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## **Resolve, To Support the Development of Maine's Economic Future by Promoting Science, Technology, Engineering and Math Education**

**Emergency preamble.** Whereas, acts and resolves of the Legislature do not become effective until 90 days after adjournment unless enacted as emergencies; and

**Whereas,** the Maine Department of Education and the University of Maine System have submitted a report to the Joint Standing Committee on Education and Cultural Affairs pursuant to Resolve 2009, Chapter 98, "Resolve, To Understand and Assist Efforts to Promote Science, Technology, Engineering and Math Education"; and

**Whereas,** this report on the status of Maine science, technology, engineering and mathematics learning initiatives notes that limited gains in student scores in mathematics and science on the National Assessment of Educational Progress, and unfavorable comparisons to student performance in other countries, are factors that are leading to a significant focus on science, technology, engineering and mathematics education in the State and the nation; and

**Whereas,** this report proposes that, by conducting a study, the Department of Education can further promote science, technology, engineering and mathematics learning initiatives in Maine while assisting Maine in documenting the current efforts necessary to enable the department to complete a successful application to the federal Race to the Top competitive grant fund; and

**Whereas,** it is necessary to enact this legislation immediately so that the Department of Education may submit the State's application for the federal Race to the Top competitive grant program by the deadline of June 2010; and

**Whereas,** in the judgment of the Legislature, these facts create an emergency within the meaning of the Constitution of Maine and require the following legislation as immediately necessary for the preservation of the public peace, health and safety; now, therefore, be it

### **Sec. 1 State plan for science, technology, engineering and mathematics learning.**

**Resolved:** That the Legislature supports the development of a state plan for the learning of science, technology, engineering and mathematics, in order that the Department of Education may submit the State application for the federal Race to the Top competitive grant program established under sections 14005 and 14006 of the federal American Recovery and Reinvestment Act of 2009 prior to the Phase Two deadline for applications in June 2010. The Department of Education shall conduct a study to provide comprehensive baseline data to support State and local efforts to improve science, technology, engineering and mathematics learning. The department shall use its review of existing plans related to the following three aspects of the priority on science, technology, engineering and mathematics, identified by the federal Department of Education; learning shall be used to develop a strategic plan that addresses the need to:

1. Offer a rigorous course of study in mathematics, the sciences, technology, and engineering;

2. Cooperate with industry experts, museums, universities, research centers, and other community partners to prepare and assist teachers in integrating science, technology, engineering and mathematics content across grades and disciplines, in promoting effective and relevant instruction, and in offering applied learning opportunities for students; and

3. Prepare more students for advanced study and careers in the sciences, technology, engineering, and mathematics, including by addressing the needs of underrepresented groups and of women and girls in the areas of science, technology, engineering and mathematics.

The Department of Education shall consult with educational partners at the University of Maine System and the Maine Community College System in the development of the strategic plan to ensure that the State application for the federal Race to the Top competitive grant program includes a high quality plan that addresses all three aspects of the science, technology, engineering and mathematics priority established by the United States Education Department. The Department of Education shall produce the strategic plan by May 15, 2010; and be it further

**Sec. 2 Department of Education review. Resolved:** That the Department of Education shall review existing state learning standards for kindergarten to grade 12 public education to determine whether students have sufficient opportunity to develop the skills and gain the knowledge that will be incorporated as part of a national assessment of technological literacy beginning in 2012. The Department of Education review must include an evaluation of the following areas that, as part of the National Assessment of Educational Progress assessment, the National Assessment Governing Board will include in its assessment of technological literacy:

1. Technology and society; including:
  - A. Interactions of technology and humans;
  - B. Effects of technology on the natural world;
  - C. Effects of technology on the world of information and knowledge; and
  - D. Ethics, equity and responsibility;
2. Design and systems, including:
  - A. Nature of technology;
  - B. Engineering design;
  - C. Systems thinking; and
  - D. Maintenance and troubleshooting;
3. Information and communication technology, including:
  - A. Construction and exchange of ideas and solutions;
  - B. Information research;
  - C. Investigation of problems;
  - D. Acknowledgement of ideas and information; and

E. Selection and use of digital tools; and be it further

**Sec. 3 Report. Resolved:** That the Department of Education shall submit a report by February 1, 2011 to the joint standing committee of the Legislature having jurisdiction over education matters on the status of the State plan for science, technology, engineering and mathematics learning prepared pursuant to section 1 and on the review of state learning standards and opportunities for learning related to technological literacy pursuant to section 2. The joint standing committee of the Legislature having jurisdiction over education matters may submit a bill based on the findings and recommendations of the report submitted by the Department of Education to the First Regular Session of the 125th Legislature.

**Emergency clause.** In view of the emergency cited in the preamble, this legislation takes effect when approved.