FELLOWS

Scientists Trade Test Tubes for Reporter's Notebooks

Pitching story ideas to editors, conveying difficult concepts with a limited amount of words, and seeing their copy getting cut—it's everything that a journalist expects from a reporting job. But throw a scientist into this world, and it could be an interesting experiment.

This summer, 23 graduate students in science and engineering are spending 10 weeks working at television and radio stations, newspapers, and magazines. Under AAAS's Mass Media Science and Engineering Fellows Program, these students bring scientific expertise to their roles as reporters, researchers, and production assistants. The goal of the program is to enhance coverage of science-related issues in the media in order to improve public understanding and appreciation of science and technology.

The students come from a range of scientific fields, including chemistry, mathematics, microbiology, physics, psychology, and zoology. Almost half the students are postdoctoral candidates. And although they know their own fields very well, this summer they're learning the ropes of a new craft.

Ameca Shang, a graduate student in nutrition at Tufts University, started her fellowship with radio station KUNC in Greeley, Colorado, with a two-part story on produce microbiology and pesticide residues. "Production takes a long time and I kept messing up my reading and having to do tons of retakes," Shang said. "Believe me, I got used to hearing my own voice."

John MacNeil, a graduate student in chemical engineering at the University of California–Santa Barbara, learned the hard way about balance in a story at his post at the *Richmond Times-Dispatch*. He reported on an ad campaign by the Audubon Society against Virginia's horseshoe crab fishing policy. "I did my best to represent both sides of the issue in my article," MacNeil said. "However, I wasn't careful enough, and I had a bit of a learning experience two days later when an angry Virginia official questioned a statement I had made about his agency."

The students are also getting practice pitching story ideas. Nicole Johnston, a graduate student in microbiology at McMaster University in Ontario, Canada, wrote two stories her first week at *New Scientist*, but said coming up with new ideas is not easy, especially when competing with other reporters on staff. "I'm beating my head against a wall, trying to come up with innovative story ideas,"

As part of their orientation, the mass media fellows tour National Public Radio.

CREDIT: DAVID SCAVONE

Johnston said. "It's a weekly magazine that is up-to-the-minute and chock full of reporters who know where to get the good stuff first."

Jennifer Frazier, a Ph.D. candidate in cell biology at University of California–San Francisco, had expected more help in crafting stories from *Wired* but was told that if she wanted to write anything her pitches would have to be accepted. "How is a cell biologist supposed to think of fresh stories for those CEOs," Frazier said she first asked herself. "Now I am getting the hang of this 'pitching' thing and one of my stories has been accepted as a short piece in the October issue. And I am learning a lot about what it is like to put a magazine together."

Getting story ideas accepted is only half the battle. Next comes the red pen. The first story that Ilana Harrus, a post-doctoral student of physics at Columbia University, wrote for *The News and Observer* in Raleigh, North Carolina, was heavily edited. "My piece was, in short, loaded with jargon and very badly organized," Harrus said her editor told her. Not a single sentence was left intact in her second story. She hopes, though, that "by the end of the summer I can recognize as mine the articles that bear my name."

Roberta Hotinski, a graduate student in geosciences at Pennsylvania State University, on her first day at the *U.S. News and World Report* covered a National Institutes of Health study on the effects of electric and magnetic fields on human health. Her one column story was bumped and cut. "No byline and much shorter, but my mother was ecstatic anyway." Her second story was on how women's preference for male faces varies with the menstrual cycle. "A lot of my original words are still there—as opposed to last week when I went through two editors and the only original words left were in a quote from the report."

Despite their travails, the students are managing to hone their reporting skills and communicate a number of scientific ideas through their stories. Saskia Traill, a Ph.D. candidate in psychology at Stanford University, worked on a piece on single fathering at WOSU radio in Columbus, Ohio. "I aired a 3-minute piece, complete with my voice, clips from my face-to-face and phone interviews, and with my own editing skills pulling it together," Traill said. Since then, she's covered an osprey reintroduction project, people with AIDS returning to the workforce, biotechnology patents, and water quality management.

The fellows got some advice from the experts before they headed to their posts. "Don't be afraid to ask stupid questions [during interviews]," said Richard Harris of National Public Radio, a former mass media fellow. "I never tell people I have a Ph.D. I approach it as someone on the outside." The fellows heard from Harris and other reporters from *The Washington Post*, *The Atlanta Journal-Constitution*, *TIME*, and other organizations during a 3-day orientation in Washington, D.C.

The AAAS Mass Media Science and Engineering Fellows Program began in 1975. About half of the mass media fellowship alumni have gone on to media-related jobs, said Amie King, the program's coordinator. Past participants are now working for such programs as "Nightline" and "Good Morning America," as well as for other broadcast and print organizations. "Those who don't take jobs in the media still can contribute to the communication of science," King said. "Being able to communicate scientific information to the public is a useful skill, whether you're a researcher or a reporter."

Johnston agrees about the benefits of the program. "The learning curve is steep at first, but this is unequivocally the coolest experience I've ever had."

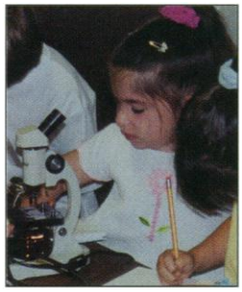
EDUCATION

For Some Children, Summer Means Science

Colleen Tobasco arrived early at the Passyunk Library in South Philadelphia with her two children, Jennifer and Joseph, for their 10:15 science class. "The kids got up at seven this morning and asked me if we were going to the library today," Tobasco said.

Soon the Tobasco children were joined by about 15 others for a class that week in July on oceanography. They studied the names and locations of the oceans, and what kind of life could be found in the water. They handled sponges, shells, and star fish. They looked at plankton under the microscope, and learned words like "extinct," "scavenger," and "trilobite."

The class was just one of 390 classes taking place this summer in greater Philadelphia as part of the award-winning Science in the Summer program, sponsored by SmithKline Beecham and administrated by AAAS. With the guidance of certified science teachers, nearly 6000 children are learning about science at their neighborhood libraries by participating in hands-on activities. With the help of scientific lab equipment that usually isn't available in schools, they might create simple machines, dissect flowers, search through fossil matrix ore, or study plant and animal cells under a microscope.



Children record their observations of life under the microscope.

SmithKline Beecham scientist Virginia Cunningham founded Science in the Summer in 1987. Her goals were to reverse the declining interest in science studies and careers and to introduce students, especially girls and minorities, to hands-on experiences in science. Science in the Summer has grown from 10 libraries and 300 children in 1987 to its current 125 libraries. So far, more than 36,000 students have participated in the program.

Groups of 15 students in two age groups (those entering grades 2 through 3 and 4 through 6) are enrolled in one of six courses: dream machines, bioscience, oceanography, chemistry, paleontology, and physical science/electricity. Each course consists of four 45-minute classes for 1 week. Students register for the program by signing up at their local library, and receive workbooks and safety glasses.

The hands-on activities, the small class size, and the teachers are what make the program a success, said Kathryn Whitacre, assistant library coordinator for the Free Library of Philadelphia. "It's a way to get science that you don't get in schools," Whitacre said. "Kids are encouraged to ask questions."

The children in the oceanography class at Passyunk eagerly answered the questions posed by their teacher, Philip Fuoco. A middle-school science teacher for 30 years, Fuoco has been involved in the Science in the Summer program from the beginning. He helped in the initial development and revisions of the student workbooks and teacher manuals and has taught a variety of the courses—mainly paleontology—for 11 years.

Fuoco teaches his classes with the energy of the character portrayed by Richard Dreyfuss in the film *Mr. Holland's Opus*. He will sometimes travel 1.5 hours to a class from his home in New Jersey. He often brings his own microscopes and materials to supplement those already provided by the program.

Fuoco had his choice of sites to work at, but chose the one in south Philly. "These inner city kids are thirsting for knowledge," Fuoco said. "The kids are here because they want to learn."

Fuoco also talks to the children about careers in science. "I hope some of these kids will go into science," Fuoco said. "I also tell the girls that they can do it. People are still out there telling them they can't do science."

Fuoco said he had no problem explaining scientific concepts to young children. "You'd be surprised how much little kids can pick up about science," Fuoco said. "If they're willing to learn, they will. You just have to get them interested in the beginning."

Tobasco quizzed her children on what they had learned in class. Joseph was ready to name all the oceans, while Jennifer answered questions about their size and location. "They're like sponges, they take everything in," Tobasco said. "But they don't realize they're learning because they're having so much fun."

For more information on Science in the Summer, contact Nathan Bell at AAAS, 800-351-7542 or 202-326-6681, or nbell@aaas.org.

CREDIT: TIFFANY AYERS

RESOLUTION
THE UNIVERSALITY OF SCIENCE AND FREEDOM IN THE CONDUCT OF SCIENCE

Over several decades, AAAS has expressed the sentiments of its members to safeguard open communication among scientists and freedom in the conduct of science. On each occasion, the inherent conflict between national security and open communications among scientists was recognized as an important factor requiring discretion and due diligence. Nonetheless, the postwar period has made clear the interrelationships between our national security, prosperity, and scientific collaboration. While we recognize the need for appropriate security for classified materials, recent events compel the Association to state anew our support for an open intellectual dialog among the world's scientific communities and to express our opposition to the measures being promoted to isolate and compartmentalize U.S. scientists in the name of national security. We emphasize the fact that intellectual scientific discourse is apolitical, beneficial to all peoples, and can promote constructive cooperation, despite political differences, among nations. On the other hand, the abridgement of scientific exchange injures all nations. Allegations of espionage and breaches of national security should not be politicized and used to impugn the loyalty of American scientists because of their ethnicity or to denigrate the value of the system of open international scientific exchange.

Whereas progress in science and technology is greatly enhanced by the unfettered exchange of information, especially the right to travel; and

Whereas such progress promotes both the national security and the general welfare; and

Whereas foreign scientists have made valuable contributions to the research productivity of the United States; and

Whereas public availability of unclassified scientific and technical information is a necessity for democratic decision-making in a wide range of important public policy issues; and

Whereas progress in science will be impeded if political criteria are used to obstruct the open international discourse of scientists and engineers; and

Whereas the universal language of science is often a means available to bridge the political chasms that divide nations,

Be It Therefore Resolved that AAAS strongly reaffirms its opposition to continuing government efforts to restrict communication of unclassified research among and between U.S. scientists and their international colleagues. We oppose the use of immigration laws or other legal and administrative measures to bar foreign visitors and travel restrictions on U.S. scientists to impede international exchanges. And we deplore as unjust and shameful the characterization of any American scientist as disloyal, and any foreign visitors as suspect based on their ethnic origins.

Be It Therefore Further Resolved that AAAS encourages its affiliated societies to endorse this resolution and to communicate their support to appropriate officials inside and outside government.

Approved by the AAAS Board of Directors on 25 June 1999.