

STEM PROGRAM AMENDMENTS

2016 GENERAL SESSION

STATE OF UTAH

Chief Sponsor: Val L. Peterson

Senate Sponsor: Stephen H. Urquhart

LONG TITLE

Committee Note:

The Economic Development and Workforce Services Interim Committee recommended this bill.

General Description:

This bill modifies provisions related to the STEM (Science, Technology, Engineering, and Mathematics) Action Center.

Highlighted Provisions:

This bill:

- ▶ defines terms;
- ▶ modifies:
 - the membership and duties of the STEM Action Center Board;
 - the duties of the director of the STEM Action Center; and
 - the rulemaking authority of the State Board of Education related to the award of STEM education endorsement incentives;
- ▶ adds Utah State University Eastern to the list of educational institutions that may partner with a school district or charter school to provide a STEM related certification program; and
- ▶ makes technical changes.

Money Appropriated in this Bill:

None



28 **Other Special Clauses:**

29 None

30 **Utah Code Sections Affected:**

31 AMENDS:

32 **63N-12-203**, as renumbered and amended by Laws of Utah 2015, Chapter 283

33 **63N-12-204**, as renumbered and amended by Laws of Utah 2015, Chapter 283

34 **63N-12-205**, as renumbered and amended by Laws of Utah 2015, Chapter 283

35 **63N-12-209**, as last amended by Laws of Utah 2015, Chapter 258 and renumbered and
36 amended by Laws of Utah 2015, Chapter 283

37 **63N-12-210**, as renumbered and amended by Laws of Utah 2015, Chapter 283

38 **63N-12-212**, as renumbered and amended by Laws of Utah 2015, Chapter 283



40 *Be it enacted by the Legislature of the state of Utah:*

41 Section 1. Section **63N-12-203** is amended to read:

42 **63N-12-203. STEM Action Center Board creation -- Membership.**

43 (1) There is created the STEM Action Center Board within the office, composed of the
44 following members:

45 (a) six private sector members who represent business, appointed by the governor;

46 (b) the state superintendent of public instruction or the state superintendent of public
47 instruction's designee;

48 (c) the commissioner of higher education or the commissioner of higher education's
49 designee;

50 (d) one member appointed by the governor;

51 (e) a member of the State Board of Education, chosen by the chair of the State Board of
52 Education;

53 (f) the executive director of the office or the executive director's designee;

54 (g) the president of the Utah College of Applied Technology or the president of the
55 Utah College of Applied Technology's designee; [~~and~~]

56 (h) the executive director of the Department of Workforce Services or the executive
57 director of the Department of Workforce Services' designee; and

58 [~~h~~] (i) one member who has a degree in engineering and experience working in a

59 government military installation, appointed by the governor.

60 (2) (a) The private sector members appointed by the governor in Subsection (1)(a) shall
61 represent a business or trade association whose primary focus is science, technology, or
62 engineering.

63 (b) Except as required by Subsection (2)(c), members appointed by the governor shall
64 be appointed to four-year terms.

65 (c) The length of terms of the members shall be staggered so that approximately half of
66 the committee is appointed every two years.

67 (d) The members may not serve more than two full consecutive terms except where the
68 governor determines that an additional term is in the best interest of the state.

69 (e) When a vacancy occurs in the membership for any reason, the replacement shall be
70 appointed for the unexpired term.

71 (3) Attendance of a simple majority of the members constitutes a quorum for the
72 transaction of official committee business.

73 (4) Formal action by the committee requires a majority vote of a quorum.

74 (5) A member may not receive compensation or benefits for the member's service, but
75 may receive per diem and travel expenses in accordance with:

76 (a) Section [63A-3-106](#);

77 (b) Section [63A-3-107](#); and

78 (c) rules made by the Division of Finance under Sections [63A-3-106](#) and [63A-3-107](#).

79 (6) The governor shall select the chair of the board to serve a [~~one-year~~] two-year term.

80 (7) The executive director of the office or the executive director's designee shall serve
81 as the vice chair of the board.

82 Section 2. Section **63N-12-204** is amended to read:

83 **63N-12-204. STEM Action Center Board -- Duties.**

84 (1) The board shall:

85 (a) establish a STEM Action Center to:

86 (i) coordinate STEM activities in the state among the following stakeholders:

87 (A) the State Board of Education;

88 (B) school districts and charter schools;

89 (C) the State Board of Regents;

- 90 (D) institutions of higher education;
- 91 (E) parents of home-schooled students; ~~[and]~~
- 92 (F) other state agencies; and
- 93 (G) business and industry representatives;
- 94 (ii) align public education STEM activities with higher education STEM activities; and
- 95 (iii) create and coordinate best practices among public education and higher education;
- 96 (b) with the consent of the Senate, appoint a director to oversee the administration of
- 97 the STEM Action Center;
- 98 (c) select a physical location for the STEM Action Center;
- 99 (d) strategically engage industry and business entities to cooperate with the board:
- 100 (i) to support high quality professional development and provide other assistance for
- 101 educators and students; and
- 102 (ii) to provide private funding and support for the STEM Action Center;
- 103 (e) give direction to the STEM Action Center and the providers selected through a
- 104 request for proposals process pursuant to this part; and
- 105 (f) work to meet the following expectations:
- 106 (i) that at least 50 educators are implementing best practice learning tools in
- 107 classrooms ~~[per each product specialist or manager working with the STEM Action Center];~~
- 108 (ii) performance change in student achievement in each classroom ~~[working with]~~
- 109 participating in a STEM Action Center ~~[product specialist or manager]~~ project; and
- 110 (iii) that students from at least 50 ~~[high]~~ schools in the state participate in the STEM
- 111 competitions, fairs, and camps described in Subsection [63N-12-205\(2\)\(d\)](#).
- 112 (2) The board may:
- 113 (a) enter into contracts for the purposes of this part;
- 114 (b) apply for, receive, and disburse funds, contributions, or grants from any source for
- 115 the purposes set forth in this part;
- 116 (c) employ, compensate, and prescribe the duties and powers of individuals necessary
- 117 to execute the duties and powers of the board;
- 118 (d) prescribe the duties and powers of the STEM Action Center providers; and
- 119 (e) in accordance with Title 63G, Chapter 3, Utah Administrative Rulemaking Act,
- 120 make rules to administer this part.

- 121 (3) The board may establish a foundation to assist in:
- 122 (a) the development and implementation of the programs authorized under this part to
- 123 promote STEM education; and
- 124 (b) implementation of other STEM education objectives described in this part.
- 125 (4) A foundation established by the board under Subsection (3):
- 126 (a) may solicit and receive contributions from a private organization for STEM
- 127 education objectives described in this part;
- 128 (b) shall comply with Title 51, Chapter 7, State Money Management Act;
- 129 (c) does not have power or authority to incur contractual obligations or liabilities that
- 130 constitute a claim against public funds;
- 131 (d) may not exercise executive or administrative authority over the programs or other
- 132 activities described in this part, except to the extent specifically authorized by the board;
- 133 (e) shall provide the board with information detailing transactions and balances of
- 134 funds managed for the board; and
- 135 (f) may not:
- 136 (i) engage in lobbying activities;
- 137 (ii) attempt to influence legislation; or
- 138 (iii) participate in any campaign activity for or against:
- 139 (A) a political candidate; or
- 140 (B) an initiative, referendum, proposed constitutional amendment, bond, or any other
- 141 ballot proposition submitted to the voters.
- 142 (5) Money donated to a foundation established under Subsection (3) may be accounted
- 143 for in an expendable special revenue fund.

144 Section 3. Section **63N-12-205** is amended to read:

145 **63N-12-205. STEM Action Center.**

- 146 (1) As funding allows, the board shall:
- 147 (a) establish a STEM Action Center;
- 148 (b) ensure that the STEM Action Center:
- 149 (i) is accessible by the public; and
- 150 (ii) includes the components described in Subsection (2);
- 151 (c) work cooperatively with the State Board of Education to:

- 152 (i) further STEM education; and
- 153 (ii) ensure best practices are implemented as described in Sections 63N-12-206 and
- 154 63N-12-207; ~~[and]~~
- 155 (d) engage private entities to provide financial support or employee time for STEM
- 156 activities in schools in addition to what is currently provided by private entities[-]; and
- 157 (e) work cooperatively with stakeholders to support and promote activities that align
- 158 STEM education and training activities with the employment needs of business and industry in
- 159 the state.
- 160 (2) As funding allows, the director of the STEM Action Center shall:
- 161 (a) support high quality professional development for educators regarding STEM
- 162 education;
- 163 (b) ensure that the STEM Action Center acts as a research and development center for
- 164 STEM education through a request for proposals process described in Section 63N-12-206;
- 165 (c) review and acquire STEM education related materials and products for:
- 166 (i) high quality professional development;
- 167 (ii) assessment, data collection, analysis, and reporting; and
- 168 (iii) public school instruction;
- 169 (d) facilitate participation in interscholastic STEM related competitions, fairs, camps,
- 170 and STEM education activities;
- 171 (e) engage private industry in the development and maintenance of the STEM Action
- 172 Center and STEM Action Center projects;
- 173 (f) use resources to bring the latest STEM education learning tools into public
- 174 education classrooms;
- 175 (g) identify at least 10 best practice innovations used in Utah that have resulted in ~~[at~~
- 176 ~~least 80% of students performing at grade level]~~ a measurable improvement in student
- 177 performance or outcomes in STEM areas;
- 178 (h) identify best practices being used outside the state and, as appropriate, develop and
- 179 implement selected practices through a pilot program;
- 180 (i) identify:
- 181 (i) learning tools for kindergarten through grade 6 identified as best practices; and
- 182 (ii) learning tools for grades 7 through 12 identified as best practices;

183 (j) ~~[provide a]~~ collect data on Utah best practices ~~[database]~~, including best practices
184 from public education, higher education, the Utah Education and Telehealth Network, and
185 other STEM related entities;

186 (k) keep track of the following items related to ~~[the]~~ best practices ~~[database]~~ described
187 in Subsection (2)(j):

188 (i) how the best practices ~~[database is]~~ data are being used; and

189 (ii) how many individuals are using the ~~[database]~~ data, including the demographics of
190 the users, if available;

191 (l) as appropriate, join and participate in a national STEM network;

192 ~~[(m) identify performance changes linked to use of the best practices database~~
193 ~~described in Subsection (2)(j);]~~

194 ~~[(m)]~~ (m) work cooperatively with the State Board of Education to designate schools as
195 STEM schools, where the schools have agreed to adopt a plan of STEM implementation in
196 alignment with criteria set by the State Board of Education and the board;

197 ~~[(n)]~~ (n) support best methods of high quality professional development for STEM
198 education in kindergarten through grade 12, including methods of high quality professional
199 development that reduce cost and increase effectiveness, to help educators learn how to most
200 effectively implement best practice learning tools in classrooms;

201 ~~[(p)]~~ (o) recognize ~~[a high school's]~~ achievement in the STEM competitions, fairs, and
202 camps described in Subsection (2)(d);

203 ~~[(q)]~~ (p) send student results from STEM competitions, fairs, and camps described in
204 Subsection (2)(d) to media and ask the media to report on them;

205 ~~[(r)]~~ (q) develop and distribute STEM information to parents of students ~~[being served~~
206 ~~by the STEM Action Center]~~ in the state;

207 ~~[(s)]~~ (r) support targeted high quality professional development for improved
208 instruction in STEM education, including:

209 (i) improved instructional materials that are dynamic and engaging for students;

210 (ii) use of applied instruction; and

211 (iii) introduction of other research-based methods that support student achievement in
212 STEM areas; and

213 ~~[(t)]~~ (s) ensure that an online college readiness assessment tool be accessible by:

214 (i) public education students; and

215 (ii) higher education students.

216 (3) The board may prescribe other duties for the STEM Action Center in addition to
217 the responsibilities described in this section.

218 (4) (a) The director shall work with an independent evaluator to track and compare the
219 student performance of students participating in a STEM Action Center program to all other
220 similarly situated students in the state, if appropriate, in the following [~~STEM related~~]
221 activities[~~, at the beginning and end of each year~~]:

222 (i) public education high school graduation rates;

223 (ii) the number of students taking a remedial mathematics course at an institution of
224 higher education described in Section [53B-2-101](#);

225 (iii) the number of students who graduate from a Utah public school and begin a
226 postsecondary education program; and

227 (iv) the number of students, as compared to all similarly situated students, who are
228 performing at grade level in STEM classes.

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

232 Section 4. Section **63N-12-209** is amended to read:

233 **63N-12-209. STEM education endorsements and incentive program.**

234 (1) The State Board of Education shall collaborate with the STEM Action Center to:

235 (a) develop STEM education endorsements; and

236 (b) create and implement financial incentives for:

237 (i) an educator to earn an elementary or secondary STEM education endorsement
238 described in Subsection (1)(a); and

239 (ii) a school district or a charter school to have STEM endorsed educators on staff.

240 (2) In accordance with Title 63G, Chapter 3, Utah Administrative Rulemaking Act, the
241 State Board of Education shall make rules [~~to establish how a~~] establishing the uses of STEM
242 education [~~endorsement~~] endorsements described in Subsection (1) [~~will be valued on a salary~~
243 scale for educators.], including that:

244 (a) an incentive for an educator to take a course leading to a STEM education

245 endorsement may only be given for a course that carries higher-education credit; and

246 (b) a school district or a charter school may consider a STEM education endorsement
247 as part of an educator's salary schedule.

248 Section 5. Section **63N-12-210** is amended to read:

249 **63N-12-210. Acquisition of STEM education high quality professional**
250 **development.**

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

254 (2) The high quality professional development application described in Subsection (1)
255 shall:

256 (a) allow the State Board of Education, a school district, or a school to define the
257 application's input and track results of the high quality professional development;

258 (b) allow educators to access automatic tools, resources, and strategies, including
259 instructional materials with integrated STEM content;

260 (c) allow educators to work in online learning communities, including giving and
261 receiving feedback via uploaded video;

262 (d) track and report data on the usage of the components of the application's system
263 and the relationship to improvement in classroom instruction;

264 (e) include video examples of highly effective STEM education teaching that:

265 (i) cover a cross section of grade levels and subjects;

266 (ii) under the direction of the State Board of Education, include videos of highly
267 effective Utah STEM educators; and

268 (iii) contain tools to help educators implement what they have learned; and

269 (f) allow for additional STEM education video content to be added.

270 (3) In addition to the high quality professional development application described in
271 Subsections (1) and (2), the STEM Action Center may create STEM education hybrid or
272 blended high quality professional development that allows for face-to-face applied learning.

273 Section 6. Section **63N-12-212** is amended to read:

274 **63N-12-212. High school STEM education initiative.**

275 (1) Subject to legislative appropriations, after consulting with State Board of Education

276 staff, the STEM Action Center shall award grants to school districts and charter schools to fund
277 STEM related certification for high school students.

278 (2) (a) A school district or charter school may apply for a grant from the STEM Action
279 Center, through a competitive process, to fund the school district's or charter school's STEM
280 related certification training program.

281 (b) A school district's or charter school's STEM related certification training program
282 shall:

283 (i) prepare high school students to be job ready for available STEM related positions of
284 employment; and

285 (ii) when a student completes the program, result in the student gaining [~~a nationally~~]
286 an industry-recognized employer STEM related certification.

287 (3) A school district or charter school may partner with one or more of the following to
288 provide a STEM related certification program:

289 (a) a Utah College of Applied Technology college campus;

290 (b) Salt Lake Community College;

291 (c) Snow College; [~~or~~]

292 (d) Utah State University Eastern; or

293 [~~(d)~~] (e) a private sector employer.