

an interest in reading general books about science and mathematics, other than textbooks.

2) To provide, on an experimental basis, a collection of carefully chosen books as a basis for developing the reading interests.

3) Stimulate an interest in choosing a career in science.

4) Offer science teachers an opportunity to broaden their subject-matter knowledge and encourage them to stimulate collateral reading on the part of their students.

In addition to the 350 sets of books that are a part of the regular program, this year an additional seven sets are being lent to the Department of the Army for circulation among the 20 senior high schools that are operated in France, Germany, Italy, and Okinawa for the children of United States citizens serving overseas. Furthermore, four sets will be lent to county library systems for circulation in bookmobiles as an experiment on the appeal of science books to adults and students in rural areas where high schools are too small to participate in the program.

To facilitate use of the books, the AAAS has each year published an annotated catalog, *Books of the Traveling High School Science Library*, popular not only with high-school librarians and teachers but also with community and university librarians and the general public. Demand has increased each year, from 3000 copies in 1955-56 to 22,000 copies in 1957-58.

The AAAS hopes to publish before year-end *A Comprehensive List of Science and Mathematics Books for Secondary School and Community Libraries*. Book publishers of the nation have sent to the AAAS free of charge copies of all books on the preliminary list of 1000 books. These are being evaluated by representatives of AAAS-member scientific and professional organizations.

To encourage young people to read science and mathematics books and to call their attention to the many good books available in paperbound editions, the AAAS published as an experiment in September 1957 a list of these paperbacks entitled "*An Inexpensive Science Library*", with a first printing of 12,000 copies. The list proved so popular that the first printing was exhausted by December 1957 and an additional 10,000 were printed; these were all distributed by April 1958. A new and enlarged edition has been published.

### FAS Urges Halt to Test Series

The Federation of American Scientists Executive Committee has addressed an open letter to the President urging him to halt the new series of ten nuclear

tests scheduled to take place in Nevada, just before the test-ban negotiations begin with the U.S.S.R. on 31 October. The letter reads in part:

"We were . . . encouraged by the recent agreement between nuclear experts of the East and West on the technical feasibility of policing a nuclear test ban, followed by your Aug. 22nd proposal to halt nuclear testing for a one year period, providing the Russians continue to abstain from testing for the same period and agree to start discussions October 31.

"Barely a week later, on Aug. 29, the climate of encouragement engendered by your statement was unfortunately dispelled by the startling Pentagon-A.E.C. announcement that the US would carry out a new series of ten tests in Nevada just before the Oct. 31 deadline on the very eve of the vital negotiations. In the eyes of the world, this announcement casts considerable doubt on our sincerity in desiring a workable test ban agreement.

"The Federation of American Scientists urges you, Mr. President, to stop the proposed Nevada test series. Such action on your part would emphasize our earnest desire that an agreement be reached to halt nuclear weapons testing as a first step towards disarmament and world peace. Even if extensive preparations have been made and important information will be gained from these tests, the adverse propaganda effect must be seriously considered. A declaration on your part that these tests will not be held would reestablish our high purposes in the eyes of the world and insure all concerned of our true desire to take steps aimed at achieving a stable peace."

### National Science Youth Month

October has been designated National Science Youth Month by the President's Committee on Scientists and Engineers. During the month, many national organizations, including the AAAS, are taking an active part in stimulating the interest of high school students throughout the country in scientific studies. A science youth organizations working group appointed by the President's Committee is leading the activities for the Month, with Science Service, Washington, (D.C.) as the coordinating agency.

During October, science teachers are being asked to start science projects to be carried out during the school term. Other suggested activities include: PTA, professional and civic meetings in October devoted to science subjects; science fairs; affiliation of local science clubs with Science Clubs of America; registration by school principals for qualifying tests for National Merit scholarships and for Science Talent Search examinations;

student assemblies featuring scientific or technological speakers; personal contacts between scientists, engineers, and students through "project nights" devoted to work on science-fair projects, or through "career sessions" when engineers and scientists discuss career opportunities and interesting experiences in their fields.

A poster-calendar for science classrooms and school bulletin boards provides a check-list of important dates and actions to be carried out during Science Youth Month. The poster has been distributed to the nation's 25,000 science teachers. (Additional single copies can be obtained from the President's Committee on Scientists and Engineers, Washington 25, D.C.)

### Reading Machine for the Blind

Development of a new device with which the blind can read ordinary printed material, such as books and magazines, was reported recently by the Veterans Administration. The portable unit, called an "aural reading machine," was designed and is being evaluated by the Battelle Memorial Institute of Columbus, Ohio, under a VA contract.

At the present stage of development of the reader, the sounds it produces do not resemble those of speech but are patterns of musical tones similar to chords played on an organ. By interpreting these tones, trained users ultimately should attain a reading speed of from 15 to 30 words per minute. Advantage of the machine over Braille is that the blind user can read material in normal print, including typewritten business correspondence.

The reader is about the size and shape of a portable radio. Weighing about 9 pounds and housed in a wooden case measuring about 7 by 9 by 8 inches, it has knobs for volume, light intensity, and the electric power switch.

The machine has three essential parts—a small probe which is held in the hand and moved over the printed material to be read, a chassis containing transistorized oscillators and an amplifier, and earphones through which the user listens.

The probe contains two tiny lights and a lens that projects an image of the printed letter upon a row of photocells. Each photocell, when it "sees" black, turns on an oscillator in the chassis that generates a specific pitch proportional to the height of the black portion of the letter "seen." These pitches are translated to sound patterns by the earphones.

Blind persons, chiefly students and faculty members from the Ohio State School for the Blind at Columbus, have been trained to interpret sounds of the Battelle machine during the past year.

Each student in the participating group received about 18 hours of instruction on the device, following preliminary training in interpreting tape-recorded sounds of the machine.

Recognition of the tape-recorded sound patterns corresponding to 145 different sentences was learned fairly readily, but the complex operation of manually rolling the probe along the line of print while interpreting the tone patterns will require considerable further practice before routine use. Only five prototype models of the reader have been made, and further development of both the device and training methods will be required before quantity production is advisable.

### Middle East Population

The Population Reference Bureau, Washington, D.C., reports that the population of the Middle East is growing by 4 million people a year (equivalent to the population of Chicago). Any plan to raise the standard of living in the Middle East, such as that suggested by President Eisenhower, will have little effect unless the population growth can be brought under control. The President recently laid before the United Nations a proposal for a regional Arab development institute that would provide for improved health, education, irrigation, and so forth. The Population Reference Bureau points out that the area's 95.7 million people have increased by 15 percent in 5 years. The rate of growth, in an area already heavily crowded in terms of habitable land, is exceeded only by that of Tropical South America.

The bureau lists these problems in the Middle Eastern population situation: large stretches of barren land; a falling death rate and a high birth rate; a predominantly illiterate agricultural population with little knowledge of modern techniques; and a Moslem tradition of taking great pride in large families. It is emphasized that there appears to be no religious mandate regarding fertility control in the Moslem world. This attitude can change when it is understood that high fertility blocks the hope for a better life.

### Antarctic Research

The Arctic Institute of North America will participate in the U.S. Antarctic Research Program under the sponsorship of the National Science Foundation and the National Academy of Sciences. Seven new programs have been planned in order to continue international scientific collaboration in the Antarctic after the close of the International Geophysical Year in December.

The programs to be undertaken by the Arctic Institute include 2-year studies in glaciology and in seismology that will involve eight scientists in investigations of the ice-cap and its base rock in hitherto untraversed areas of the continent. A program of auroral observations at the Byrd and Pole stations will also be conducted through 1959 and 1960, in cooperation with scientists from New Zealand and Australia at the Hallett, Wilkes, and Ellsworth stations.

A further responsibility of the Arctic Institute is the coordination of a program in the biological and medical sciences. This will include the establishment of a biological laboratory at the Naval Air facility at McMurdo Sound for the use of zoologists, microbiologists, and physiologists. Other programs deal with ice studies and microflora collections. Scientists for all the newly announced programs are now being selected.

### Grants, Fellowships and Awards

*General.* The British Government is calling for applications for its 1959 Marshall Scholarship Awards. Students are being urged to get their applications in *before 31 October*, when the lists close. Requirements for these 2-year study grants, 12 of which are awarded each year, are liberal. Any American student (including inhabitants of Hawaii and Puerto Rico) of either sex, married or single, may apply—provided he or she has earned a first degree at a recognized university and is under the age of 26 on 1 October 1959.

Each award is worth around \$1400 a year, for 2 years (and occasionally 3), plus tuition at a United Kingdom university, if possible of the applicant's choice. This is estimated to be sufficient for student life in Britain. Passage to and from the United Kingdom is paid. Married men get an extra allowance.

Applications should be made to the British consul-general in one of the following cities: Chicago, New York, New Orleans, or San Francisco. The Marshall Scholarship Scheme was begun in 1953. It is intended to express Britain's gratitude for Marshall Aid.

*Pediatrics.* Grants providing for post-graduate pediatric studies will be awarded again in 1959 by Wyeth Laboratories, Philadelphia. The firm will award 20 2-year grants, each carrying an annual stipend of \$2400. The first 3 years of the program will cost \$195,000.

Candidates for the pediatric fellowships may include interns, physicians who have recently completed their internship, military service, or a U.S. Public Health Service tour, and research fellows. All recipients must be citizens of the United States and Canada.

Applications must be submitted *by 28 November*. Information and application forms may be obtained from Dr. Philip S. Barbar, University of Pennsylvania School of Medicine, Philadelphia, Pa.

### NSF Summer Conferences for College Teachers

The National Science Foundation has announced that it will support in 1959 an experimental program of some 20 Summer Conferences primarily for college teachers of science and mathematics. The Summer Conferences will be of shorter duration but generally similar to the Summer Institutes that the foundation has supported in recent years. Colleges and universities interested in sponsoring such conferences are invited to request further information from the Program Director for Summer Institutes, National Science Foundation, Washington 25, D.C. The deadline date for submission of proposals is *15 December 1958*.

Although planned and sponsored by the nation's institutions of higher learning, Summer Conferences will be supported by foundation funds to defray direct operational costs plus expenses of participants. Summer Institutes, 125 of which were supported by the foundation in 1958, are usually from 6 to 10 weeks in length and have been predominantly for high school teachers. In contrast, Summer Conferences will extend over a 1-to-3-week period and will be primarily for college teachers. In a few cases secondary-school teachers may be included for particular purposes. As with Institutes, Summer Conferences will emphasize subject matter rather than methods of teaching.

### Radioactivity in Milk

The Public Health Service has announced that its latest tests for the presence of radioactivity in milk from nine locations in the United States have shown amounts well within the permissible levels recommended by the National Committee on Radiation Protection and Measurement. The new report, which covers the months of May, June, and July, brings up to date the findings of the study initiated by the Public Health Service in the spring of 1957. A report on the first-year findings was issued on 25 May 1958.

During June and July, the network of sampling stations was expanded from five to nine. The four new stations reporting for the first time are on the milksheds of Atlanta, Ga.; Austin, Tex.; Fargo, N.D.; and Chicago, Ill. An additional sampling point is being established in Spokane, Wash. New labora-