good community library services should not be readily accessible to the students at the school; (iii) the school should have a library and employ a school librarian.

The principals of public and private high schools or preparatory schools interested in receiving additional information and application blanks are requested to write immediately to Dr. Hilary J. Deason, American Association for the Advancement of Science, 1515 Massachusetts Ave., NW, Washington 5, D.C. The final date for the receipt of formal applications for the 1957–58 program is *15 May*. Priority of receipt of application will be a factor in school selection.

Thai Dam Dedicated

Thailand's large new irrigation and navigation dam near Chainat, some 100 miles north of Bangkok, was officially dedicated by King Phumiphon and Premier Pibulsonggram on 7 Feb. An $18-million loan from the International Bank for Reconstruction and Development, a United Nations special agency, helped toward the total cost of $58 million, and the U.N. Economic Commission for Asia and the Far East provided technical aid. The Chainat dam will insure a controlled water supply for a rice-growing area the size of Northern Ireland, introduce double-cropping, add some 500,000 tons a year to Thailand's rice exports, and make possible year-round navigation on the central course of the Chao Phya River.

Blakeslee Awards

Entries for the American Heart Association's Howard W. Blakeslee awards for outstanding reporting in the field of heart and blood vessel diseases must be submitted *by 1 May*. The Awards Committee will make its selections from among newspaper and magazine articles, books, radio and television programs, and films published or produced between 1 Mar. 1956 and 28 Feb. 1957.

This is the fifth in a series of Blakeslee awards, each of which carries an honorarium of $500. The number of winners to be selected this year will be determined by the judges. Presentation will be made at a meeting of the American Heart Association to be held in the fall. Entry blanks and rules folders may be obtained from the Association, 44 E. 23 St., New York 10, N.Y.

The Blakeslee awards honor "individuals whose creative efforts in any medium of mass communication are judged to have contributed most to public understanding of progress in research, and in the prevention, care and treatment of heart and circulatory disease." The rules further state that "entries will be judged on the ability of the entrant to project a positive and hopeful viewpoint toward problems of the heart and circulation."

Borazon

The General Electric Company recently announced a new synthetic substance that compares with the diamond in hardness. The substance, borazon, is a boron-nitrogen compound that is more resistant to heat than the diamond is, being able to withstand temperatures of more than 3500°F. The diamond burns up at 1600°F. Borazon was produced by applying pressures of 1 million pounds per square inch and temperatures of 3000°F. Under these conditions the boron-nitrogen compound changes its crystalline form to that of a cube and is therefore called cubic boron nitride. Robert H. Wentworth of the General Electric Research Laboratory in Schenectady, N.Y., discovered Borazon.

TV in Schools

Alexander J. Stoddard, former superintendent of schools in Philadelphia and Los Angeles, urged that all American public schools be equipped with closed-circuit television in order to raise the quality of instruction, overcome the critical shortage of teachers, and provide the necessary funds for substantial increases in teacher salaries, in a report, *Schools for Tomorrow,* published by the Fund for the Advancement of Education. If this were done and an appropriate educational program instituted it would, according to Stoddard, result in a saving of 100,000 teaching positions and more than $500 million in teaching salaries. Stoddard said that no elementary, junior, or senior high school should be built without one or more television studios and closed-circuit apparatus to all parts of the building.

Additional copies of *Schools for Tomorrow* may be obtained without charge from the offices of the Fund, 655 Madison Avenue, New York 21, N.Y.

Ferromagnetic Substances

Ever since the beginning of the century, when Heusler discovered that alloys of copper and manganese, with an addition of aluminum, become ferromagnetics (the Heusler alloys), the preparation of artificially ferromagnetic substances has been of interest both experimentally and theoretically. Recently Raub *et al.* have investigated the magnetic properties of gold-manganese alloys (*Z. Metallkunde* **57**, 9, 1956; *Umschau* **56**, 538, 1956).

Pure gold is diamagnetic—its magnetization at small fields is opposite to the direction of the field. Metallic manganese is paramagnetic (almost temperature independent) and has a lattice constant of 2.58 A, but MnAs and MnSb, with lattice constants 2.85 and 2.89, are ferromagnetic. It seems, therefore, that manganese leads to ferromagnetic material when the distance between the manganese atoms is increased; this also appears to be the case with some of the manganese-gold alloys. It is possible to detect in the gold-manganese system an alloy that is 15 to 23 percent manganese, or approximately the composition of Au_4Mn, which is ferromagnetic.

There exists another phase, AuMn. This is antiferromagnetic; the neighboring domains are magnetized in opposite directions (as one can show directly by neutron diffraction). However, there is still another phase, Au_2Mn, and this seems to indicate that the system consists of a super position of ferromagnetic and antiferromagnetic domains. In the other phases of the manganese-gold system there are mixed crystals with a temperature-dependent paramagnetism and a temperature-independent paramagnetism in the crystals of the type $AuMn_3$.

It is therefore possible in one and the same material, depending on the composition, to produce almost all the various types of magnetism that are known. —K. L.-H.

Edison Children's Book Award

The Thomas Alva Edison Foundation presented its children's book awards for 1956 last month at the National Edison Birthday Celebration dinner, held by the Edison Foundation at the Waldorf-Astoria in New York in honor of the 110th anniversary of Thomas Alva Edison's birth. The occasion marked the inauguration of National Science Youth Day on 11 Feb., henceforth to be an annual event commemorating Edison's birth for the purpose of stimulating a greater interest in science and scientific careers.

The children's book awards are part of the Edison Foundation National Mass Media Awards Program, established in cooperation with 62 national organizations, to encourage mass media productions that (i) interest boys and girls in science, in view of the serious shortage of scientific manpower; (ii) make meaningful the values of the American tradition; and (iii) present ideals and heroes worthy of emulation by children. The $250 award for the best children's science book (for younger children) went to Roy A. Gallant, author, and Lowell

Hess, illustrator, of *Exploring the Universe,* which was published by Garden City Books, a division of Doubleday and Company, Inc.

Los Alamos Opened

The Atomic Energy Commission permitted controls governing public access to Los Alamos, N.M., to be removed on 18 Feb. Since 1943, when the atomic installation was set up, admission to Los Alamos has been by pass only. Furthermore, visitors have had to get permission to enter the town at least 24 hours in advance.

The new AEC decision applies only to restrictions on movement into and out of the community. There will be no relaxation of controls over access to the Los Alamos natural science laboratory itself. The government will continue to own all real estate and existing facilities within the technical area and the present community areas.

The commission has reported that its decision to open the city was based on several points, among them the saving of nearly $100,000 a year on gate-control costs, the making possible of private financing of home sites in nearby areas, the private leasing of government-owned land and buildings for commercial purposes, and the aiding in recruitment of employees.

Biology at Randolph Macon

An anonymous gift of $350,000 has been made to Randolph-Macon Woman's College to strengthen its biology and mathematics programs. At the donor's suggestion, $35,000 will be applied to general administration and $50,000 to strengthen the mathematics program. The rest will go to the special program in biology.

The gift will provide scholarships yearly to applicants who show the greatest promise in biology and in mathematics. Other scholarships will be provided as well as assistantships, graduate fellowships, research support for faculty members, and new equipment.

Cardiovascular Training Program

A new 1-year term of the special postgraduate cardiovascular research and training program at the Medical College in Augusta will start on 1 July. It will enable about five postdoctoral students to receive intensive training in cardiovascular research under the direct supervision of William F. Hamilton, president of the American Physiological Society and professor of physiology, and Raymond P. Ahlquist, professor of pharmacology. The course is sponsored by the American Heart Association and the National Heart Institute of the U.S. Public Health Service.

A stipend of $3400, plus $350 for each dependent, will be provided. Inquiries and requests for application forms should be addressed to either Hamilton or Ahlquist, who are codirectors of the program.

Astro-Geophysics at Colorado

Fundamental research in solar-terrestrial relations will be stressed in a new graduate department of astro-geophysics recently established at the University of Colorado. Doctoral candidates in the department will be able to take advantage of the research and laboratory facilities of the High Altitude Observatory, the Central Radio Propagation Laboratory of the National Bureau of Standards, and the university's department of physics.

RCA Teaching Scholarships

Responding to the need expressed by educators for more qualified teachers of science and mathematics, the Radio Corporation of America has established 30 college and university scholarships for students who are preparing for the science teaching profession. These scholarships, which will be awarded at 20 different teacher-training colleges throughout the country, are actually an extension of the long-established RCA scholarship and fellowship program.

N.Y.U. Mathematical Sciences Institute

The Institute of Mathematical Sciences at New York University offers temporary memberships to mathematicians and other scientists holding the Ph.D. degree who intend to study and do research in the fields in which the Institute is active. These fields include functional analysis, ordinary and partial differential equations, mathematical physics, fluid dynamics, electromagnetic theory, numerical analysis and digital computing, and various specialized branches, such as hydromagnetics and reactor theory.

The temporary membership program is designed primarily as a means of alleviating the present critical shortage of scientists trained in mathematical physics, applied mathematics, and related fields of mathematical analysis. The program is being supported by the National Science Foundation and also by funds contributed by industrial firms.

Temporary members may participate freely in the research projects, the advanced graduate courses, and the research seminars of the institute, and they will have the opportunity of using the computational facilities.

The temporary members will receive a stipend commensurate with their status.

Membership will be awarded for a year, but it may be renewed. Special arrangements can be made for applicants who expect to be on leave of absence from their institutions. Requests for information and for application blanks should be addressed to the Membership Committee, Institute of Mathematical Sciences, 25 Waverly Place, New York 3, N.Y.

Geophysical Observatory in France

The French National Center for Scientific Research is spending more than 600 million francs, plus equipment costs, to build the new National Geophysical Observatory near Pouilly-sur-Loire in France. Seven laboratories and numerous other buildings will house special equipment for scientific studies to be made there. Houses are being built for the 70 scientists and technicians who will form the permanent staff of the new observatory.

Beckman and Statham

Beckman Instruments, Inc., which has headquarters in Fullerton, Calif., and Statham Laboratories, Inc., Los Angeles, Calif., have jointly announced that agreement has been reached to merge the two firms, subject to the completion of legal details and the approval of shareholders. Statham, with production facilities in Los Angeles and Puerto Rico, manufactures precision pressure transducers, accelerometers, and other devices used in aircraft and guided missiles and for scientific and industrial measurement and control. Beckman manufactures precision components, measuring and control instruments, computers, and data-handling systems.

Scientists in the News

JAMES B. CONANT, organic chemist and emeritus president of Harvard University, has resigned as United States Ambassador to the Federal Republic of Germany to return to private life.

ARNIE J. SUOMELA of Oregon has been nominated by President Eisenhower to be the first commissioner of fish and wildlife. The office, a new one in the Department of Interior, was created by