

**SENATE . . . . . No. 00232**

---

The Commonwealth of Massachusetts

\_\_\_\_\_  
PRESENTED BY:

*Karen E. Spilka*

\_\_\_\_\_

*To the Honorable Senate and House of Representatives of the Commonwealth of Massachusetts in General Court assembled:*

The undersigned legislators and/or citizens respectfully petition for the passage of the accompanying bill:

An Act to improve STEM education in the Commonwealth..

\_\_\_\_\_  
PETITION OF:

NAME:	DISTRICT/ADDRESS:
<i>Karen E. Spilka</i>	<i>Second Middlesex and Norfolk</i>
<i>Sal N. DiDomenico</i>	<i>Middlesex, Suffolk, and Essex</i>
<i>Tom Sannicandro</i>	<i>7th Middlesex</i>
<i>Robert M. Koczera</i>	<i>11th Bristol</i>
<i>Carolyn C. Dykema</i>	<i>8th Middlesex</i>
<i>Kate Hogan</i>	<i>3rd Middlesex</i>
<i>Chris Walsh</i>	<i>6th Middlesex</i>

# SENATE . . . . . No. 00232

By Ms. Spilka, petition (accompanied by bill, Senate, No. 232) of Walsh, Hogan, Dykema and other members of the General Court for legislation to improve science education in the Commonwealth [Joint Committee on Education].

[SIMILAR MATTER FILED IN PREVIOUS SESSION  
SEE  
□ SENATE  
□ , NO. 273 OF 2009-2010.]

## The Commonwealth of Massachusetts

\_\_\_\_\_  
**In the Year Two Thousand Eleven**  
\_\_\_\_\_

An Act to improve STEM education in the Commonwealth..

*Be it enacted by the Senate and House of Representatives in General Court assembled, and by the authority of the same, as follows:*

1 SECTION 1. Section 1G of Chapter 15 of the General Laws, as appearing in the 2008  
2 Official Edition, is hereby amended by inserting after the paragraph 8 the following new  
3 paragraphs:-

4 The council shall create a task force composed of members who have demonstrated  
5 scholarship or creativity in, or distinguished service to science, technology, engineering or  
6 mathematics, and shall be broadly representative of those areas. The task force shall consist of 15  
7 members: 1 of whom shall be a representative of the Massachusetts school building authority; 11  
8 members shall be appointed by the board: 7 of whom shall be science and mathematics educators  
9 in public schools throughout the commonwealth; 1 of whom shall be a science educator from a

10 public high school; 1 of whom shall be a mathematics educator from a public high school; 1 of  
11 whom shall be a science educator from a public middle school; 1 of whom shall be a  
12 mathematics educator from a public middle school; 1 of whom shall be a science educator from a  
13 public elementary school; 1 of whom shall be a mathematics educator from a public elementary  
14 school; and 2 of whom shall be curriculum coordinators representing distinct STEM subject  
15 areas.

16           The task force shall also include 3 members whom shall be representatives of business  
17 firms in the areas of science, technology, engineering or mathematics; 2 of whom shall represent  
18 non-profit science or math education research organizations; provided further the 3  
19 representatives shall be appointed by the Robert H. Goddard Council on Science, Technology,  
20 Engineering and Mathematics Education established under section 4A of chapter 15A.

21           The task force shall investigate and study STEM education in the commonwealth,  
22 including but not limited to the following: a study of current science laboratory facilities and  
23 equipment in public schools for all grade levels, a review of curricula used for science and math  
24 education in grades kindergarten through twelve, and a comprehensive review of current  
25 professional development programs in the science, technology, engineering and math areas  
26 throughout the commonwealth. The task force shall develop recommendations for the  
27 improvement of curricula and facilities for science, technology, engineering and math education  
28 in grades kindergarten to 12, inclusive. Said recommendations shall include ways to increase  
29 inquiry based science education. The taskforce shall report to the general court the results of its  
30 investigation and study and its recommendations, if any, together with drafts of legislation  
31 necessary to carry out such recommendations, by filing the same with the clerks of the senate

32 and house who shall forward the same to the chairs of the joint committee on education on or  
33 before December 31, 2012.

34 SECTION 2. Chapter 70B of the General Laws, as appearing in the 2008 Official  
35 Edition, is hereby amended by inserting after section 3E the following new section:-

36 Section 3F. (a) The School Building Authority, in consultation with the department of  
37 elementary and secondary education shall develop science education facilities standards and  
38 regulations for grades kindergarten through twelve. These standards and regulations shall apply  
39 to all new school construction projects for the approval of school building construction and  
40 applicable school renovation projects.

41 (b) In the development of these standards and regulations, the authority shall consult  
42 with the department of elementary and secondary education and the Robert H. Goddard Advisory  
43 Council on Science, Technology, Engineering and Mathematics Education established under  
44 section 4A of chapter 15A. The regulations and standards shall include, but need not be limited  
45 to:

46 (1) the establishment of rigorous safety standards for the use of all laboratory  
47 equipment;

48 (2) facilities and equipment requirements consistent with inquiry-based  
49 scientific teaching and learning methods and designed for multi-disciplinary use;

50 (3) the establishment of minimum requirements for facilities and related  
51 equipment for grades 9-12 in the areas of general science, biology, chemistry, physics, and  
52 technology and engineering;

- 53 (4) the establishment of limits for cost per square foot of laboratory space for  
54 general science, biology, chemistry, physics, technology and engineering;
- 55 (5) guidelines for design standards for combination classroom and laboratory  
56 facilities;
- 57 (6) minimum requirements for length of use.