SENATE DOCKET, NO. 598 FILED ON: 1/19/2011

SENATE . . . . . No. 232

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 adoption of the accompanying bill:

An Act to improve STEM education in the Commonwealth..

PETITION OF:

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

SENATE DOCKET, NO. 598 FILED ON: 1/19/2011

SENATE . . . . . No. 232

By Ms. Spilka, a petition (accompanied by bill, Senate, No. 232) of Karen E. Spilka, Sal N. DiDomenico, Tom Sannicandro, Robert M. Koczera and other members of the General Court for legislation to improve science education in the Commonwealth. 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:

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

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

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

16 The task force shall also include 3 members whom shall be representatives of
17 business firms in the areas of science, technology, engineering or mathematics; 2 of whom shall
18 represent 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
22 commonwealth, including but not limited to the following: a study of current science laboratory
23 facilities and equipment in public schools for all grade levels, a review of curricula used for
24 science and math education in grades kindergarten through twelve, and a comprehensive review
25 of current professional development programs in the science, technology, engineering and math
26 areas 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
35 Official 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
37 department of elementary and secondary education shall develop science education facilities
38 standards and regulations for grades kindergarten through twelve. These standards and
39 regulations shall apply to all new school construction projects for the approval of school building
40 construction and applicable school renovation projects.

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

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

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

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

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

55 (5) guidelines for design standards for combination classroom and

56 laboratory facilities;

57 (6) minimum requirements for length of use.