Science-literacy resources in Chinese, Japanese, and Spanish; how-to workshops in Europe and the United States; and support for African educators were a few of the Association’s many contributions to science careers and education in 2008. AAAS works to strengthen and diversify the science and technology workforce — from kindergarten to professional settings — through its Education and Human Resources program as well as the science-literacy initiative, Project 2061, and the Science Careers Web site.

Science Literacy, in Any Language

When asked whether the universe began with a huge explosion, more than 60% of all Americans incorrectly describe this statement as false, the National Science Foundation has reported. Promoting innovation by improving science literacy has become an increasingly urgent goal. The premier AAAS science-literacy effort, Project 2061, helps K-12 teachers guide students in understanding how science ideas relate to each other, and how learning one idea can contribute to understanding others. In kindergarten, for instance, gravity can be introduced by discussing the ideas of “push and pull.” By high school, students must understand that the magnitude of the force between two objects is proportional to their masses and diminishes with distance. Two volumes of the respected Project 2061 publication, the Atlas of Science Literacy, allow teachers to map students’ progress from concept to concept, at each grade level.


Reaching out to Rwanda

Following a trip to Rwanda, high-level AAAS officials pledged to provide science education resources to help the Central African nation pursue an ambitious education and development plan. The AAAS delegation — including Education and Human Resources Director Shirley Malcom, Chief International Officer Vaughan Turekian, and staffers Tom Wang and Sarah Banas — agreed to provide curriculum-development help, such as workshops on the Atlas of Science Literacy and other resources from Project 2061, the association’s science-literacy initiative. “This partnership makes me feel hopeful and optimistic,” Malcom said. “We have an opportunity to support capacity-building in a context where top-level leaders have a commitment to education, and an understanding of the economic and development stakes for their country.”

Rwandan Minister of Education Daphrose Gahakwa welcomed the support. AAAS officials also met with Science Minister Romain Murenzi; Théoneste Mutsindashyaka, the State Minister for Primary and Secondary Education; James Kimonyo, Rwanda’s ambassador to the United States; top university administrators; the Kigali Institute
of Science and Technology; the Kigali Institute of Education; the National University of Rwanda; the National Curriculum Development Center; and staff from the U.S. Embassy in Kigali, including Chargé d’Affaires Cheryl Sim and Economic Counselor Alex Sokoloff. (For more on Rwandan President Paul Kagame’s address at the AAAS Meeting, see page 16.)

**Science Careers Goes Global**

Scientists and engineers hoping to land competitive jobs in academia, industry, and government need all the support they can find. Through Science Careers, the association provides comprehensive, freely accessible online resources for job applicants, grant seekers, and recruiting employers. High-quality news reports on the Science Careers site offer insights to job markets worldwide — from Singapore’s ambitious plans for science, to massive reforms within the French scientific system. Science Careers podcasts and videos reveal the first-hand stories of scientists working in rainforest ecology, quantitative analysis, synthetic biology, and other fields. The site also includes MySciNet—the Minority Scientists Network—designed to promote information-sharing among individuals and underrepresented communities of scientists and engineers.

In 2008, Science Careers staff conducted a series of career fairs and professional development workshops in collaboration with organizations such as Sweden’s Karolinska Institute, the U.S. National Institutes of Health, and the American Society for Cell Biology. In October, for example, Science Careers teamed up with Rockville Economic Development, Inc. to organize a how-to session on navigating career fairs. Publications from Science Careers, such as a Career Basics booklet, provide additional support for early-career scientists and engineers. Log onto www.sciencecareers.org.

**Excellence in Undergraduate Education**

Some 500 stakeholders at the 2008 Course, Curriculum, and Laboratory Improvement (CCLI) conference, organized by AAAS, evaluated creative approaches for transforming teaching and learning at campuses nationwide. The CCLI program, established in 1999 by the U.S. National Science Foundation Division of Undergraduate Education, distributes institutional grants to promote effective teaching practices. “Forming innovative STEM curricula frequently requires faculty members to think outside the box as well as collaborate with colleagues within other disciplines,” explained Yolanda George, Deputy Director of AAAS Education and Human Resources.

**Historically Black Colleges and Universities**

Nearly half of all undergraduate physics degrees and almost 40% of all chemistry degrees awarded to African Americans in 2004 came from historically black colleges and universities (HBCUs). Every year, Morehouse College alone graduates more African American students with undergraduate science degrees than some countries. Such institutions contribute disproportionately as the baccalaureate-origin institutions in many fields that are crucial to U.S. competitiveness and national security. At the National Science Foundation’s 2008 HBCU Undergraduate Program Research Conference, organized by AAAS, some 800 students and educators took part in poster presentations, workshops, plenary presentations, and more. See http://ehrweb.aaas.org/HBCU.

**Threats to Higher-Education Diversity**

Recent U.S. court decisions limiting efforts to recruit underrepresented minority students pose a profound challenge for colleges, universities, and science-related industries, educators and business leaders said at a AAAS-co-sponsored forum. Still, speakers said, many effective programs are in place, and others could be developed to meet the legal standard of strict scrutiny while also helping to diversify student bodies. Some 35 invited experts, comprising the academic, nonprofit, and business communities, gathered to discuss diversity within U.S. higher-education institutions, as part of a roundtable organized by AAAS and NACME, the National Action Council for Minorities in Engineering. The event was organized, with support from the Alfred P. Sloan Foundation.

**Media Fellows Make Their Mark**

Selected from an applicant pool of 130 talented science and engineering students, 14 exceptional AAAS Mass Media Fellows were transformed in 2008 into cub reporters for National Public Radio, the Los Angeles Times, and other news organizations. The Fellows program, marking its 34th anniversary in 2008, dispatches graduate- and post-graduate level students to newsrooms for a 10-week internship. Support is provided by affiliated science societies and foundations such as the Burroughs Wellcome Fund. Log onto www.aaas.org/programs/education/MassMedia.