The Science, Technology, Engineering, and Mathematics (STEM) Education Coalition represents the broadest and most unified voice in advocating for policies to improve STEM education at all levels. As an alliance of more than 500 business, professional, and education organizations, our Coalition works aggressively to raise awareness in Congress, the Administration, and other organizations 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. **Our Coalition supports the Administration’s Fiscal Year 2012 Budget Request of $911.2 million for the National Science Foundation’s Education and Human Resources Directorate.** We also appreciate the opportunity to offer our views on this appropriation as well as on other issues related to STEM education that fall under the Subcommittee’s purview.

It is a central mission of our Coalition to inform federal policymakers on the critical role that STEM education plays in U.S. competitiveness and future economic prosperity. Our broad alliance advocates on behalf of policies to encourage and inspire more of our best and brightest students, especially those from underrepresented or disadvantaged groups, to study in STEM fields; improve the content knowledge and professional skills of the STEM educator workforce; recruit and retain highly-skilled STEM educators; improve the resources available for learning STEM subjects; and facilitate better coordination of efforts among federal agencies that provide STEM education programs.

Over the past several years, Congress has repeatedly demonstrated strong bipartisan support for increased investments to strengthen the U.S. STEM education pipeline. While we recognize the difficult choices that Congress faces in controlling the growth of federal deficits, debt, and spending, we are also concerned that some budget proposals in the House and Senate would significantly reduce funding for STEM education programs at the National Science Foundation (NSF) and would have an adverse effect on U.S. competitiveness and on the ability of American students to compete in the global technological economy of the future.
The NSF has long-served as a catalyst for STEM education reform. NSF’s Education and Human Resources (EHR) Directorate seeks to advance discovery and innovation at the frontiers of STEM learning and teaching; support the testing, assessment, study and evaluation of highly innovative models and approaches to learning; foster linkages between STEM education research and practice; and serve as the intellectual nexus that unites education research and evaluation activities across the Foundation and with other federal agencies. In short, NSF’s EHR programs make the rest of the Federal government’s investments in STEM education programs more effective and efficient.

While NSF provides leadership in helping to develop effective tools to facilitate STEM learning, the Department of Education (DoEd) must play a leading role in scaling up and disseminating the knowledge embodied in NSF-funded educational programs into practice. It is essential that these two agencies form an effective partnership to deliver the best new educational strategies and materials to pre-K-12 educators.

The Administration has proposed a joint NSF-DoEd initiative under a new Teacher Learning for the Future program to prepare 100,000 STEM teachers with strong teaching skills and deep content knowledge over the next decade. Of the $100 million proposed for this joint program, $20 million would be managed by NSF’s EHR Directorate. According to the Administration’s Budget Request, the NSF portion of this funding would be drawn from the existing funding for the NSF Math and Science Partnership Program and the Robert Noyce Teacher Scholarship Programs. While we support the Administration’s overall objective in devoting significant funds toward effective models for STEM teacher recruitment and retention, we urge the Administration to implement this program in a way that clearly distinguishes this new mission from the somewhat similar missions of the two existing programs from which these new funds have been drawn.

Our Coalition also supports comprehensive efforts to coordinate, evaluate, and review all federal STEM programs on a regular basis to ensure that effective programs are scaled up and that underperforming programs are improved or eliminated. We are pleased that the Administration has begun the process of implementing Section 101 of the America COMPETES Reauthorization Act of 2010, which directed the Director of the Office of Science and Technology Policy to:

“establish a committee under the National Science and Technology Council, including the Office of Management and Budget, with the responsibility to coordinate Federal programs and activities in support of STEM education, including at the National Science Foundation, the Department of Energy, the National Aeronautics and Space Administration, the National Oceanic and Atmospheric Administration, the Department of Education, and all other Federal agencies that have programs and activities in support of STEM education.”

We encourage the Subcommittee to aggressively pursue its oversight role in ensuring that STEM education programs across the federal science agencies are focused on producing sound results that will contribute to student achievement.
Finally, as the Subcommittee looks to foster the improvement of educational programs at the National Science Foundation and at other federal science agencies under its jurisdiction, we would like to offer a number of broader policy recommendations related to STEM education:

- Our Coalition supports an inclusive definition of the term “STEM” education by federal programs that is not limited to math and science, but embraces each STEM discipline and its unique needs.

- Our Coalition supports efforts to expand the diversity of the STEM pipeline and workforce, including targeted initiatives to promote the inclusion of underrepresented minorities and women in STEM fields.

- Our Coalition supports a strong emphasis in learning environments on hands-on, experiential, inquiry-based and learner-centered student experiences and activities, including engineering design processes.

- Our Coalition supports incentives to promote business community engagement in STEM education activities at every level, including tax incentives for donations of equipment, training and services, and access to facilities.

- Our Coalition supports integration of STEM-focused activities in federal programs directed at learning environments outside the K-12 classroom, such as afterschool and summer community-based programs, universities and other higher education entities, community colleges, and workforce and job training programs.

We thank you for the opportunity to offer these recommendations and for your consideration.