consult with the International Atomic Energy Agency to assure the development of a safeguard system reasonably compatible with that of the agency. In addition, in the event of the establishment of an international safeguards and control system by the International Atomic Energy Agency, the United States and Euratom will consult regarding assumption by that agency of the safeguards and control over fissionable material utilized and produced in implementation of the joint program.

Basic Curriculum Study

How much should a student know about himself and his world after 12 years of schooling? In an attempt to find an answer, the Council for Basic Education, Washington, D.C., has brought together a group of men and women representing many agencies concerned with the problem. The council, headed by Howard A. Meyerhoff, president, has received a grant of approximately $34,000 from the Relm Foundation, Ann Arbor, Mich.

The council's planning group met recently to discuss the first phase of a "Basic Curriculum Study"—a study divided into four phases from which will come, over a period of several years, a series of publications dealing with the basic curriculum, with the preparation of teachers, with the gifted child, and with a system of national academic achievement examinations. Each publication will be the subject of a national conference, the first one to be held next fall in Washington, D.C.

At that meeting an effort will be made to define the level of attainment that graduating high school students should reach in what the Council calls the basic subjects: English, history, foreign languages, geography, mathematics, biology, chemistry, and physics. An outstanding scholar in each subject will present a paper describing, for his particular field, the proper educational aims of the public school. The papers will be published subsequently in the form of a citizen's handbook that will be made widely available.

Conservation Slide Rule

Research data on soil conservation, gathered by U.S. Department of Agriculture scientists over the past 30 years, is now readily available for practical use by technicians in the form of a simple conservation slide rule that makes possible fast and reliable soil-loss estimates right in the field. This slide rule, developed from information compiled by scientists of USDA's Agricultural Research Service, is in use by soil-conservation technicians in the nine Corn Belt States to help farmers protect their land. It was designed by J. J. Pierre of the Soil Conservation Service, using information previously available to soil conservation technicians only in tabular and chart form. Although the present slide rule is adapted only to Kentucky, Minnesota, Iowa, Missouri, Wisconsin, Illinois, Indiana, Ohio, and Michigan, research information is being developed to make similar prediction methods available to soil conservation technicians in other parts of the United States.

Since 1929, soil and water conservation experiment stations throughout the country have been studying the most important factors governing the amount of soil and water lost from farmland during rainstorms. All these factors except rainfall itself are influenced to some extent by the method of cropping and conservation practices used.

The rate of erosion caused by storms depends on the force with which raindrops stir up soil and the amount and speed of the runoff water. Erosion is also affected by the kind of soil, kind and amount of soil cover, and steepness and length of slope, as well as soil-management and conservation practices. When enough experimental data are available to give accurate relative values for these various factors, mathematical methods can be used to estimate or predict soil loss on a particular farm.

Medical Research in Australia

Last March Sir Howard Florey, in the presence of the Prime Minister of Australia, opened the new building of the John Curtin School of Medical Research at the Australian National University in Canberra. The National University was founded in 1946 as a national center for research and research training, initially in the fields of physical sciences, medical sciences, and the social sciences.

There had long been complaints in Australia that many of the most able scientists left the country because of the greater attractions in universities and research institutions in Great Britain. Such complaints applied more to the medical sciences than to other natural sciences, for which the large and varied laboratories of C.S.I.R.O. provided first-class facilities, whereas the only medical research institute in Australia with an international reputation was the relatively small Walter and Eliza Hall Institute in Melbourne.

In a report to the Commonwealth Government in 1944, Florey suggested that a national institute for advanced medical sciences should be set up in Australia, and the John Curtin School of Medical Research, established as an integral part of a university devoted to research and research training, is the result of this suggestion. Florey was intimately associated with the development of the school from the time of his report until 1955, and the building he opened in March is a monument to his inspiration and drive.

There were no laboratories in Canberra in 1948 when the first professor was appointed, so the departments were started in laboratory space lent by several institutions—biochemistry at the Commonwealth Serum Laboratories, Melbourne; medical chemistry at the Wellcome Research Institution in London; microbiology at the Walter and Eliza Hall Institute in Melbourne; experimental pathology in Florey's laboratories in Oxford; and physiology in the University of Otago in New Zealand.

In 1951 temporary laboratories were built in Canberra. These were occupied between 1952 and 1957, when the departments were transferred to the present building, a brick structure of about 170,000 square feet in floor area. At present the total research staff is about 40 and there are some 20 Ph.D. students.

Research Institutes in the U.S.S.R.

A revised *Directory of Medical and Biological Research Institutes of the U.S.S.R.* has been issued by the National Institutes of Health, Public Health Service. The 1958 *Directory* lists more than 700 institutes with their subdivisions, and includes a general subject and name index. Its purpose is to facilitate the exchange of scientific information between the United States and the U.S.S.R., to provide materials for study of the organization of Russian biomedical research, and to assist scientists in planning visits to Russian research centers.

A limited supply of the 1958 edition (PHS Publication No. 587) is available. Requests for single copies should be addressed to the Publications and Reports section, Scientific Reports Branch, National Institutes of Health, Bethesda 14, Md.

Mental Health

Plans for a World Mental Health Year in 1960 sponsored by 108 mental health and professional societies in 43 countries and territories have been announced by the New York Office of the World Federation for Mental Health. Following the pattern of the International Geophysical Year, the purpose of the program is to stimulate mental health activities, including research, with a maximum of international cooperation. The federation, a non-governmental or-

ganization which includes 29 societies in the United States and 79 in 42 other countries, reports a world-wide increase in work for the promotion of mental health during the 10 years since it was organized, not only in countries where it has member societies, but in a number of others with which it has no formal link.

Five major mental health objectives have been singled out for intensive effort: (i) to increase the study of child development in different countries; (ii) to increase the knowledge of the many causes and the distribution of mental illness; (iii) to improve and extend the teaching of the principles of mental health in medical and nursing schools, teacher training colleges, schools of social work, theological seminaries and similar centers of professional training; (iv) to develop knowledge and techniques for dealing with the human relations problems which arise in industries and all types of occupations; and (v) to encourage the study and creation of better methods of preventing and dealing with psychological problems arising from migration within and between countries, whether voluntary or involuntary.

In addition to the major objectives, each country is being encouraged to develop more extensive national programs, particularly in those aspects having areas of special local significance. The United States, with its 29 member societies, will conduct a program on a larger scale than most other countries. To coordinate activities in the U.S., a steering committee has been named as follows: Marian J. FitzSimons, Frank Fremont-Smith, John P. Gillin, Alberta Jacoby, Marian McBee, Mabel Ross, Ruth Simonson, George S. Stevenson and Mottram P. Torre.

Responsibility for financial support of plans and projects within the United States has been assumed by the World Federation for Mental Health: United States Committee, Inc. This committee, formerly known as the International Committee for Mental Health, was founded by Clifford Beers in 1930. Its present officers are: Mrs. Clifford W. Beers, Earl D. Bond, Arthur H. Ruggles and Mrs. Henry Ittleson, honorary presidents; Mrs. Charles S. Ascher, president; Mrs. Jonathan Bingham and John A. P. Millet, vice presidents; Frank Fremont-Smith, general secretary; and George S. Stevenson, treasurer.

Grants, Fellowships, and Awards

General. Applications will be accepted through *15 October* by the National Science Foundation for both the senior postdoctoral and science faculty fellowships. Henceforth, these fellowships will be awarded annually in December rather than biannually as awarded in previous years. Awards will be made in the mathematical, physical, and engineering sciences; medical and biological sciences, including anthropology and psychology (excluding clinical psychology); and in selected fields of social science. Included as well are interdisciplinary fields which overlap two or more scientific disciplines.

To be eligible for senior postdoctoral fellowships, candidates must be citizens of the United States with special aptitude for advanced training, and must have held the doctoral degree for at least 5 years or have equivalent education and experience.

The science faculty fellowships are directed toward college teachers of science who wish to improve their competence as teachers. These fellowships are open to any citizen of the United States who holds a baccalaureate degree or its equivalent, has demonstrated ability and special aptitude for science teaching and advanced training, and has taught at the collegiate level as a full-time faculty member for not less than 3 years, and intends to continue teaching.

Annual stipends to a maximum of $12,000—adjusted to match as closely as feasible the regular salaries of the recipients—will be awarded under both these programs. Fellows may engage in study or research at any accredited nonprofit institution of higher learning in the United States or at any similar institution abroad approved by the National Science Foundation. A limited allowance to aid in defraying the cost of travel for a fellow and his dependents will also be available. Application materials may be obtained from the Division of Scientific Personnel and Education, National Science Foundation, Washington 25, D.C.

Science teaching. The National Science Foundation has announced that proposals will be accepted *until 1 September* from colleges and universities for the support of 1959–60 Academic-Year Institutes. These institutes offer full-time work in science and mathematics through programs designed especially to improve the quality of instruction offered by high school science and mathematics teachers. Directions for preparing proposals and forms to be used in making application may be obtained by interested institutions of higher education from the Division of Scientific Personnel and Education, National Science Foundation, Washington 25, D.C.

Foundation grants will provide support for 19 Academic-Year Institutes during the 1958–59 school year starting in September. It is expected that grants will be awarded for about 30 institutes for the 1959–60 school year. Each institute provides instruction for about 50 teachers. Foundation grants enable the sponsoring institutions to offer stipends up to $3000 plus additional allowance for dependents and travel. Grants also cover tuition and fees, an allowance for books, and operating costs beyond those supported by tuition payments.

Foundation grants extend complete freedom to sponsoring institutions to administer and conduct their respective programs, and teachers seeking training offered by Academic-Year Institutes should apply directly to the sponsoring college or university, not to the foundation. Most institutions will provide for an additional closely allied summer program which may enable many participating teachers to earn graduate degrees.

Social science. The next closing date for receipt of proposals in the Social Science Research Program of the National Science Foundation is *1 October.* Proposals received by that date will be evaluated in the fall. Approved grants will be activated in time for work to begin in the second semester or the summer of 1959. The Social Science Research Program supports basic research in anthropology, archeology, demography, human ecology, economic and social geography, economics, social psychology, sociology, and history and philosophy of science.

Proposals received after 1 October will be reviewed following the winter closing date of 1 February 1959, with activation of approved grants in the summer and fall of 1959. Inquiries should be addressed to the National Science Foundation, Washington 25, D.C.

Population Trends

The newly published United Nations *Demographic Yearbook* for 1957 reports that the population of the world is increasing at an average rate of 5400 persons every hour, or 47 million a year, a rate that is calculated to double the estimated world total of 2737 million inhabitants within the next 40 years. United Nations statisticians have estimated the world birth rate at 34 per 1000 inhabitants and the death rate at 18. During the past 20 years the death rate has declined well over 25 percent in most countries and as much as 50 percent in several. And since the birth rate has remained high and unchanged in most of these same countries, the world population has increased almost 25 percent in one-fifth of a century. Other information contained in the annual statistical publication is as follows:

Percentagewise, Latin America is the fastest growing area of the world, with an estimated population increase of 2.5 percent annually, as against a world aver-