

PHYSICS EDUCATION PROPOSAL

2015 GENERAL SESSION

STATE OF UTAH

Chief Sponsor: Howard A. Stephenson

House Sponsor: Steve Eliason

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

63M-1-3207, as last amended by Laws of Utah 2014, Chapters 318 and 371

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

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31 (1) Section 63A-1-115 is repealed on July 1, 2014.

32 (2) Section 63C-9-501.1 is repealed on July 1, 2015.

33 (3) Subsection 63J-1-218(3) is repealed on December 1, 2013.

34 (4) Subsection 63J-1-218(4) is repealed on December 1, 2013.

35 (5) Section 63M-1-207 is repealed on December 1, 2014.

36 (6) Subsection 63M-1-903(1)(d) is repealed on July 1, 2015.

37 (7) Subsection 63M-1-1406(9) is repealed on January 1, 2015.

38 (8) Subsection 63M-1-3207(3) is repealed on January 1, 2016.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.