

Science Education and Careers

Two AAAS programs, Education and Human Resources (EHR) and Project 2061, continued in 2005 to improve science-education standards and opportunities for *all* students. By working with teachers, schools, libraries, and policy-makers, EHR and Project 2061 are advancing science-curriculum materials and teaching standards, while also promoting diversity and the integrity of science education, from kindergarten to graduate school and beyond.

Bolstering Support for Careers

The new *ScienceCareers* Web site, www.sciencecareers.org, debuted in November 2005, consolidating its powerful recruitment and job search features with *Science's* Next Wave, GrantsNet, the Minority Scientists Network, and other features — all at one fresh-looking, easy-to-navigate site. The changes at *ScienceCareers* were a central part of a sweeping redesign of the *Science* family of Web sites that have given the sites a clean, integrated look, easier access, and more intuitive navigation. And, for the first time, the popular *ScienceNOW* daily news Web site became available to all readers without charge. Thanks to the redesign, visitors to the new *ScienceCareers* site find the single most comprehensive, freely accessible source of online science and technology career support in the world, serving scientists, engineers, and others at every level.

As *ScienceCareers* went into hyper-drive in 2005, the Association also geared up an array of other career-support efforts. Richard Weibl was named to serve as a key point of contact for AAAS's broad international efforts to provide career information to science and technology students, post-doctoral researchers, and early-career professionals, as director of AAAS's Center for Careers in Science and Technology. Go to www.aaas.org/programs/centers/careers.

The AAAS Center for Advancing Science and Engineering Capacity, meanwhile, continues to provide fee-based consulting support to institutions of higher education, to increase the recruitment, enrollment, retention, and graduation of U.S. students in science, technology, engineering, and mathematics fields, especially those from traditionally underrepresented groups. See www.aaas.org/programs/centers/capacity.

Project 2061 Looks to the Future

Named for the next year when Halley's Comet will be visible from Earth, Project 2061, the Association's exemplary science-education reform initiative, marked its 20th anniversary with a Capitol Hill briefing, a teachers' workshop, a seminar, and a reception. With its 1989 report, *Science for All Americans*, Project 2061 set forth recommendations for what all students should know about science, mathematics, and technology by their high-school graduation day. A follow-up 1993 report, *Benchmarks for Science Literacy*, translated those recommendations into learning goals, or benchmarks, for grades K-12.

Project 2061 and the National Science Teachers Association co-published the *Atlas of Science Literacy*, a collection of 49 conceptual maps that show how students' understanding of the ideas and skills that lead to literacy in science, mathematics, and technology might grow over time. "Project 2061 can be proud of the unrivaled contributions it made to the advancement of science education during its first 20 years, and now, in the next 20 [years] it must continue to press forward with the same strategy, energy, and inventiveness in its crucial effort to make nationwide science literacy a reality in America," said Dr. F. James Rutherford, founder of Project 2061, now a distinguished visiting professor at Mills College, Oakland, California. See www.project2061.org.



Building Strength in Computer Science

Recruiting “nontraditional” students into computer science studies and jobs will be critical in keeping the U.S. workforce strong, a new AAAS report concluded. The number of undergraduates seeking computer science degrees has dropped sharply since 2000, and the number of women seeking such degrees has plunged, too, while few minority students are winning advanced degrees in the field. Yet, the growing pool of nontraditional students is often overlooked and underserved by higher education, government, and industry. The report, *Funding Women and Minorities for the IT Workforce: the Nontraditional Educational Pathways*, was supported by National Science Foundation. It’s online at www.aaas.org/publications/books_reports/ITW.

Teaching Techniques — Captured on Tape

Nine school districts and 80 middle-school mathematics teachers in Delaware and Texas are taking part in a unique “reality show” — a video-based study of how highly rated textbooks supported by effective teaching practices can improve students’ learning versus the way that key mathematics concepts are being taught. For Laura Conner, a sixth-grade teacher in Middletown, Delaware, watching video of her classroom technique proved “extremely enlightening,” she said. The study, “Improving Mathematics Teacher Practice and Student Learning Through Professional Development,” is being conducted by Project 2061, the AAAS science-education reform initiative, with funding from the Interagency Education Research Initiative, a joint program of the U.S. National Science Foundation, the Department of Education, and the National Institute of Child Health and Human Development.



ENTRY POINT! Nears a Milestone

Now approaching its tenth anniversary, AAAS’s renowned internship program, ENTRY POINT! has placed 440 summer positions for students with disabilities who excel in science, technology, engineering, and mathematics. In 2005, the program matched 67 outstanding students with projects directed by scientists and engineers — placements with employers such as NASA, the National Oceanic and Atmospheric Administration, IBM, and Merck & Co., Inc. The students’ 2005 projects ranged from improving a critical satellite network and weather dispatches to studying the behavior of killer whales. See <http://entrypoint.org> for details.

Helping D.C. Math Teachers

AAAS has teamed up with the George Washington University and the D.C. Public School System to help Washington, D.C.-based middle-school teachers brush up on their content knowledge of mathematics. After completing a three-year Master’s degree program, teachers will be better prepared to help guide students through the treacherous middle-school years, when young people can easily become stranded between basic arithmetic skills and the formal algebra instruction that awaits them at the high-school level. Known as DC FAME (DC Fellows for the Advancement of Mathematics Education), the program is supported by a major grant from the Mathematics and Science Partnership Program of the U.S. Department of Education (DOE) through the D.C. State Education Office.



U.S. Voter Reforms — For All

As the U.S. voting system showed signs of stress, Shirley Malcom, director of Education and Human Resources at AAAS, joined the 21-member Commission on Federal Election Reform — headed by former U.S. President Jimmy Carter and former Secretary of State James A. Baker III — to help compile 87 recommendations for strengthening the electoral system and building voters’ confidence. She urged U.S. political leaders to reverse a growing “crisis of confidence” among voters by adopting the Commission’s recommendations. In a break with her colleagues, however, Malcom questioned a proposal to maintain Iowa and New Hampshire as the traditional first elections in the primary campaign process, even as the other state primaries are consolidated into four regional votes. Iowa and New Hampshire have only a small percentage of minority residents, but a disproportionate influence in determining the Republican and Democratic presidential nominees, Malcom said.