

**Senator Howard A. Stephenson** proposes the following substitute bill:

**PHYSICS EDUCATION PROPOSAL**

2015 GENERAL SESSION

STATE OF UTAH

**Chief Sponsor: Howard A. Stephenson**

House Sponsor: Steve Eliason

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**LONG TITLE**

**General Description:**

This bill requires the Science, Technology, Engineering, and Mathematics (STEM) Action Center Board to make recommendations to the Legislature related to physics education.

**Highlighted Provisions:**

This bill:

- ▶ requires the Science, Technology, Engineering, and Mathematics (STEM) Action Center Board to develop a proposal to promote physics education;
- ▶ specifies goals for a physics education proposal; and
- ▶ requires the STEM Action Center Board to report to the Education Interim Committee.

**Money Appropriated in this Bill:**

None

**Other Special Clauses:**

None

**Utah Code Sections Affected:**

AMENDS:

**63I-2-263**, as last amended by Laws of Utah 2014, Chapters 172, 423, and 427



26 [63M-1-3207](#), as last amended by Laws of Utah 2014, Chapters 318 and 371



27  
28 *Be it enacted by the Legislature of the state of Utah:*

29 Section 1. Section **63I-2-263** is amended to read:

30 **63I-2-263. Repeal dates, Title 63A to Title 63M.**

- 31 (1) Section [63A-1-115](#) is repealed on July 1, 2014.
- 32 (2) Section [63C-9-501.1](#) is repealed on July 1, 2015.
- 33 (3) Subsection [63J-1-218](#)(3) is repealed on December 1, 2013.
- 34 (4) Subsection [63J-1-218](#)(4) is repealed on December 1, 2013.
- 35 (5) Section [63M-1-207](#) is repealed on December 1, 2014.
- 36 (6) Subsection [63M-1-903](#)(1)(d) is repealed on July 1, 2015.
- 37 (7) Subsection [63M-1-1406](#)(9) is repealed on January 1, 2015.
- 38 (8) Subsection [63M-1-3207](#)(3) is repealed on January 1, 2016.

39 Section 2. Section **63M-1-3207** is amended to read:

40 **63M-1-3207. Report to Legislature and the State Board of Education.**

41 (1) The board shall report the progress of the STEM Action Center, including the  
42 information described in Subsection (2), to the following groups once each year:

- 43 (a) the Education Interim Committee;
- 44 (b) the Public Education Appropriations Subcommittee;
- 45 (c) the State Board of Education; and
- 46 (d) the office for inclusion in the office's annual written report described in Section  
47 [63M-1-206](#).

48 (2) The report described in Subsection (1) shall include information that demonstrates  
49 the effectiveness of the program, including:

- 50 (a) the number of educators receiving high quality professional development;
- 51 (b) the number of students receiving services from the STEM Action Center;
- 52 (c) a list of the providers selected pursuant to this part;
- 53 (d) a report on the STEM Action Center's fulfilment of its duties described in Section  
54 [63M-1-3204](#); and
- 55 (e) student performance of students participating in a STEM Action Center program as  
56 collected in Subsection [63M-1-3204](#)(4).

- 57 (3) (a) As used in this Subsection (3):
- 58 (i) "Endorsement" means the same as that term is defined in Section 53A-6-103.
- 59 (ii) "Proposal" means the proposal described in Subsection (3)(b).
- 60 (b) The board shall coordinate with the State Board of Education to develop a proposal
- 61 to promote physics education in secondary schools.
- 62 (c) In developing the proposal described in Subsection (3)(b), the board shall focus on:
- 63 (i) strategies and activities that leverage the value and importance of physics education
- 64 in the pathway of science education; and
- 65 (ii) the importance of highly qualified physics teachers in ensuring that students receive
- 66 high-quality physics education that forms the basis for the scientific pathway.
- 67 (d) The board shall design the proposal to:
- 68 (i) increase the number of secondary school students who take physics;
- 69 (ii) encourage a teacher who teaches a subject other than physics to receive an
- 70 endorsement to teach physics;
- 71 (iii) improve outcomes for a student who studies physics;
- 72 (iv) use technology to teach physics, which may include replacing physics textbooks
- 73 with high quality online materials; and
- 74 (v) encourage a school to teach physics to students in grade 9.
- 75 (e) In the proposal, the board shall make recommendations related to:
- 76 (i) providing high-quality professional learning experiences focused on problem-based
- 77 learning for:
- 78 (A) an existing physics teacher;
- 79 (B) an existing teacher of a subject other than physics who is considering receiving an
- 80 endorsement to teach physics; and
- 81 (C) a student in a teacher preparation program;
- 82 (ii) increasing the number of teachers who have an endorsement to teach physics;
- 83 (iii) strategically deploying resources to promote and support problem-based physics
- 84 learning in the classroom;
- 85 (iv) effectively incorporating classroom technology into physics education;
- 86 (v) determining effective sequencing of secondary science courses;
- 87 (vi) developing a grant program for schools to receive funding to focus on physics

88 education; and

89 (vii) implementing a comprehensive evaluation plan for a physics education program  
90 that describes participation, performance, and impact data.

91 (f) Based on the proposal described in Subsection (3)(b), the board may present  
92 proposed legislation for the Legislature to consider during the 2016 legislative session.

93 (g) The board may consult with one or more experts in physics education in designing  
94 the proposal.

95 (h) On or before November 1, 2015, the board shall present the proposal, including  
96 proposed legislation, to the Education Interim Committee.