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# SENATE . . . . . No. 273

## The Commonwealth of Massachusetts

**In the Year Two Thousand 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:*

SECTION 1. Section 1G of Chapter 15 of the General Laws, as appearing in the 2006 Official Edition, is hereby amended at line 35 after the word "mathematics", by inserting the following:-

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 be comprised of 14 members. The board shall appoint 11 members, eight of whom shall be science and mathematics educators in public schools throughout the Commonwealth. The eight members shall include one science educator from a public high school, one mathematics educator from a public high school, one science educator from a public middle school, one mathematics educator from a public middle school, one science educator from a public elementary school, one mathematics educator from a public elementary school and two curriculum coordinators representing distinct STEM subject areas. The task force shall also include three members representative of business firms in the areas of science, technology, engineering or mathematics;

two of whom shall represent non-profit science or math education research organizations. The Robert H. Goddard Council on Science, Technology, Engineering and Mathematics Education established under section 4A of chapter 15A shall appoint three representatives to serve on the task force.

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

SECTION 2. Chapter 70B of the General Laws is hereby amended by inserting after section 3E the following new section:-

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

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

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

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

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

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

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

(6) minimum requirements for length of use.