



## K-12 Teachers

### Laboratory/Field

- 1) **National Science Foundation. (2010, May) *Preparing the next generation of STEM innovators: Identifying and developing our nation's human capital.* (Publication No. NSB-10-33). <http://www.nsf.gov/nsb/publications/2010/nsb1033.pdf>**

This report contains a series of policy actions, a research agenda, and three key recommendations detailing how our Nation might foster the identification and development of future STEM innovators: a) *Provide opportunities for excellence* – we must offer coordinated, proactive, sustained formal and informal interventions to develop their abilities. Students should learn at a pace, depth, and breadth commensurate with their talents and interests and in a fashion that elicits engagement, intellectual curiosity, and creative problem solving—essential skills for future innovation.; b) *Cast a wide net* – develop and implement appropriate talent assessments at multiple grade levels and prepare educators to recognize potential, particularly among those individuals who have not been given adequate opportunities to transform their potential into academic achievement.; and c) *Foster a supportive ecosystem* – parents/guardians, education professionals, peers, and students themselves must work together to create a culture that expects excellence, encourages creativity, and rewards the successes of all students regardless of their race/ethnicity, gender, socioeconomic status, or geographical locale.

- 2) **President's Council of Advisors on Science and Technology. (2010) *Prepare and Inspire: K-12 Education in Science, Technology, Engineering, and Math (STEM) for America's Future.* <http://www.whitehouse.gov/sites/default/files/microsites/ostp/pcast-stem-ed-final.pdf>**

A report outlining the need to improve STEM education through better preparation and inspiring students, and increase the federal government's strategy for improving K-12 STEM education.

- 3) **Committee on Science, Engineering & Public Policy (2007) *Rising Above the Gathering Storm: Energizing and Employing America for a Brighter Economic Future.* Washington, D. C.: National Academies Press. [http://www.nap.edu/catalog.php?record\\_id=11463](http://www.nap.edu/catalog.php?record_id=11463)**

In a world where advanced knowledge is widespread and low-cost labor is readily available, U.S. advantages in the marketplace and in science and technology have begun to erode. A comprehensive and coordinated federal effort is urgently needed to bolster U.S. competitiveness and pre-eminence in these areas. This congressionally requested report by a pre-eminent committee makes four recommendations along with 20 implementation actions that federal policy-makers should take to create high-quality jobs and focus new science and technology efforts on meeting the nation's needs: a) Increase America's talent pool by vastly improving K-12 mathematics and science education; b) Sustain and strengthen the nation's commitment to long-term basic research; c) Develop, recruit, and retain top students, scientists, and engineers from both the U.S. and abroad; and d) Ensure that the United States is the premier place in the world for innovation.