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Industry's Other Contribution to Education

There has been much discussion of the quality of precollege science and mathematics education in the United States and of its relation to the nation's economy and security and to the quality of life. The general consensus is that substantial immediate improvement is necessary and that all sectors should become involved in this effort. Industry itself, as well as government and the nonprofit sectors, might do well to view industry as a major partner in problem definition and resolution, rather than primarily as a potential funding source. A valuable asset of industry is the technical capabilities of its current and retired scientists and engineers.

Recently, the American Chemical Society (ACS) sponsored a conference on Using Industrial Chemists for the Enrichment of High School Chemistry and Science Education. One point that became apparent at the conference is that a number of companies already have in place local programs to supplement secondary education.

Phillips Petroleum Company, in Bartlesville, Oklahoma, and the local school system sponsor a Science Teacher's Workshop for precollege science teachers from more than 100 school districts in Oklahoma and southern Kansas. The program is designed to rekindle the teachers' interest in science and to assist them in developing new classroom techniques for making science interesting for students. A day-long workshop is held, including a "science circus" of experiments for the general community. The last such show drew larger crowds than any recent local athletic event.

The Science Consultants Program, sponsored by Xerox Corporation, brings scientists and engineers into elementary schools twice a month to give demonstrations and provide students with hands-on experience in such areas as chemistry, optics, and probability. In 12 years the program has reached more than 10,000 fourth through sixth graders.

The Chemical Industry Council of New Jersey has developed programs that draw on the intellectual resources of the chemical industry. Each year the Chemical Caravan brings 200 students to a local university, where faculty members and industrial personnel present programs on the applications of chemistry and on activities in industry. Chemical Pilgrimage, a week-long teachers' workshop, mixes classroom instruction with field trips to industrial plants and laboratories.

The PRISM Program, developed by the Industrial Management Council (IMC) of Rochester, is aimed at increasing the number and quality of students who enter science and engineering. The program involves curriculum development, teacher training programs and parent awareness sessions, and extensive use of role models from industry to motivate students. It begins in the seventh grade and continues through the twelfth. The IMC is an association of 150 manufacturing firms that have made a 10-year financial commitment for a permanent staff which includes professionals in curriculum development and community relations.

A second point made at the ACS meeting is the importance of summer employment in industry for high school science teachers. These positions acquaint teachers with applications of chemistry and the many activities of industry, as well as giving those in industry closer contact with and a better understanding of the educational community. The financial support to teachers is also important. The ACS Corporation Associates have taken some steps to encourage more such opportunities for teachers. As the economy improves, it is hoped that more positions will become available.

Joint efforts of the industrial and educational communities are capable of enriching secondary education in science and mathematics. They are to be encouraged.—F. BASOLO, *President, American Chemical Society*, and MORRISON PROFESSOR OF CHEMISTRY, *Northwestern University*, Evanston, Illinois 60201, and E. WASSERMAN, *Chairman, ACS Committee on Corporation Associates, American Chemical Society*, Washington, D.C. 20036