

VOLUNTEER TEACHING PROJECT IN DC CREATES MODEL FOR NATION

A successful volunteer project, involving the placement of professionally employed people in public schools to help teach science and mathematics, is entering its third year in the District of Columbia. Sponsored initially by the Federal City Council, a non-profit organization of business, professional and civic leaders dedicated to the improvement of the nation's capital, the project was taken over last fall by the DC school system. The volunteers, who are scientists, engineers and mathematicians, have come from local universities, corporations and government agencies.

According to Connie Spinner, the director of volunteer services and training for the DC schools, 170 volunteers were placed in part-time assignments during the second year of the program, and by the end of this year it is expected that up to 250 will be placed. A key to the success of the pilot program, Spinner says, has been a strong commitment from the school system, which provided a full-time staff person to coordinate placements. "You can't hold volunteers year after year unless you put them in an environment in which they feel and know they are making a difference," Spinner observes.

The idea for the program, "The Science/Math Education Project," came to Theodore D. Drury, a former public affairs director for Volunteers in Service to America (VISTA), in 1984 when he was doing public affairs work for NSF. Drury brought the idea for the project to the Federal City Council, which helped raise \$142 000 to support it and borrowed Drury from NSF to run it. Echoing Spinner's remarks, Drury says they discovered that it is even more important to give training and orientation to the teachers than to the volunteers themselves. "Having a volunteer means extra work for the teacher," he says, "and so in a sense the teachers are volunteers too."

In seeking volunteers, Drury had particularly good luck with a list of



School science volunteer Ned Stone, a physicist at the Naval Research Laboratory, with students at the Friendship Educational Center in Washington, DC. In this photograph, which was taken by Linda Boone, the cooperating teacher at the school, Stone is showing members of the Young Astronauts Club satellite imagery of the Earth. Stone is the man in eyeglasses holding one of the digitally-transmitted photographs.

retired military officers provided by the Reserve Officers Association. The mailing yielded more than 20 volunteers, most of them graduates of the service academies and many employed at high-tech companies in the DC area.

One such volunteer, a retired brigadier general named James Herbert, has been working up some imaginative mathematics assignments using real financial data from local organizations. One assignment involved directing a community fund-raising drive, another dealt with the management of a fast-food store and a third focused on the management of a high-tech firm. The point, Drury says, was to "get it across that science and math are not esoteric or irrelevant subjects, that they are an important part of everyday life."

Edward J. Stone, a physicist who works in infrared and atmospheric sciences for the Naval Research La-

boratory, has sought to do things that "are fun but also have a point" in working with pupils in the Young Astronauts club at the Friendship Education Center, an elementary and middle school near the laboratory. Stone has found that the pupils, who are mostly from low-income minority households, are "starved for hands-on experience." Weeks after he provided children with simple devices to demonstrate physical phenomena, such as a system of washers and string designed to simulate the solar system, they still would be carrying them around and playing with them.

The important thing for volunteers to realize is that "teachers are swimming up a waterfall," Stone says. He, for one, would gladly spend a full day each week helping them out with their teaching if NRL were willing to provide him with release time. As things currently stand, NRL quietly tolerates his absences to participate

in the Science/Math Education Project.

AARP project

In 1984 the American Association of Retired Persons launched a somewhat similar volunteer project in the whole DC area, including the Maryland and Virginia suburbs, involving just older scientists and engineers (see *PHYSICS TODAY*, July 1984, page 67). It has been less successful than the Federal City Council's project precisely because the difficulty of placing volunteers satisfactorily was underestimated. Charlotte Nusberg, who has coordinated the project for AARP, says that out of some 250 people on the volunteer roster they assembled, perhaps 100 ended up doing something useful, even though placements were not limited to schools.

Community agencies are not accustomed to dealing with professional volunteers, Nusberg says. Furthermore, particularly with the schools, it often turned out that there was no follow-through after the initial friendly contacts between AARP and school placement officers. According to Nusberg, the demonstration project did lead to some significant achievements, especially in forging an *esprit de corps* among participants and in raising the consciousness of professional societies to the needs of their older members. But AARP has decided not to give the project further support as a national model, and another sponsor is now being sought.

The Federal City Council's project, on the other hand, does appear to be successfully creating a national model. The Triangle Coalition for Science and Technology Education, which promotes the building of education alliances among community leaders, is distributing copies of a manual based on the project, "Scientists in the Classroom: One School District's Experience with Science and Mathematics Volunteers in Elementary and Secondary Schools." The Triangle Coalition and the National School Volunteer Program have submitted a proposal to NSF to initiate similar projects in ten other communities where alliances are forming. The National School Volunteer Program supports another successful science volunteer project in Salem, Oregon.

The Science/Math Education Project may well be the largest project of its kind in the US, according to John Fowler of the Triangle; it may also be one of the few that has been subjected to a careful independent evaluation. The review was completed last year by the Bureau of Social Science Research Inc, a consulting firm in Wash-

ington. "The most overwhelming impression in looking at the volunteer coordinator's role and activities was that the level of effort required was underestimated," the evaluation said. "A major responsibility of the volunteer coordinator during the demonstration phase of the project was to find schools and teachers willing to host professional volunteers and then see that the principals and teachers fulfilled their role in making contact with volunteers and developing appropriate activities for them. As the first year of the program progressed, it became clear that this portion of the volunteer coordinator's responsibilities was much more difficult and time-consuming than had been anticipated."

Despite those difficulties, "the number of professionals applying to

become part of the project exceeded expectations and preparations. Those who participate in the program wish to continue to participate. Teachers and principals view the project as beneficial and are willing to continue to apply for volunteers for their schools. Finally, there is evidence that working with a volunteer is enjoyable for students, that they feel they do perform better as a result of working with a volunteer and that their attitudes become more positive about science and math coursework and careers."

Copies of the Federal City Council's report on the project, "Scientists in the Classroom," can be obtained for \$10 from the National School Volunteer Program, Suite 300, 701 North Fairfax Street, Alexandria VA 22314.

—WILLIAM SWEET

AIP REPORTS ON SALARIES OF MEMBER-SOCIETY MEMBERS

Not all physicists necessarily are torn about whether they'd rather be dead or in Philadelphia, à la W. C. Fields. But if they were working in 1985 and their main concern was making money, they would have done a lot better living in Albuquerque, New Mexico. The median cost-of-living-adjusted salary of individuals belonging to member societies of the American Institute of Physics was \$52 800 in Albuquerque that year, while in Philadelphia it was \$32 300.

This is one of the findings in a new report, "1985 Salaries: Society Membership Survey," which was released late last year by AIP's Education and Employment Statistics Division. The report is based on a survey of about one-sixth of AIP's US and Canadian member-society membership. The survey was carried out in spring 1985,

and the response rate was 65%.

Physicists in Philadelphia can take heart that New York City continues to be the most expensive city in the continental US. Upon adjustment for the cost of living, the median salary of member-society members in New York drops from \$49 000—one of the highest metropolitan salaries in the country—to \$36 400.

Philadelphia physicists also can take solace in the fact that their relatively low salary position largely results from their heavy employment at colleges and universities, many of them very prestigious. Albuquerque, on the other hand, has the lowest proportion of academically employed members in the list of selected metropolitan areas included in the AIP report.

Place and type of employment gen-

Salaries for member-society members with PhDs who changed employers between 1983 and 1985

1983 Employer/ 1985 Employer	Median salary	Mean salary	Median age	Number in sample
University (postdoctorates) University	\$19.5 K 30.6	\$20.2 K 31.3	33	21
University (non-postdoctorates) University	33.6 45.0	39.4 49.9	40	41
University Industry	21.4 43.7	24.8 46.6	35	33
Industry Industry	45.0 55.0	49.1 59.0	42	87
Government & government labs Industry	44.1 55.0	46.1 61.3	44	20