

STEM Education Coalition



March 27, 2008

The Honorable Edward Kennedy
Chairman
Committee on Health, Education, Labor and Pensions
U.S. Senate
Washington, DC 20510

The Honorable Michael Enzi
Ranking Member
Committee on Health, Education, Labor and Pensions
U.S. Senate
Washington, DC 20510

Dear Chairman Kennedy and Ranking Member Enzi:

The Science, Technology, Engineering, and Mathematics (STEM) Education Coalition would like to express support for several key STEM education policy priorities related to the reauthorization of the No Child Left Behind (NCLB) Act.

The STEM Education Coalition is composed of a diverse range of organizations representing all sectors of the technological workforce – from knowledge workers, to educators and researchers, to scientists, engineers, and technicians. Our Coalition works to raise awareness in Congress and throughout the Executive Branch about the critical role that STEM education plays in enabling the U.S. to remain the economic and technological leader of the global marketplace of the 21st century.

We appreciate the HELP Committee's efforts via the discussion draft circulated last Fall to address a number of key issues that will have an impact on our national competitiveness and on student achievement in the STEM fields. We urge you and your colleagues to strongly consider the following recommendations as you proceed with the reauthorization of NCLB:

- Strengthen the Math and Science Partnerships
- Dedicate Funding for Teacher Professional Development under Title II A
- Establish K-8 Master Teacher Programs
- Strengthen Emphasis on STEM fields in After-School Programs
- Promote STEM Specialty High Schools
- Dedicate Funding for Elementary and Middle School Mathematics
- Include STEM Education Centers As Providers Of Teacher Training

Strengthen the Math and Science Partnerships

Strengthen the existing program at the Department of Education (DoEd) by:

- Amending the existing program to make possible additional technical support and assistance to state education agencies with oversight of the program so that they can develop and support more state-based STEM reform projects;
- Directing that the two Math and Science Partnership programs at the DoEd and the National Science Foundation (NSF) cooperate to ensure that the models and results derived from the NSF program are proliferated widely through the DoEd program;
- Including technology and/or engineering teachers alongside math and science teachers as allowed participants in all incentive programs enacted to recruit, train, mentor, retain and further educate K-12 teachers; and
- Allowing informal STEM education centers to receive funds to provide STEM teacher professional development.
- Authorizing at least \$450 million per year as specified funding (current funding authorization is now “such sums as required”).

Establish K-8 Science and Math Specialist Programs

NCLB should provide resources specifically for the establishment of programs to hire and/or train math and/or science specialists at the K-8 level in a large number of school districts. Math and science specialists would provide mentoring to other teachers, develop model lessons or co-teach lessons, provide oversight of hands-on inquiry materials, and offer in-service professional development or provide avenues for teachers to obtain professional development.

Dedicate Funding for Teacher Professional Development under Title II A

NCLB should provide increased resources for professional development for all educators, including a dedicated funding stream in Title II A (Teacher Quality) that would go specifically to teacher professional development for STEM educators.

Strengthen Emphasis on STEM fields in After-School Programs

Develop programs to support structured after-school activities, in conjunction with local museums, universities and/or businesses, and parks which would enhance student interest in STEM careers and outdoor activities to promote discovery and understanding of the natural environment. After school programs could include activities such as exposure to computer programming, robotics, computer art or design software, building materials, design challenges, and other technologies and apprenticeships.

Promote STEM Specialty High Schools

Authorize increased resources to create additional specialty public schools that focus on the STEM subjects in conjunction with other federal resources and facilities. Such schools should be viewed as demonstration sites to increase student achievement after exposure to integrated coursework based on the best practices available.

Dedicate Funding for Elementary and Middle School Mathematics

Dedicate funding for a mathematics initiative similar to the Reading First program that would provide resources to help schools improve instruction and develop strategies to increase student achievement in mathematics and preparedness for more rigorous high school mathematics coursework.

Include STEM Education Centers As Providers Of Teacher Professional Development

Allow informal STEM education centers to become eligible partners to receive funds under Title IIA so they can provide professional development to teachers.

We look forward to working together with you to advance the reauthorization of the No Child Left Behind Act. Thank you for your leadership and consideration. If we can provide you additional information or assistance, please do not hesitate to contact James Brown at (202) 872-6229 or Jodi Peterson at (703) 312-9214.

Sincerely

*Aerospace Industries Association
AIAA-American Institute of Aeronautics and Astronautics
American Association of Physicists in Medicine
American Association of Physics Teachers
American Association of University Women (AAUW)
American Chemical Society
American Society of Heating, Refrigerating, and Air-Conditioning Engineers, Inc.
ASME Center for Public Awareness
Association for Women in Science
Association of Science-Technology Centers
Business Higher Education Forum
Chesapeake Bay Foundation
EAST Initiative
Education Development Center, Inc.
Engineers Without Borders-USA
Exploratorium
Greater Cleveland Neighborhood Center Association
Hands On Science Partnership
Institute of Food Technologists
International Technology Education Association
Knowledge Alliance
Maine Mathematics and Science Alliance
Maryland Science Center
Museum of Science, Boston
National Center for Optics and Photonics Education (OP-TEC)
National Center for Technological Literacy
National Center for Women & Information Technology
National Council of Teachers of Mathematics
National Defense Industrial Association
National Science Teachers Association
National Society of Professional Engineers
Project Exploration
Project Lead the Way
SAE International
Science Companion
Society of Hispanic Professional Engineers
Society of Women Engineers
SPIE – The International Society for Optics and Photonics
Tiffin Columbia High School*