Among the 700 participants at a 2007 National Science Foundation (NSF) event, organized by AAAS, African-American undergraduate students took part in rigorous grilling regarding their research methods, networking exercises, and other activities intended to help them think outside the box. “Research is not about staying within your own comfort zone, but rather stepping outside,” said Camille McKayle, who directs the NSF’s Historically Black Colleges and Universities Undergraduate Program (HBCU-UP). Traditionally underrepresented students often find a nurturing environment at HBCUs, but they need to make other connections to succeed as researchers and educators, McKayle noted.

The AAAS-NSF event, supported by a three-year, $975,000 NSF grant, recognized the role of HBCUs in allowing students of color to gain skills and confidence, said Yolanda George, deputy director of Education and Human Resources at AAAS. In 2000, HBCUs graduated 40 percent or more of all African-Americans who received degrees in physics, chemistry, astronomy, environmental science, mathematics, and biology, noted Shirley M. Malcom, director of Education and Human Resources at AAAS, a Public Welfare Medal winner.

As legislators and policy-makers put forward proposals for voluntary national science learning standards, Project 2061 at AAAS released a new collection of “roadmaps” to help teachers guide K-12 students toward science literacy. Maps in the new Atlas of Science Literacy 2, together with Atlas 1, connect the science-learning goals recommended in two previous Project 2061 resources, Science for All Americans and Benchmarks for Science Literacy. Now, Atlas 2 maps 44 new science-literacy topics, including weather and climate, computation and estimation, and health and technology. The Atlas is “an enormously powerful tool to help teachers choose the most important science concepts at each stage,” said Elizabeth Petersen, a middle-school teacher in Ladue, Missouri, past president of the Science Teachers of Missouri. Log onto www.project2061.org.

How can graduate students leverage science, technology, engineering, and mathematics (STEM) research methods to spark interest in science and engineering among K-12 students and teachers? Colby Kearns, a conservation and environmental science graduate student at the University of Hawaii at Hilo, helped to develop lessons focusing on Hawaii’s sandy shoreline habitats. “You don’t teach about squirrels if there aren’t any around,” Kearns joked during a poster session at a joint AAAS-NSF event that focused on bringing universities and K-12 schools together. “You need to make sure your lesson is relevant, interesting, and accessible.” Kearns was among more than 500 participants in the conference, based on the NSF’s Graduate Teaching Fellows in K-12 Education Program (GK-12). By 2007, the NSF program, assisted by AAAS, had funded 6,335 fellows, worked with 8,845 teachers, and engaged 550,533 K-12 students.
• IMPROVING SCIENCE CURRICULA

U.S. Rep. Vernon J. Ehlers (R-Mich.), a member of the House Committee on Science and Technology, commended Project 2061’s efforts to seed the next-generation of science teachers and curriculum developers, through the AAAS Center for Curriculum Materials in Science (CCMS), a collaboration led by Project 2061 and involving several partner universities. Ehlers spoke at a 2007 Capitol Hill reception, part of a Knowledge Sharing Institute at AAAS for more than 100 researchers and educators who compared notes on how best to help U.S. students achieve science literacy. The mission of the CCMS “is to improve the design, selection, and use of science curriculum materials through research, through leadership development, and through the education of teachers,” explained Project 2061 Director Jo Ellen Roseman. See www.aaas.org/programs/centers/curriculum.

• AN ENTRY POINT! FOR INTERNS

Texas A&M University student Jeremy Northum developed procedures for removing radioactive materials from a laboratory at the National Institute of Science and Technology (NIST), as part of his 10-week placement through the Association’s ENTRY POINT! program. Each summer, ENTRY POINT! provides highly competitive internships for science and engineering students with disabilities, thanks to collaborations with a long list of corporations and federal agencies. Northum toured the Library of Congress and the Supreme Court during a special Capitol Hill Day in 2007, along with other Washington, D.C.-area ENTRY POINT! interns. By the year’s end, ENTRY POINT! had made more than 600 internship placements since the program’s inception in 1996. Program Director Virginia Stern estimates that 92 percent of the ENTRY POINT! alumni are now working in science and technology jobs, or pursuing related graduate degrees. Log onto www.entrypoint.org.

• ALCOHOL, MIDDLE-SCHOOL, AND SCIENCE

Efforts to halt underage drinking often focus on peer pressure and the prevention of risky behaviors, but AAAS in 2007 launched a new federally funded project to give middle-school children a science-based understanding of what can happen to them if they use alcohol. The three-year project, called “The Science Inside Alcohol,” incorporates recent advances in neuroscience that have been shedding new light on how alcohol affects the body. The National Institute on Alcohol Abuse and Alcoholism funds the effort.

• OBESITY BOOK EARN ACCLAIM

AAAS’s new plain-language book, Obesity: The Science Inside, earned a bronze award in the patient-education information category of the 2007 National Health Information Awards — a competition among some 1,000 entries. The Obesity volume is part of a seven-book series organized by the Healthy People Library Project at AAAS, funded by the National Institutes of Health’s National Center for Research Resources. Other titles in the series focus on HIV and AIDS, asthma and allergies, and having healthy babies. Go to www.healthlit.org.

“Whether they’re rich, poor, white, black, Hispanic, male, female, or in any other category, all children deserve our very best efforts to teach them science and mathematics … [but] U.S. standards and learning goals vary from place to place, whereas most other industrialized countries do have nationwide educational standards.”

OP-ED, WASHINGTON TIMES, 15 AUGUST 2007, BY THE AAAS CEO