructional materials that are dynamic and engaging for students;
(ii) use of applied instruction; and
(iii) introduction of other research-based methods that support student achievement in STEM areas; and
(s) ensure that an online college readiness assessment tool be accessible by:
(i) public education students; and
(ii) higher education students.
(3) The STEM board may prescribe other duties for the STEM Action Center in addition to the responsibilities described in this section.
(4)
(a) The director shall work with an independent evaluator to track and compare the student performance of students participating in a STEM Action Center program to all other similarly situated students in the state, if appropriate, in the following activities:
(i) public education high school graduation rates;
(ii) the number of students taking a remedial mathematics course at an institution of higher education described in Section 53B-2-101;
(iii) the number of students who graduate from a Utah public school and begin a postsecondary education program; and
(iv) the number of students, as compared to all similarly situated students, who are performing at grade level in STEM classes.

(b) The State Board of Education and the Utah Board of Higher Education shall provide information to the STEM board to assist the STEM board in complying with the requirements of Subsection (4)(a) if allowed under federal law.

Amended by Chapter 365, 2020 General Session

9-22-107 Acquisition of STEM education related instructional technology program -- Research and development of education related instructional technology through a pilot program.

(1) For purposes of this section:
(a) "Pilot" means a pilot of the program.
(b) "Program" means the STEM education related instructional technology program created in Subsection (2).
(2)
(a) There is created the STEM education related instructional technology program to provide public schools the STEM education related instructional technology described in Subsection (3).
(b) On behalf of the STEM board, the staff of the STEM board and the staff of the State Board of Education shall collaborate and may select one or more providers, through a request for proposals process, to provide STEM education related instructional technology to school districts and charter schools.
(c) On behalf of the STEM board, the staff of the STEM board and the staff of the State Board of Education shall consider and may accept an offer from a provider in response to the request for proposals described in Subsection (2)(b) even if the provider did not participate in a pilot described in Subsection (5).
(3) The STEM education related instructional technology shall:
(a) support mathematics instruction for students in:
(i) kindergarten through grade 6; or
(ii) grades 7 and 8; or
(b) support mathematics instruction for secondary students to prepare the secondary students for college mathematics courses.
(4) In selecting a provider for STEM education related instructional technology to support mathematics instruction for the students described in Subsection (3)(a), the STEM board shall consider the following criteria:
(a) the technology contains individualized instructional support for skills and understanding of the core standards in mathematics;
(b) the technology is self-adapting to respond to the needs and progress of the learner; and
(c) the technology provides opportunities for frequent, quick, and informal assessments and includes an embedded progress monitoring tool and mechanisms for regular feedback to students and teachers.
(5) Before issuing a request for proposals described in Subsection (2), on behalf of the STEM board, the staff of the STEM board and the staff of the State Board of Education shall collaborate and may:
(a) conduct a pilot of the program to test and select providers for the program;
(b) select at least two providers through a direct award or sole source procurement process for the purpose of conducting the pilot; and
(c) select schools to participate in the pilot.
(6)

(a) A contract with a provider for STEM education related instructional technology may include professional development for full deployment of the STEM education related instructional technology.
(b) No more than 10% of the money appropriated for the program may be used to provide professional development related to STEM education related instructional technology in addition to the professional development described in Subsection (6)(a).

Renumbered and Amended by Chapter 487, 2019 General Session

9-22-108 Distribution of STEM education instructional technology to schools.

(1) Subject to legislative appropriations, on behalf of the STEM board, the staff of the STEM board and the staff of the State Board of Education shall collaborate and shall:
(a) distribute STEM education related instructional technology described in Section 9-22-107 to school districts and charter schools; and
(b) provide related professional development to the school districts and charter schools that receive STEM education related instructional technology.
(2) A school district or charter school may apply to the STEM board, through a competitive process, to receive STEM education related instructional technology from the STEM board.
(3) A school district or charter school that receives STEM education related instructional technology as described in this section shall provide the school district's or charter school's own computer hardware.

Renumbered and Amended by Chapter 487, 2019 General Session

9-22-109 Report to Legislature and the State Board of Education.

(1) The STEM board shall report the progress of the STEM Action Center, including the information described in Subsection (2), to the following groups once each year:
(a) the Education Interim Committee;
(b) the Public Education Appropriations Subcommittee;
(c) the State Board of Education; and
(d) the department for inclusion in the department's annual written report described in Section 9-1-208.
(2) The report described in Subsection (1) shall include information that demonstrates the effectiveness of the program, including:
(a) the number of educators receiving high quality professional development;
(b) the number of students receiving services from the STEM Action Center;
(c) a list of the providers selected pursuant to this part;
(d) a report on the STEM Action Center's fulfillment of its duties described in Section 9-22-106; and
(e) student performance of students participating in a STEM Action Center program as collected in Subsection 9-22-106(4).

Renumbered and Amended by Chapter 487, 2019 General Session

9-22-110 Acquisition of STEM education high quality professional development.

(1) The STEM Action Center may, through a request for proposals process, select technology providers for the purpose of providing a STEM education high quality professional development application.

(2) The high quality professional development application described in Subsection (1) shall:
(a) allow the State Board of Education, a school district, or a school to define the application's input and track results of the high quality professional development;
(b) allow educators to access automatic tools, resources, and strategies , including instructional materials with integrated STEM content;
(c) allow educators to work in online learning communities, including giving and receiving feedback via uploaded video;
(d) track and report data on the usage of the components of the application's system and the relationship to improvement in classroom instruction;
(e) include video examples of highly effective STEM education teaching that:
(i) cover a cross section of grade levels and subjects;
(ii) under the direction of the State Board of Education, include videos of highly effective Utah STEM educators; and
(iii) contain tools to help educators implement what they have learned; and
(f) allow for additional STEM education video content to be added.
(3) In addition to the high quality professional development application described in Subsections (1) and (2), the STEM Action Center may create STEM education hybrid or blended high quality professional development that allows for face-to-face applied learning.

Renumbered and Amended by Chapter 487, 2019 General Session

9-22-111 STEM education middle school applied science initiative.
(1) The STEM Action Center shall develop an applied science initiative for students in grades 7 and 8 that includes:
(a) a STEM applied science curriculum with instructional materials;
(b) STEM hybrid or blended high quality professional development that allows for face-to-face applied learning; and
(c) hands-on tools for STEM applied science learning.
(2) The STEM Action Center may, through a request for proposals process, select a consultant to assist in developing the initiative described in Subsection (1).

Renumbered and Amended by Chapter 487, 2019 General Session

9-22-112 High school STEM education initiative.
(1) Subject to legislative appropriations, after consulting with State Board of Education staff, the STEM Action Center shall award grants to school districts and charter schools to fund STEM related certification for high school students.
(2)
(a) A school district or charter school may apply for a grant from the STEM Action Center, through a competitive process, to fund the school district's or charter school's STEM related certification training program.
(b) A school district's or charter school's STEM related certification training program shall:
(i) prepare high school students to be job ready for available STEM related positions of employment; and
(ii) when a student completes the program, result in the student gaining an industry-recognized employer STEM related certification.
(3) A school district or charter school may partner with one or more of the following to provide a STEM related certification program:

(a) a technical college described in Section 53B-2a-105;
(b) Salt Lake Community College;
(c) Snow College;
(d) Utah State University Eastern;
(e) Utah State University Blanding; or
(f) a private sector employer.

Amended by Chapter 357, 2019 General Session
Renumbered and Amended by Chapter 487, 2019 General Session

9-22-113 Computer science initiative for public schools.

(1) As used in this section:
(a) "Computational thinking" means the set of problem-solving skills and techniques that software engineers use to write programs that underlie computer applications, including decomposition, pattern recognition, pattern generalization, and algorithm design.
(b) "Computer coding" means the process of writing script for a computer program or mobile device.
(c) "Educator" means the same as that term is defined in Section 53E-6-102.
(d) "Endorsement" means a stipulation, authorized by the State Board of Education and appended to a license, that specifies the areas of practice to which the license applies.
(e)
(i) "Institution of higher education" means the same as that term is defined in Section 53B-3-102.
(ii) "Institution of higher education" includes a technical college described in Section 53B-2a-105.
(f) "Employer" means a private employer, public employer, industry association, union, or the military.
(g) "License" means the same as that term is defined in Section 53E-6-102.
(2) Subject to legislative appropriations, on behalf of the STEM board, the staff of the STEM board and the staff of the State Board of Education shall collaborate to develop and implement a computer science initiative for public schools by:
(a) creating an online repository that:
(i) is available for school districts and charter schools to use as a resource; and
(ii) includes high quality computer science instructional resources that are designed to teach students in all grade levels:
(A) computational thinking skills; and
(B) computer coding skills;
(b) providing for professional development on teaching computer science by:
(i) including resources for educators related to teaching computational thinking and computer coding in the STEM education high quality professional development application described in Section 9-22-110; and
(ii) providing statewide or regional professional development institutes; and
(c) awarding grants to a school district or charter school, on a competitive basis, that may be used to provide incentives for an educator to earn a computer science endorsement.
(3) A school district or charter school may enter into an agreement with one or more of the following entities to jointly apply for a grant under Subsection (2)(c):
(a) a school district;
(b) a charter school;

(c) an employer;
(d) an institution of higher education; or
(e) a non-profit organization.
(4) To apply for a grant described in Subsection (2)(c), a school district or charter school shall submit a plan to the State Board of Education for the use of the grant, including a statement of purpose that describes the methods the school district or charter school proposes to use to incentivize an educator to earn a computer science endorsement.
(5) The State Board of Education and the STEM board shall encourage schools to independently pursue computer science and coding initiatives, subject to local school board or charter school governing board approval, based on the unique needs of the school's students.
(6) The STEM board shall include information on the status of the computer science initiative in the annual report described in Section 9-22-109.

Renumbered and Amended by Chapter 487, 2019 General Session

9-22-114 Computing Partnerships Grants program.
(1) There is created the Computing Partnerships Grants program consisting of the grants created in this part to provide for the design and implementation of a comprehensive K-16 computing partnerships program, based upon the following common elements:
(a) outreach and student engagement;
(b) courses and content;
(c) instruction and instructional support;
(d) work-based learning opportunities;
(e) student retention;
(f) industry engagement;
(g) stacked credentials that allow for multiple exit and entry points;
(h) competency-based learning strategies; and
(i) secondary and post-secondary collaborations.
(2) The grant program shall incentivize public schools and school districts to work with the STEM Action Center, staff of the State Board of Education, Talent Ready Utah, industry representatives, and secondary partners on the design and implementation of comprehensive K-16 computing partnerships through:
(a) leveraging existing resources for content, professional learning, and instruction, including existing career and technical education funds, programs, and initiatives;
(b) allowing for the support of professional learning for pre- and in-service educators;
(c) supporting activities that promote and enhance access, diversity, and equity;
(d) supporting collaborations and partnerships between K-12, institutions of higher education, cultural and community partners, and industry representatives;
(e) identifying the appropriate credentials that align with industry needs and providing the credentials in a stacked credentials pathway;
(f) implementing a collaborative network that enables sharing and identification of best practices; and
(g) providing infrastructure assistance that allows for the support of new courses and the expansion of capacity for existing courses.
(3) The grant program shall include the following:
(a) rigorous and relevant metrics that are shared by all grant participants; and
(b) an evaluation by the STEM Action Center of the grant program that identifies best practices.
(4) The STEM Action Center, in consultation with the State Board of Education, shall:

(a) in accordance with Title 63G, Chapter 3, Utah Administrative Rulemaking Act, adopt rules:
(i) for the administration of the grant program and awarding of grants; and
(ii) that define outcome-based measures appropriate to the type of grant awarded under this part;
(b) establish a grant application process;
(c) in accordance with Subsection (5), establish a review committee to make recommendations for:
(i) metrics to analyze the quality of a grant application;
(ii) approval of a grant application; and
(iii) criteria to establish a requirement for an applicant to demonstrate financial need; and
(d) with input from the review committee, adopt metrics to analyze the quality of a grant application.

(5)
(a) The review committee shall consist of K-16 educators, staff of the State Board of Education, representatives of Talent Ready Utah, post-secondary partners, and industry representatives.
(b) The review committee shall:
(i) review a grant application submitted;
(ii) make recommendations to a grant applicant to modify the grant application, if necessary; and
(iii) make recommendations regarding the final disposition of an application.

(6) The STEM Action Center shall report annually on the grant program to the State Board of Education and any findings and recommendations on the grant program shall be included in the STEM Action Center annual report to the Education Interim Committee.

Renumbered and Amended by Chapter 487, 2019 General Session