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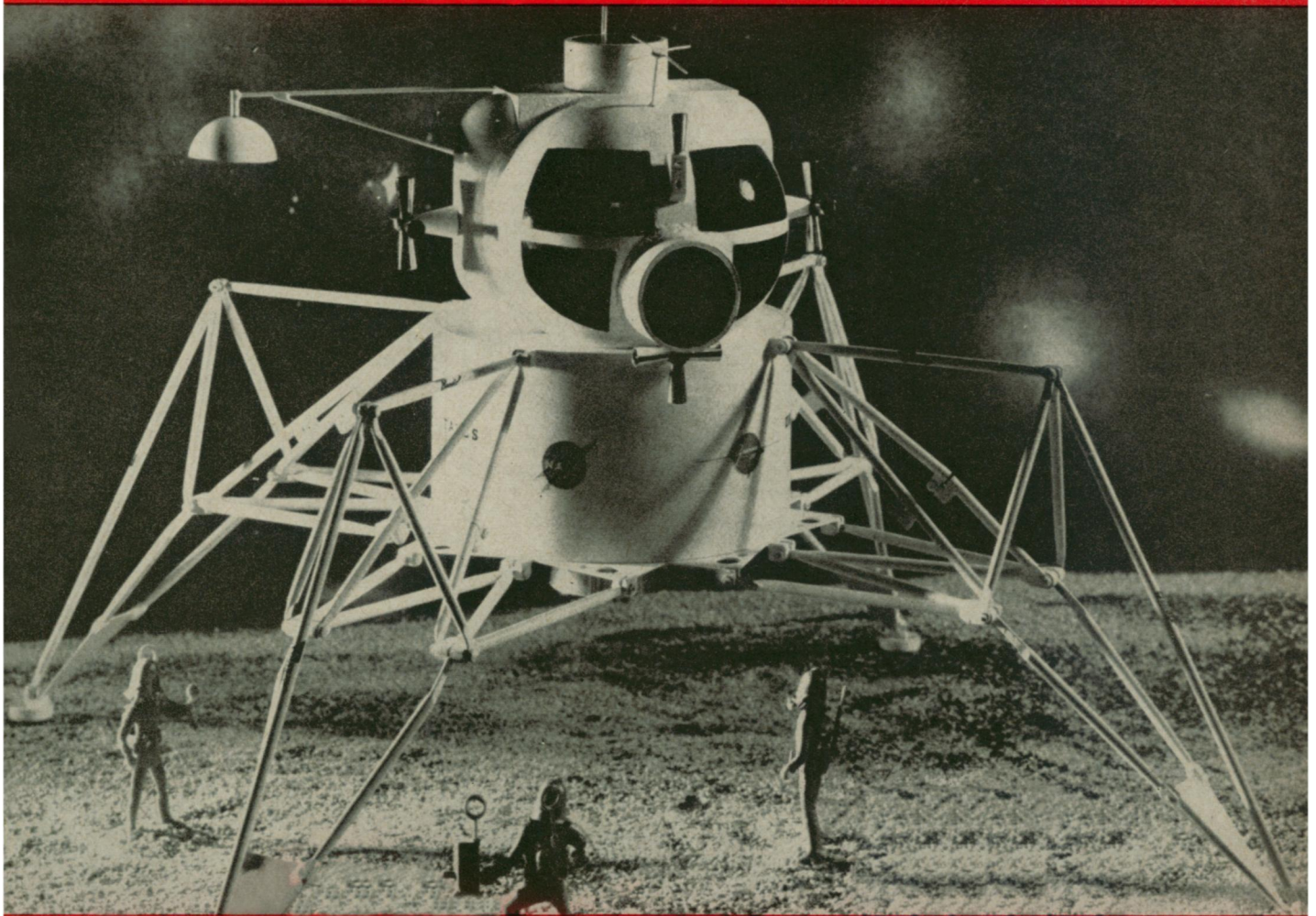
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\$5.50 A YEAR

SCIENCE NEWS LETTER

®

THE WEEKLY SUMMARY OF CURRENT SCIENCE



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See Page 103

A SCIENCE SERVICE PUBLICATION

OCTOBER SPOTLIGHTS SCIENCE TALENT OF TOMORROW...



NATIONAL SCIENCE YOUTH MONTH

OCTOBER 1963

Sun	Mon	Tues	Wed	Thur	Fri	Sat
		1	2	3	4	5
6	PLAN YOUR ACTION					12
13	PROGRAM NOW!					19
20	21	22	23	24	25	26
27	28	29	30	31		

October As National Science Youth Month Inaugurates the Year's Activity of Over A Million Science Students and Thousands of Dedicated Teachers Throughout the World

Science Service has organized the Eighth Annual National Science Youth Month in cooperation with over 50 national agencies to nurture science talent in youth.

TODAY'S YOUTH = TOMORROW'S SCIENTISTS

Organize a local National Science Youth Month Committee to plan a full scale program in your community • Encourage professional and technical societies, civic groups, PTA's, school science clubs, and other groups to devote an October meeting to science youth activities, science careers and new developments in science • Help science teachers, classes, clubs and other school groups schedule scientific tours, workshops and clinics on club activities, science projects and fairs, and career opportunities • Publicize what you are doing through the media of radio, television and newspapers.

Cooperating in National Science Youth Month:

American Association for the Advancement of Science

AAAS administers a School Science Library Program sponsored by the National Science Foundation. Objectives are to develop student interest in reading science and mathematics books that broaden their perspective, to stimulate career choice in science, to encourage teachers to enliven their instruction with collateral reading assignments and to facilitate selection of science books for school and public libraries. Publications available: *The Science Book List for Children* (\$1.50), *A Guide to Science Reading* (list of paperback books available at local stores or for 70¢ from AAAS), *The Science Book List for Young Adults* (\$1.50) and *Careers in Science* (25¢). Address: Dr. H. J. Deason, Dir. Science Library Program, AAAS. *Education News* reports education activities of scientific societies. Junior Academies of Science are encouraged through AAAS-affiliated Academies of Science and grants are given for student projects through Senior Academies. A Junior Scientists' Assembly is sponsored at an annual meeting by the Academy Conference. AAAS sponsors a Commission on Science Education which is primarily concerned with improvement of science teaching materials in elementary and junior high schools. The Commission conducted an eight-week summer writing session at Stanford University to prepare science materials for trial this year on a limited basis in grades K through 3. Address: Dr. John R. Mayor, Dir. of Educ., AAAS, 1515 Massachusetts Ave., N.W., Washington 5, D. C.

American Cancer Society

The American Cancer Society endeavors to stimulate student interest in science studies and careers. In cooperation chiefly with senior high schools, colleges and community resources, the Society is carrying out an active career-incentive program. It helps conduct and support science

fairs, provide medical and research speakers, facilitate student visits to hospitals and research centers—and in other ways seeks to aid student interest. Certain divisions have provided training grants for careers in medical technology and granted other scholarships. Free teaching aids and informational materials on cancer to science teachers and students are provided on request to local units of the Society.

American Chemical Society

Members volunteer to give personal assistance to high school science teachers. ACS presents four NSF-I awards and many local sections sponsor award programs. ACS Division of Chemical Education activities include a standardized test program and publication of the *Journal of Chemical Education*. ACS initiates conferences and institutes in chemistry and publishes *Chemistry*, a scientifically oriented journal for high school students and teachers. Over 160 local sections are active in educational activities. More than 400 student affiliate chapters in colleges and universities engage in programs to better prepare students for careers in chemistry. Consult local section or American Chemical Society, 1155 - 16th St., N.W., Washington 6, D. C.

American Dental Association

State and local dental societies and dental schools are urged to participate in science fair activities. They are prepared to offer advice and material assistance to science teachers and students. ADA annually presents awards at the NSF-I. Resource material available includes: *Frontiers in Dental Science* (50¢ from Scholastic Book Services, 904 Sylvan Ave, Englewood Cliffs, N. J.); *Dental Projects for High School Science Students* (25¢ for single copy; 20¢ each for 10 or more) from Science Service, and *ADA Catalog* describing dental health literature, information and films on career opportunities in dentistry (single copy on request). Write: Dr. Sholcm Pearlman, ADA, 222 E. Superior St., Chicago 11, Ill.

American Federation of Labor and Congress of Industrial Organizations

AFL-CIO supports better schools and encour-

ages scientific education. Many of its affiliated unions conduct apprenticeship schools to transmit skills to young apprentices and the latest scientific processes to journeymen members. Central labor organizations and local unions of skilled workmen in almost every community stand ready to help pupils with their science projects, clubs and fairs. Students wanting assistance are invited to contact the local union bodies or write AFL-CIO, Coord. of State and Local Councils, 815 16th St., N.W., Washington 6, D. C.

American Heart Association, Inc.

AHA is actively engaged in programs to interest young people in science and health careers. State and local associations cooperate extensively with science fairs and other school-related science activities. AHA and many of its state and local associations have health career committees which plan and conduct specific youth activities such as field trips, seminars, student research, work experience in science laboratories and consultation on special projects. For program information and educational materials, contact your local heart association.

American Institute of Biological Sciences

Among AIBS educational activities is the Biological Sciences Curriculum Study (BSCS), directed at the secondary level. Three approaches using fundamental concepts and modern trends will be available during fall of 1963. Visiting Biologist Program for High Schools is administered by AIBS and supported by The National Science Foundation and Atomic Energy Commission. The Secondary School Biological Sciences Film Series, directed primarily at 10th grade level, consists of 120 lecture-demonstration 30-min. films each correlated with teachers' manuals and study guides. Information is available on careers in biology. Selected winners from the NSF-I are guests and display their exhibits at AIBS annual meeting. Write: Educational Activities, AIBS, 2000 P St., N.W., Washington 6, D. C.

American Medical Association

County and state medical societies cooperate

with local science clubs and fairs by joining in sponsoring committees, giving special awards and scholarships, arranging counseling, etc. AMA presents citations at the NSF-I and selected winners are guests at AMA annual meeting. A 25-min. color, sound motion picture—*I Am a Doctor*; a large-scale exhibit on Medicine as a Career; descriptive literature on the study of medicine, scholarship information and school guidance program suggestions are available without charge from the AMA and local medical societies. Write: Norman H. Budde, AMA, 535 N. Dearborn St., Chicago 10, Ill.

American Pharmaceutical Association

Through the efforts of the National Advisory Commission on Careers in Pharmacy, which is comprised of representatives of every national organization in the profession, practicing pharmacists are urged to assist students and science teachers in the development of science projects. APhA, which presents two awards at the NSF-I, coordinates the commission. A career brochure, *See Your Future in Pharmacy*, two color sound films (one for junior high school age and one for senior high and adults) about the profession of pharmacy are available and a 10-foot Career Exhibit may be rented from APhA. Address: George B. Griffenhagen, APhA, 2215 Constitution Ave., N.W., Washington 37, D. C.

American Psychological Association

The program of APA is to advance psychology as a science and a means of promoting the public welfare. APA members are interested in helping students become familiar with research, theory and practice of psychology. APA will award several prizes at the NSF-I for projects relating to psychology conceived broadly as a behavioral science. For information and booklet, *A Career in Psychology*, write: American Psychological Ass'n., 1333 16th St., N.W., Washington 6, D. C.

American Society for Metals

ASM distributes information on metals, materials, presents technical congresses and exhibitions, issues accredited home study courses and publishes technical and periodical books. Local chapters cooperate with schools and libraries in attracting students to engineering and encourage young engineers' meetings. Scholarships are provided through colleges offering degrees in metallurgy. ASM cooperates in FSA Awards, a metal science kit and establishment of BSA Explorer Posts in metals. ASM awards are made at the NSF-I. Contact: Allan Ray Putnam, American Society for Metals, Metals Park, Ohio.

American Society for Microbiology

Local Branches of the ASM have committees which provide speakers on microbiological topics and give aid to biology students and teachers. ASM issues citations to students and their sponsors for microbiology exhibits at science fairs. Certain local branches give additional awards. ASM sponsors awards at the NSF-I. Suggestions for experiments, projects, film lists, references, other teaching aid materials and a career brochure are available free to teachers. A list of universities offering degree programs in microbiology is available at 50¢. Address: American Society for Microbiology, 115 Huron View Blvd., Ann Arbor, Mich. A movie, "A Career in Bacteriology," may be rented or purchased from Audio-Visual Center, Indiana University, Bloomington, and other sources.

American Veterinary Medical Association

Veterinary associations are being encouraged to assist students in the development of proper scientific attitudes and techniques. Aid to science fair personnel through these associations and their Women's Auxiliaries is being developed. A booklet *Veterinary Medicine as a Career* (single copies free, additional copies 10¢ each) and a list of veterinary medical organizations to contact for direct assistance are available. AVMA presents awards at the NSF-I; top winner is guest at AVMA annual meeting. Ad-

dress: Heinz R. Kuehn, Dir., Public Information, 600 S. Michigan Ave., Chicago 5, Ill.

Armed Forces Chemical Association

AFCA is a nonprofit organization interested in promoting and supporting chemical, bacteriological and radiological technology. Membership is composed of military men from all branches of the Armed Services, civilian technicians employed by government agencies and representatives of chemical manufacturing firms. AFCA supports six NSF-I awards. Educational activities include symposiums, national and local meetings, briefings and publications. Publications include: *Armed Forces Chemical Journal* and *Newsletter of the Armed Forces Chemical Association*. For information, write: AFCA Headquarters, Suite 610, 1025 Connecticut Ave., N.W., Washington 36, D. C.

Army Aviation Association of America

AAAA will participate again in the National Science Fair-International. Five \$100 awards and inscribed plaques will be awarded to finalists for Army Aviation oriented projects. AAAA plans to increase its participation in the NSF-I affiliated fairs by offering certificates and providing qualified judges where feasible. Write: Mr. D. P. Gerard, Chm., National Science Fair Program, AAAA, Westport, Conn.

B'nai B'rith Women

BBW works with the B'nai B'nai Youth Organizations, Hillel Foundation and Vocational Service. Direction by trained personnel enable youth to explore interests, learn skills, develop healthy patterns of human relationships and responsibilities. Career guidance clinics are conducted. Write: BBW, 1640 Rhode Island Ave., N.W., Washington 36, D. C.

Chamber of Commerce of the United States

Over 2000 Chambers of Commerce have Committees on Education alerted to manpower problems and to the need for career planning. Many chambers cooperate with school officials in planning and conducting "Career Conferences for Teen-Agers" in which students have the opportunity to learn trends in local manpower needs and training required. Business and professional men in every community are ready to work with teachers and administrators to improve guidance programs, to develop science fairs or to secure materials, equipment or work experience to make science teaching more effective. Consult local Chamber of Commerce or write: Education Dept., U. S. Chamber of Commerce, 1615 H St., N.W., Washington 6, D. C.

Cooperative Extension Service

4-H Club work, the youth phase of the Cooperative Extension Service of the U. S. Department of Agriculture in cooperation with the Land Grant College or University in each state, provides a program of youth development based on scientific approach to problem solving. This is supported by extension specialists representing various divisions of each college or university. Scientific approach to agriculture, home economics and youth development has always been an important segment of 4-H Club work. It is increasingly imperative that materials relating to science be provided volunteer local leaders who works directly with 4-H members in 50 States, Puerto Rico and 70 foreign countries. Information from the 4-H Division, Federal Extension Service, USDA, Washington 25, D. C.; the Land Grant College or University of each State; or local county extension office.

Engineering and Science Organizations

Each field of engineering has its own professional society and some are represented by the Engineers Joint Council, 345 E. 47th St., New York 17, N. Y. Problems of education, personnel, training and utilization are the concern of the Engineering Manpower Commission at the above address, while Scientific Manpower Commission, 1507 M St., N.W., Washington 5, D. C., performs the same function for scientific organizations. Teachers and others may make inquiries on special problems in science, tech-

nology and careers. The Scientific Manpower Commission may be consulted on Selective Service and other military problems.

Entomological Society of America

ESA is a professional society of entomologists, students of entomology and others with related interests. Membership is principally North American with about 100 other countries represented. The Society publishes: *Annals of the Entomological Society of America*, *Bulletin of the Entomological Society of America*, *Journal of Economic Entomology*, *Miscellaneous Publications of the Entomological Society of America*, *Entoma*. Write: Executive Secretary, ESA National Headquarters, 4603 Calvert Rd., College Park, Md.

Federal Surplus Property

Agencies and Departments of the Federal Government may find that they own more real or personal property than they require because of a change in program requirements or reduction in operation. Surplus property, properly utilized on school project activity can permit a wide variety of student skills, interests and abilities. Because of diversity of materials available, individual differences can be more readily met. Students active in science research projects under school supervision would be eligible to use surplus property acquired by their school. A single State Agency for Surplus Property in each state distributes the property. For name of your state director, contact the Regional Representative, Division of Surplus Property Utilization, Department of Health, Education and Welfare, for your Region: Region I, 120 Boylston St., Boston 16, Mass.; Region II, 42 Broadway, New York 4, N. Y.; Region III, 700 E. Jefferson St., Charlottesville, Va.; Region IV, 50 7th St., N.E., Atlanta, Ga.; Region V, 433 W. Van Buren St., Chicago 7, Ill.; Region VI, 560 Westport Rd., Kansas City 6, Mo.; Region VII, 1114 Commerce St., Dallas 2, Texas; Region VIII, 621 17th St., Denver 2, Colo.; Region IX, 447 Federal Office Bldg., San Francisco 2, Calif.

Junior Engineering Technical Society

Program designed to stimulate and encourage interest in engineering, applied science and mathematics among high school students. JETS chapters are sponsored by local industry and/or professional groups throughout the U. S. and 11 foreign countries. JETS provides materials for initiating and operating chapters. Program includes a National Project Exposition and Conference. JETS offers students an opportunity to explore various technical fields and to compare attitudes, interests and abilities with requirements of technical professions through actual experiences and contacts. Write: JETS, 345 E. 47th St., New York 17, N. Y.

Junior Science and Humanities Symposia Program

The U. S. Army cooperates with universities, educational and civic organizations, and industries in conducting this program. Symposia are held only on college campuses or similar places and are designed to seek out, motivate and stimulate talented youth toward careers in science and provide recognition for outstanding students and teachers. Programs are two to four days in length and consist of presentations of research papers by high school students, presentations by outstanding scientists and humanists, panel discussions on career and technical matters and visits to research laboratories. Presentations on humanities are given to impress young scientists with the need to be intellectually well-rounded. A National U. S. Army JSHS is held honoring outstanding student speakers and teachers. Write: Director, JSHS Program, U. S. Army Research Office, Box CM, Duke Station, Durham, N. C.

Manufacturing Chemists' Association, Inc.

MCA, representing the chemical manufacturing industry, executes an aid-to-education program from kindergarten to college. Request free

copy: *An Industry Helps Our Schools*. Holt, Rinehart and Winston, 383 Madison Ave., New York 17, N. Y., distributes *Scientific Experiments in Chemistry* (for senior highs), *Superstition to Supersonics* (for junior highs) and *Matter, Energy and Change* (for elementary supervisors and teachers). For MCA's chemistry films information write Southerland Educational Films, Inc., 201 N. Occidental Blvd., Los Angeles 26, Calif. Free publications: *Guide to Aid-to-Education Materials Available from the Chemical Industry*; *Frontiersmen of the Future*; *Careers Ahead in the Chemical Industry*; *Film Guide on Chemicals, Chemistry and the Chemical Industry*. *Chemical Industry Facts Book* (single copy 40¢ to educators). Address: Manufacturing Chemists' Association, 1825 Connecticut Ave., N.W., Washington 9, D. C.

Mathematical Association of America

MAA offers guidance and information to students interested in mathematics. The guidance pamphlet: *Professional Opportunities in Mathematics* may be purchased (25¢ for single copy, five or more 20¢ each). Under a National Science Foundation Grant, MAA sponsors a program of lecturers to secondary schools. Annual High School Mathematics Contest is sponsored jointly by MAA and Society of Actuaries. For information, write: Harry M. Gehman, Exec. Dir., MAA, SUNY at Buffalo (University of Buffalo), Buffalo 14, N. Y.

National Aeronautics and Space Administration

NASA has organized the Office of Educational Programs and Services (OEPS) to inform educators, students and the public. OEPS programs encompass the development, production and distribution of publications, reports, exhibits, historical documents, motion pictures, other visual aids and the Spacemobile, a space science lecture-demonstration presented to school assemblies, science fairs, teacher workshops and institutes, adult and higher education groups, civic organizations and general public audiences. Included are services to educational and commercial television networks, curriculum planners of elementary and secondary schools, colleges and professional educational organizations, which activities involve personal consultative services of NASA educational specialists and the help and advice of NASA experts in fields of space science and technology. Address: Office of Educational Programs and Services, NASA, Washington 25, D. C.

National Aerospace Education Council

To help teachers locate free and inexpensive aerospace teaching aids NAEC publishes *Pictures, Pamphlets and Packets* (25¢) listing more than 600 booklets, pamphlets, charts, pictures, films, bibliographies, units, etc., produced by industry, government agencies, private and professional organizations; *1963 U. S. Aircraft, Missiles and Spacecraft* (\$2) pictorial descriptions, three-view drawings, specifications; *Earth and Space Science* (\$1.50) guide for secondary teachers covering geology, climate, oceans, and space science; *America's Space Pilots* (25¢) biographies and photographs of NASA and Air Force space trainees and future manned space programs. To provide continuing aviation and space information, NAEC offers a mailing service (\$5 a year). Address: National Aerospace Education Council, 1025 Connecticut Ave., N.W., Washington 6, D. C.

National Association of Manufacturers

By encouraging study of science and mathematics in schools, cooperation with local and regional science fairs and the National Science Fair-International, the NAM Education Department and Committee on Research is promoting development of science talent. Booklets, *Industrial Research and Development* and *The Growth of American Industry*, have been distributed. Copies free on request. Address: Education Dept., NAM, 2 East 48th St., New York 17, N. Y.

National Association of Rocketry

NAR, an affiliate of the National Aeronautics Association, U. S. Representative to the Federation Aeronautique Internationale, is nationally recognized for the Space Age Hobby and is the USAF-approved model rocketry organization. Model rocketry is a sport, hobby and educational tool involved with building and flying small, light, non-metallic, recoverable models powered by factory-made solid propellant rocket engines of proven reliability and safety. Membership includes privileges of obtaining information, plans, club charters, contest sanctions, etc. Write: National Association of Rocketry, Stamford Museum and Nature Ctr., Stamford, Conn.

National Committee for Careers in Medical Technology

In cooperation with the Intersociety Committee on Pathology Information, NCCMT supplies certificates for local and state medical technologist and pathologist societies to award at science fairs. Summer jobs in hospital laboratories often accompany awards. A summer job with the American Registry of Pathology at the Armed Forces Institute of Pathology plus travel expenses is awarded for a pathology-medical technology project at the NSF-I. Career information on medical technology is available. NCCMT is sponsored by the American Society of Clinical Pathologists, American Society of Medical Technologists and College of American Pathologists. Address: National Committee for Careers in Medical Technology, 1785 Massachusetts Ave., N.W., Washington 6, D. C.

National Institute of Neurological Diseases and Blindness (NIH)

NINDB conducts research on the brain and nervous system, neurological and sensory disorders. *Hope Through Research*, series of pamphlets, explain many of these disorders. *Exploring the Brain*, prepared for high school students by National Committee for Research in Neurological Disorders in cooperation with NINDB, explains neurological disorders and presents research approaches. Special exhibits available for conventions and science fairs. Write for pamphlets, information concerning research materials or science fair projects: National Institute of Neurological Disease and Blindness, NIH, Bethesda 14, Md.

National Merit Scholarships

National Merit Scholarships are four-year college scholarships available to high school seniors. Stipends are based on need and vary from \$100 to \$1500 per year. Winners choose colleges and curricula during the competition. Last year 1,415 Merit Scholarships were awarded, including 875 Merit Scholarships offered by and named for 175 sponsors. Each principal is sent registration materials in September. The following spring, National Merit Qualifying Test is administered to second semester juniors and first semester seniors. Participating students pay a \$1 testing fee. The 1964-65 competition begins with Qualifying Test in March 1964. Winners will be announced in the Spring of 1965. See your principal or write: National Merit Scholarships, 1580 Sherman Ave., Evanston, Ill.

National Pest Control Association

NPCA is expanding its program of aid to science fairs and other local programs designed to encourage science study. Through individual members and cooperating state associations, NPCA seeks to make information available on general biology, entomology and economic entomology. NPCA distributes *Careers in Entomology*, in cooperation with the Entomological Society of America, and *Career Opportunities in the Pest Control Industry*. Write: National Pest Control Ass'n, 250 W. Jersey St., Elizabeth, N. J.

National Safety Council

NSC, organizing framework of the safety movement in America, is a voluntary non-commercial, nonprofit membership association.

Its purpose is to reduce number and severity of accidents and serves as a national and international clearing house to gather and distribute safety information. Through its national headquarters, regional offices, state and local affiliated units, it stimulates continuous and coordinated accident prevention programs. Cooperating with other organizations, it stimulates interest in safety in all fields. For information on materials and services for science clubs write: Youth Activities Dept., National Safety Council, 425 N. Michigan Ave., Chicago 11, Ill.

National Science Foundation

This Federal Government agency makes grants to other organizations to support scientific research and science education. Programs in education include institutes, research participation, summer fellowships and other training programs for secondary school and college teachers of science and mathematics; research participation and independent study for college undergraduates; special programs for high school students in science and mathematics; holiday lectures; fellowships for graduate students and advanced scholars in science, mathematics and engineering; and projects for the improvement of course content materials and the development of new teaching and learning aids in science and mathematics. For general description of these programs, write for *National Science Foundation Programs for Education in the Sciences* to National Science Foundation, Washington 25, D. C. More specific information on programs is also available.

National Science Teachers Association

NSTA is a Department of NEA, an affiliate of AAAS. Membership (\$8.00) provides: 8 issues of *The Science Teacher*, 8 issues of *Science and Children* (a journal for elementary science teachers) and the packet service. Several publications for students and teachers are available. Activities include the Annual Convention, nine regional meetings and maintaining national registry of science and mathematics teachers. Future Scientists of America club program includes: *Sponsor's Guide Book*, *Centrifuge Newsletter*, Charter Plaques and other free and low cost services and materials. The Ford-Future Scientists of America Awards for science students offer 720 plaques (7-12 grades), 48 \$100 scholarships (9-12 graders), 16 \$300 scholarships (11-12 graders), and several \$100 scholarships as awards for reports of research-type investigation. Write: National Science Teachers Ass'n., 1201 16th St., N.W., Washington 36, D. C.

National Telemetering Conference

NTC will award to the National Science Fair-International finalist with the best exhibit in a field directly applicable to telemetering, a certificate and expense-paid trip to attend and exhibit at the annual NTC. The sponsor of the award recipient also will be awarded this trip.

National Youth Conference on the Atom

Approximately 60 investor-owned electric utility companies are sponsoring outstanding high school science students and teachers to the 1963 National Youth Conference on the Atom, November 7-9, Pick-Congress Hotel, Chicago. Purpose is to present to these students and teachers an authoritative and inspiring picture of the peaceful atom in its various applications and help advance interest in the study of science. Delegates will tour Argonne National Laboratory and Dresden Nuclear Power Station. Co-sponsored by National Science Teachers Association, the conference is supported by other scientific and academic organizations. Delegates are selected by local educators working with electric companies. Contact local electric company or write: T. R. Jordan, Bozell & Jacobs, Inc., 230 Park Ave., New York 17, N. Y.

Oak Ridge Institute of Nuclear Studies

The Institute is a nonprofit educational corporation of Southern colleges and universities, operating under contract with the U. S. Atomic

Energy Commission. It is a major avenue through which these institutions participate in and support the nation's nuclear energy program. Programs are designed to further the cause of science and science education from the pre-college to post-doctoral levels. Institute activities include a program to train secondary science teachers to become either "traveling teachers" or specialists in their own school systems; administration of graduate fellowship programs, traveling atomic energy exhibits, student tours of nuclear facilities and college student training program; special courses for high school and college teachers, symposia and conferences; maintenance of a museum of atomic energy and provision of a mobile radioisotopes laboratory for on-campus college training. For information write: Oak Ridge Institute of Nuclear Studies, P. O. Box 117, Oak Ridge, Tenn.

Optical Society of America

OSA has an active career-incentive program. A booklet, *Careers in Optics*, is being prepared. OSA sections welcome young scientists to meetings. OSA student memberships, available at \$2 a year, give students the right to attend OSA meetings and receive OSA publications. OSA will present two awards at the National Science Fair-International of \$100 and \$75 for books and materials to enable the students to continue their studies in optics, plus one to three honorable mention awards, if merited. All awardees receive a one-year student membership in OSA, including gratis subscriptions to *Journal of the Optical Society of America* and to *Applied Optics*. For information about local OSA sections, write: Optical Society of America, 1155 16th St., N.W., Washington 6, D. C.

Science Service

Adult sponsors are invited to affiliate their groups with Science Club of America and receive the free SCA Sponsor Aids. Science Talent Search, conducted by Science Clubs of America and sponsored by Westinghouse Educational Foundation, is open to high school seniors. Teachers should request examination about October 15. Affiliated regional science fairs send their top two finalists to the National Science Fair-International to be held in Baltimore, Md., May 6-9, 1964. A news service for newspapers is operated. *Science News Letter*, a weekly summary of current science (\$5.50 per year), is published. THINGS of science, monthly experimental kits (\$5 per year), are produced. Books valuable in science youth activities are available. Write: Science Service, 1719 N Street, N.W., Washington 36, D. C.

Scientific Apparatus Makers Association

SAMA represents some of the nation's principal manufacturers and dealers in scientific laboratory and equipment industry. Leaflets and reprints available without charge: *A Guide to Evaluating Your Science Facilities*, *Your Career with the Instrument and Control Industry by the Recorder-Controller Section*, *I am the Science Teacher*, *SAMA Motion Picture Film Directory*, *Chart—Suggested Built-In Instruments and Equipment for Laboratory Furniture*. Write: Scientific Apparatus Makers Association, 20 N. Wacker Dr., Chicago 6, Ill.

Society of Women Engineers

Objectives of SWE are to inform the public of qualifications, abilities and achievements of women engineers, bring about better utilization of engineering talent for economic and social benefit of humanity, encourage young women with suitable aptitudes and interest to enter the engineering profession and guide them in educational programs. SWE presents a \$100 U. S. Savings Bond to the girl with the best project showing engineering aptitudes at the NSF-I. Write: Society of Women Engineers, Room 305, 345 E. 47th St., New York 17, N. Y.

The National Foundation

The National Foundation, a private health organization supported largely by the March of Dimes, conducts programs of research, patient

care and education in virus diseases, birth defects, arthritis and polio. Research financed by The National Foundation developed Salk and Sabin vaccines. As of July 1, 1963, The National Foundation-March of Dimes is supporting a network of 69 Clinics for arthritis and birth defects. Many local chapters offer "starter" scholarships in the fields of medicine, medical social work, physical and occupational therapy. Publications of Yearly Annual Report, booklets, pamphlets and posters; filmstrips and exhibits available for loan. Headquarters: 800 Second Ave., New York 17, N. Y.

Thomas Alva Edison Foundation

The Edison Foundation conducts a public information program for improving quality and quantity of science education and encouragement of boys and girls to undertake scientific and engineering careers. Science Youth Day, held annually on Thomas Alva Edison's birthday, February 11, is a nationwide program to interest young people in science and engineering. Science experiment booklets and free materials are distributed. Student visits to industrial plants, research and development laboratories are arranged. The Foundation organizes national conferences and Edison Institutes on scientific manpower and science education. Awards are given in the mass media to encourage better program material in sciences. A list of publications is available. Write: Thomas Alva Edison Foundation, Inc., 8 W. 40th St., New York 18, N. Y.

U. S. Atomic Energy Commission

To encourage interest of elementary and secondary school students in nuclear science, AEC provides educational literature and motion picture films (write USAEC, Division of Technical Information, Engineering and Education Section, P.O. Box 62, Oak Ridge, Tenn.); traveling exhibits and assembly demonstrations (write Information and Exhibits Division, ORINS, P.O. Box 117, Oak Ridge, Tenn.); and AEC Special Awards for outstanding nuclear-related exhibits at the National Science Fair to 10 students and their teachers for an Atomic Energy Research Orientation Week at an AEC national laboratory. To aid both neophyte and veteran exhibitors, AEC is preparing a "how-to" booklet on nuclear energy projects.

U. S. Forest Service

Through its Conservation Education Branch the Forest Service, U. S. Department of Agriculture, assists teachers in the development of conservation materials in the curriculum. Forest Service provides teaching materials, charts and posters. Its personnel serve as resource specialists in school programs. Several publications serve to inspire and inform youth of career opportunities. Special ideas are outlined for science fair projects. Write: Conservation Educ. Branch, Forest Service, USDA, Washington 25, D. C.

U. S. Geological Survey

The U. S. Geological Survey has prepared *Project Ideas in the Earth Sciences*, describing 20 projects, for free distribution to teachers and students. Write to nearest U. S. Geological Survey Office: 503 Cordova Bldg., Anchorage, Alaska; 232 Appraisers Bldg., San Francisco, Calif.; 1031 Bartlett Bldg., Los Angeles, Calif.; 468 New Customhouse, Denver, Colo.; 602 Thomas Bldg., Dallas, Tex.; 437 Federal Bldg., Salt Lake City, Utah; South 157 Howard St., Spokane, Wash.; or to the Director, U. S. Geological Survey, Washington 25, D. C.

U. S. Office of Education

Activities of the Science Specialists of the Division of Elementary and Secondary Education include research, publication and consultation services to improve quality of science instruction. Science Teaching Exploring for Excellence Program (STEPS) is a "bootstrap" operation in some 20 pilot project areas. Key to the STEPS program is local initiative. In a STEPS program an effort is made to draw upon all resources available for science teaching improvement. New curriculum materials, equip-

ment and facilities purchased under NDEA, science institute returnees, college and industrial scientists are among the many resources which might be tapped. State science supervisors and U. S. Office of Education personnel will provide consultant help when requested, but a STEPS project remains a local effort. For information, write: Publications Inquiry Unit, U. S. Office of Education, Washington 25, D. C., and ask for bulletin #OE-29037.

U. S. Patent Office

The Patent Office provides a vital public service by issuing patents and granting to inventors the exclusive right to their inventions for a 17 year period. The Patent System affords incentives for scientific and technological advancement. Before granting a patent, all prior patents and literature must be searched. The Patent Office and its reservoir of over 3,000,000 patents form the major concentration of technological know-how in the world. Information is provided to students, teachers, inventors, researchers, scientists and the public. For pamphlets: *Answers to Questions Frequently Asked About Patents*, *How to Obtain Information from Patents*, write: Office of Information Services, U. S. Patent Office, Washington 25, D. C.

U. S. Soil Conservation Service

The Soil Conservation Service, U. S. Department of Agriculture, furnishes technical assistance to establish soil and water conservation programs and practices. Publications: *That Land Down There*—AB 255, *Soil Conservation at Home*—AB 244, *Outdoor Recreation in Small Watershed Projects*—PA 500, *Careers in Soil Conservation Service*—Misc. Pub. 717, *Teaching Soil and Water Conservation*—PA 341 and others are available to teachers, librarians and leaders. Contact: Local and state SCS offices.

U. S. Department of Defense

The Department of Defense, including Military Departments, cooperates with individuals and groups in providing guidance and assistance on projects designed to stimulate interest in scientific pursuits. This includes speakers' programs, films, instructional and informational materials, demonstrations, exhibits and displays of military products, installation tours and briefings, and assistance in certain forms of scientific experimentation. Address: Commanding Officers of local military installations.

U. S. Air Force

The Air Force will participate in regional, state and local science fairs, recognizing high achievement in fields related to Aerospace and providing student summer employment for NSF-I finalists in its research laboratories. The Aerospace Education Foundation of the Air Force Association will award recognition prizes to USAF recognized finalists.

U. S. Army

The Department of the Army expanded its participation in 1963 by selecting 20 superior and 13 meritorious award winners at the 14th NSF-I. Of the Superior Awards, 9 were offered summer jobs and 11 were given one week visits to research and development laboratories. The Army also launched its first participation in regional fairs by working through its Reserve Research and Development Units throughout the country. With one hundred fairs as its original goal, plans are underway for total participation in all NSF-I affiliated regional fairs. Greater emphasis is to be placed on offers of summer employment.

U. S. Navy

The U. S. Navy offers a tour/cruise to one male sophomore, junior, or senior at each NSF-I affiliated fair. Fair directors must request awards from the National Science Fair-International, 1719 N St., N.W., Washington 36, D. C. Naval District Commandants have been requested to cooperate with fair directors in selecting winners and presenting the award of a one-week visit to Navy installations and a short shipboard cruise. Ten additional winners are selected at the NSF-I.