

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

---

**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:

Karen E. Spilka

DISTRICT/ADDRESS:

Second Middlesex and Norfolk

[SIMILAR MATTER FILED IN PREVIOUS SESSION  
SEE SENATE, NO. S00285 OF 2007-2008.]

## The Commonwealth of Massachusetts

---

In the Year Two Thousand and Nine

---

### 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.

2 Section 1G of chapter 15 of the General Laws, as appearing in the 2006 Official Edition, is  
3 hereby amended at line 35 after the word “mathematics”, by inserting the following:-

4 The council shall create a task force composed of members who have demonstrated scholarship  
5 or creativity in, or distinguished service to science, technology, engineering or mathematics, and  
6 shall be broadly representative of those areas. The task force shall be comprised of 14 members.

7 The board shall appoint 11 members, eight of whom shall be science and mathematics educators  
8 in public schools throughout the Commonwealth. The eight members shall include one science  
9 educator from a public high school, one mathematics educator from a public high school, one  
10 science educator from a public middle school, one mathematics educator from a public middle  
11 school, one science educator from a public elementary school, one mathematics educator from a  
12 public elementary school and two curriculum coordinators representing distinct STEM subject

13 areas. The task force shall also include three members representative of business firms in the  
14 areas of science, technology, engineering or mathematics; two of whom shall represent non-  
15 profit science or math education research organizations. The Robert H. Goddard Council on  
16 Science, Technology, Engineering and Mathematics Education established under section 4A of  
17 chapter 15A shall appoint three representatives to serve on the task force.

18

19 The task force shall investigate and study STEM education in the Commonwealth, including but  
20 not limited to the following: a study of current science laboratory facilities and equipment in  
21 public schools for all grade levels, a review of curricula used for science and math education in  
22 grades kindergarten through twelve, and a comprehensive review of current professional  
23 development programs in the science, technology, engineering and math areas throughout the  
24 Commonwealth. The task force shall develop recommendations for the improvement of  
25 curricula and facilities for science, technology, engineering and math education in grades  
26 kindergarten through twelve. Said recommendations shall include ways to increase inquiry  
27 based science education. The first recommendations shall be completed by June 30, 2010.

28

## 29 SECTION 2.

30 Chapter 70B of the General Laws is hereby amended by inserting after section 3E the following  
31 new section:-

32 Section 3F: (a) The School Building Authority, in consultation with the department of  
33 elementary and secondary education shall develop science education facilities standards and  
34 regulations for grades kindergarten through twelve. These standards and regulations shall apply

35 to all new school construction projects for the approval of school building construction and  
36 applicable school renovation projects.

37 (b) In the development of these standards and regulations, the authority shall consult with the  
38 department of elementary and secondary education and the Robert H. Goddard Advisory Council  
39 on Science, Technology, Engineering and Mathematics Education. The regulations and  
40 standards shall include, but need not be limited to:

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

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

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

47 (4) the establishment of limits for cost per square foot of laboratory space for general  
48 science, biology, chemistry, physics, technology and engineering;

49 (5) guidelines for design standards for combination classroom and laboratory facilities;

50 (6) minimum requirements for length of use.

51

52