

# Education, Capacity, and Careers

An array of AAAS activities and *ScienceCareers.org* resources support innovation by enhancing and diversifying the science and technology workforce, and by helping early-career Ph.D.s identify the full range of opportunities. Staff within the highly regarded science-education reform initiative, Project 2061, and the AAAS Education and Human Resources (EHR) program are improving science education for *all* students — through programs for teachers, schools, libraries, policy-makers, and curriculum and textbook developers.

## Project 2061: Science for All

As U.S. teachers prepare to help K–12 students meet new science-learning requirements under the No Child Left Behind law, in 2007–08 Project 2061, the Association’s science-education reform initiative, is working to “test the tests.” Too often, Project 2061 Director Jo Ellen Roseman said: “Questions in such tests are confusing or not well aligned to the key science ideas and skills that students are expected to learn.” So, Project 2061 is aligning assessments with science standards as well as information on students’ experiences. The results will allow further development to improve science assessments, and ultimately, science literacy.

Project 2061 was launched in 1985 — the year Halley’s Comet was last visible from Earth — and its name is a reminder of the importance of science, mathematics, and technology to those who will come of age before the Comet’s return in 2061. In 1989, Project 2061 released *Science for All Americans*, describing the knowledge and abilities required for adult science literacy. *Benchmarks for Science Literacy*, the landmark description of student-learning goals in science, mathematics and technology at various grades, followed in 1993. Project 2061, with the National Science Teachers Association, also has published two volumes of the *Atlas of Science Literacy*. To order, log onto <http://www.project2061.org>.

## Many Settings for Science Teaching

“Bait them with the fun and excitement, and then teach them something, even when they have no idea that is what you are trying to do,” suggests Bob Hirshon, senior project director of AAAS Media Programs. Hirshon, who won the Washington Academy of Sciences (WAS) Krupsaw Award for non-traditional teaching in 2006, is

the mastermind behind “Kinetic City: Mission to Vearth,” a popular Web-based after-school science education program. (See [www.kineticcity.com](http://www.kineticcity.com).) Designed for children aged 8 through 11, Kinetic City combines exciting online activities with hands-on science experiments, culminating in games that test their skill and knowledge. Some 180 U.S. clubs and 30 in Singapore are licensed to take part in the Kinetic City program.

Hirshon also serves as executive producer and host of the syndicated AAAS science radio program, *Science Update* ([www.scienceupdate.com](http://www.scienceupdate.com)). Now in its 19th year, *Science Update* airs daily on about 50 commercial stations, and also regularly on hundreds of additional stations through the Westwood One show, “America in the Morning.” Yet another AAAS Web-based program, *Science NetLinks* ([www.sciencenetlinks.com](http://www.sciencenetlinks.com)) got its start from Hirshon, and now provides standards-based resources for K–12 science educators — including lesson plans, interactive activities and various Internet resources.

## Enhancing *ScienceCareers.org*

The single most comprehensive, freely accessible source of online resources for science and technology career support keeps getting better. In 2006, for instance, *ScienceCareers.org* added a Social, Behavioral, and Economic Sciences component, supported by the U.S. National Science Foundation, with a focus on career paths followed by real practitioners. Profiles of scientists like Joan Brenner Coltrain of the University of Utah — who sought her undergraduate degree after enrolling the youngest of her six children in kindergarten — offer lessons and practical tips for career seekers at all stages. Brenner Coltrain’s situation was extreme, but her experiences were universal: “I love my research,” she said, “but it had to be negotiated relative to my family responsibilities.” News articles, job listings, a keyword-searchable grants database and

other features on *ScienceCareers.org* are constantly being enhanced. At the same time, Outreach Director Garth Fowler offers lectures and workshops for thousands of early-career Ph.D.s each year, helping researchers identify both traditional and non-traditional job choices. See <http://sciencecareers.org>.

### Capacity Center Takes Off

The AAAS Center for Advancing Science and Engineering Capacity — a trusted source of advice for universities and colleges seeking to increase the participation of all students, especially women and under-represented minorities, in science and engineering careers — gained significant new momentum in 2006. Two years after its inception, thanks to a grant from the Alfred P. Sloan Foundation, the Center took on multiple new clients, disseminated its research findings at conferences, workshops, and in publications, and raised more than a half-million dollars in revenue, said Center Director Daryl E. Chubin. “We understand the demographic, financial, and legal pressures that universities must balance” as they broaden educational impacts, Chubin said. “The problems that emerge from imbalances require tailor-made solutions.” Go to [www.aaas.org/programs/centers/capacity](http://www.aaas.org/programs/centers/capacity).

### Media Fellows Celebrate 32 Years

Every summer, prominent media outlets such as National Public Radio and the *Los Angeles Times* open their doors to more than a dozen science, mathematics, and engineering students participating in competitive AAAS fellowships. During a 10-week program, graduate- and post-graduate level students apply their academic training to reporting science news. “At a time when science departments at U.S. newspapers are suffering from cutbacks and science literacy among the country’s youth is either stagnant or declining, this AAAS program is especially important in training the next generation of scientists to communicate effectively with the public,” said Senior Project Director Judy Kass. In 2006, additional program support from the Annenberg Foundation allowed four environmental scientists to work at the *Los Angeles Times*. Log onto [www.aaas.org/programs/education/MassMedia](http://www.aaas.org/programs/education/MassMedia).



IMAGE COURTESY OF USDA

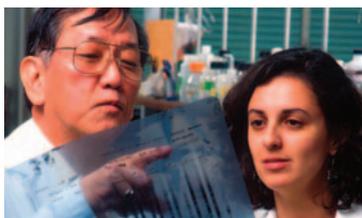


IMAGE COURTESY OF USDA



### Education Leadership and Diversity

When the National Science Board’s Commission on 21st Century Education in Science, Technology, Engineering, and Mathematics was asked to develop recommendations on how to use federal resources to ensure science and mathematics literacy for all, they tapped Shirley Malcom, director of Education and Human Resources (EHR) at AAAS, and AAAS Past President Leon M. Lederman, a Nobel laureate. The co-chairs were charged with creating an action plan for educating young people to build S&T capacity.

Also in 2006, the U.S. National Science Foundation awarded AAAS a grant to organize conferences for NSF awardees of the Historically Black Colleges and Universities Undergraduate Program. The strategy, said Yolanda George, deputy director of EHR, is to broaden student participation across the fields of science, technology, engineering, and mathematics (STEM). Through another NSF program, Alliances for Graduate Education in the Professoriate, AAAS hosted discussions on the experiences of underrepresented minority social, behavioral, and economic sciences graduate students.