

15¢

\$5.50 A YEAR

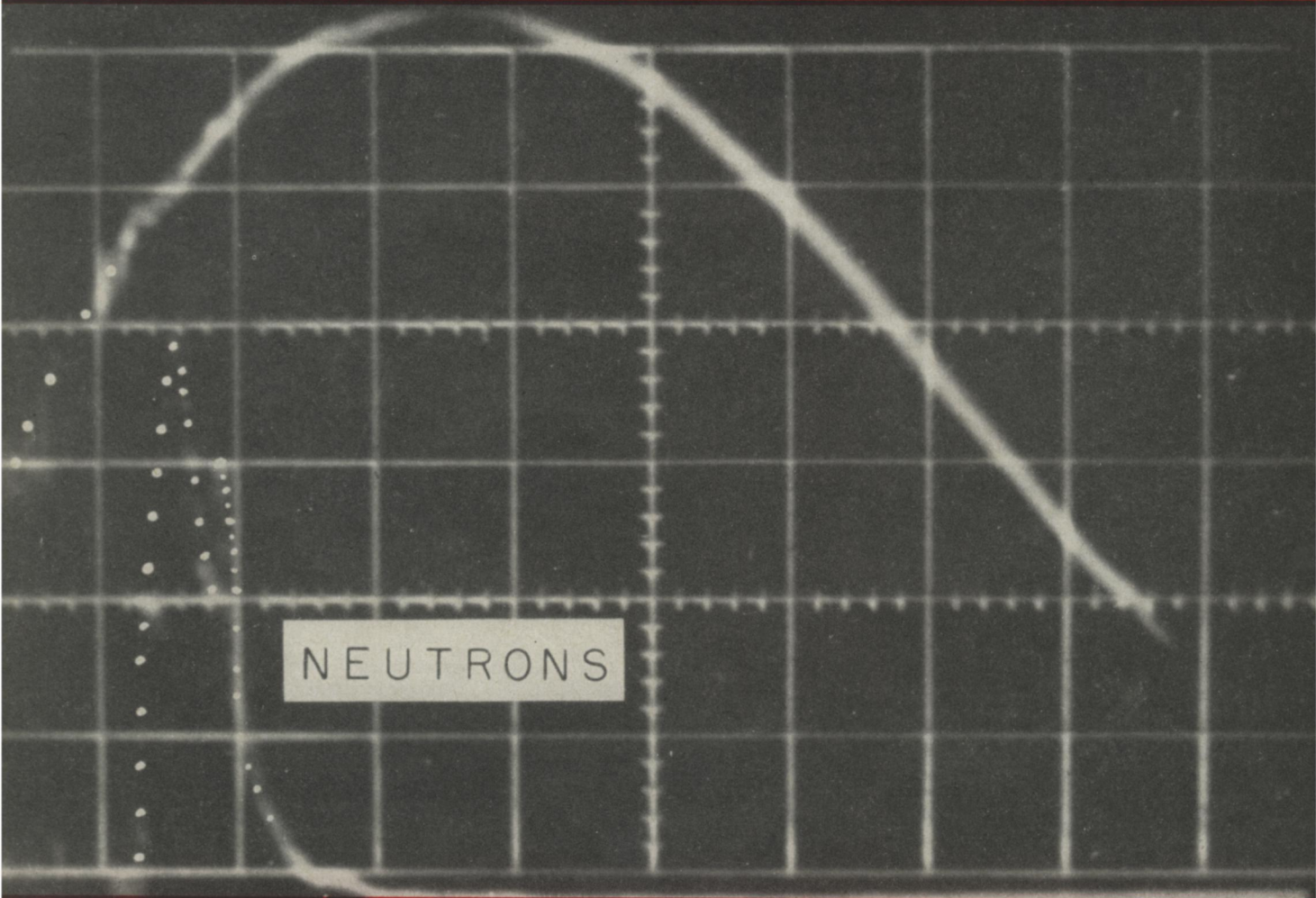
August 29, 1959

VOL. 76 NO. 9 PAGES 129-144

SCIENCE NEWS LETTER

®

THE WEEKLY SUMMARY OF CURRENT SCIENCE



NEUTRONS

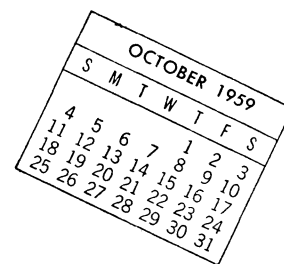
Neutrons From Fusion?

See Page 131

A SCIENCE SERVICE PUBLICATION

October

SCIENCE YOUTH MONTH



To inspire and inform youth in our schools as to the opportunities, need and qualifications of scientific and technological manpower.

Millions of youths in schools, science clubs, and science fairs throughout the nation provide the nucleus of this month-long emphasis on science activities for the new school year.

✓ Check YOUR action program . . . NOW

General . . .

Emphasize the wide range of careers in science and the variety of abilities and interests that are needed.

Dramatize the lifelong adventure of being part of the scientific community, of sharing the exciting challenge and rewards of searching for new knowledge.

Recognize the importance of brainpower as well as manpower.

Business and Industry . . .

Advertising—produce National Science Youth Month posters; organize a poster contest among students; suggest featuring NSYM in appropriate advertising of books, scientific equipment, etc.

Stores, banks, etc.—display science fair projects in windows, lobby; tie in NSYM with window displays of appropriate merchandise; highlight NSYM in book, toy, optical, hobby, electrical equipment, etc. departments.

Industries that employ scientists—arrange student-teacher tours of laboratories; offer to provide speakers for PTA, science club, civic organization meetings on the importance of science, the significance of NSYM, scientific careers; offer project counseling to student-scientists; make scientific library available to qualified students or to their teachers and club sponsors.

Community . . .

Libraries, museums—feature special displays tied in with NSYM; arrange programs relevant to NSYM; display outstanding projects done for science fairs and the Science Talent Search.

Civic organizations—invite science teachers, scientists, science students, science fair and Science Talent Search winners to speak at meetings; honor outstanding teachers, students, scientists.

Youth organizations—feature science in Boy and Girl Scouts, Campfire Girls, YW and YMCA, Boys' Clubs, 4-H, etc. Give recognition and awards for science projects of members.

Organizations and individuals—give practical support to honoring and rewarding science achievement at least as much as athletic triumphs. Join in educating the whole community on the importance of encouraging the development of young scientists, engineers and technicians.

Consider forming a permanent organization of civic groups, professional societies, universities, newspapers and industries to sponsor science fairs, work for better science education, arrange for career counseling, act as a catalyst for contacts between scientists and students.

Plan the October PTA meeting as "Science Night." Invite a scientist as speaker; ask students and teachers to cooperate in featuring school science activities; honor the science faculty; bring PTA up to date on science awards won by students in the past year; exhibit awards and some of the best science projects.

Teachers . . .

Request Oct. 15 Science Talent Search examinations for your most promising senior science students. Encourage them to finish their research papers in plenty of time. (Exams mailed Nov. 15.)

Sponsor a science club if not already doing so. A copy of the Sponsor Handbook, issued without cost to sponsors by Science Clubs of America, will answer questions and offer suggestions.

Plan this year's science fair, appoint committees. (If this is your first, write Science Service for help in organizing.)

Find a regional or state fair you can join, if you haven't already done so, to make it possible for your winners to compete with others to go on to the National Science Fair.

Ask cooperation from the school faculty in featuring science in mathematics, English, history, art, etc.

Give recognition to top science students, their accomplishments and plans, in school papers and magazines, news bulletins.

Ask librarians to display new science books and science magazines and journals.

Offer to advise, or to find a professional scientist-advisor, on individual science projects of students.

Ask your high school principal for information about the National Merit Scholarship Program.

Request student entry materials for the Science Achievement Awards for Students program. Available from the Future Scientists of America Foundation of NSTA.

Students . . .

Join the Science Club. (If your school doesn't have one, join with other interested students to start one.)

Plan "how-to-do-it" sessions to share ideas and techniques in exhibiting science fair projects.

Encourage school science fairs in elementary and junior high schools.

Feature science this month in your radio, auto, etc., clubs.

Register with your science teacher for the Science Talent Search examination (if you are a senior), and keep working on your research project, paper due in December.

Plan a "career" meeting for your club. Consider asking a scientist or panel of scientists to discuss careers in science.

For the fourth year, October is being designated as National Science Youth Month. Thirty-four national groups have joined with Science Service in organizing this national emphasis on science youth activity. The National Science Youth Program of Science Service, of which Science Youth Month is a part, is supported in part under a grant from the National Science Foundation.

SCIENCE IS STRENGTH. TODAY'S YOUTHS ARE TOMORROW'S SCIENTISTS.

Cooperating in National Science Youth Month:

American Association for the Advancement of Science

The AAAS administers a Traveling High School Science Library Program and a Traveling Elementary School Science Library Program, sponsored by the National Science Foundation, to stimulate interest in and choice of careers in science and to assist in improving school instruction in the sciences and mathematics. These libraries are on loan in 1959-60 to approximately 1,700 high schools and preparatory schools and 800 elementary schools. Applications for 1960-61 are invited from principals and headmasters. Address Dr. H. J. Deason, AAAS, Annotated catalogues of the traveling libraries are available at 25c each. Also available are an annotated list of paperback science books (25c) and a comprehensive list of science books recommended for high school and public libraries (\$1.00). Send orders to AAAS Publications.

Under a new grant from the Carnegie Corporation of New York, the Science Teaching Program of AAAS is sponsoring a project on Studies in Teacher Education with the cooperation of Bucknell and Emory Universities, Hunter College, and the University of Tennessee. Another Study on the Use of Special Teachers of Science in grades 5 and 6 will be carried out in Cedar Rapids, Iowa, Lansing, Mich., Washington, D. C., and Versailles, Ky. Small research grants have been made available to staff members in small colleges. A requirement of the research project is that it involve preservice science teachers. A quarterly newsletter, called *Science Education News* reports education activities of scientific societies.

Junior Academies of Science are encouraged through AAAS-affiliated State and City Academies of Science. A Junior Scientists' Assembly is sponsored each year at the annual meeting. Grants are given for student projects through the Senior Academies. AAAS, 1515 Massachusetts Avenue, N. W., Washington 5, D. C.

American Cancer Society

The ACS is carrying out an active career-incentive program. Most ACS local Units and Divisions can provide cooperation and support for local career programs and activities. A number of ACS Divisions have provided special training grants for careers in medical technology, and other types of scholarships relating to career training have been granted in some instances. Materials and information on cancer may be obtained without charge by students, teachers and others upon request to their local ACS Unit. Write: Public Education Division, American Cancer Society, Inc., 521 West 57th St., New York 19, N. Y.

American Chemical Society

Each year about 5,000 of the nearly 90,000 ACS members volunteer to give such personal assistance to high school science teachers as these teachers request. This year ACS members are particularly excited about the possibilities of the "Continental Classroom" in modern chemistry which will start in September and continue until June, 1960. This nationally televised course is aimed specifically at the high school teacher of chemistry. Some of his outstanding students undoubtedly will want to watch the course. Special assistance in connection with this course and other projects can be obtained through ACS members in more than 150 local sections throughout the country. If teachers want further information about careers in chemistry or chemical engineering, summer employment opportunities, speakers, consultants and the like, they

should consult local section officers. Their names and addresses and other information can be obtained from: American Chemical Society, 1155 16th Street, N.W., Washington 6, D. C.

American Dental Association

All state and local dental societies are being urged to participate in science fair activities. Dental societies and dental schools in many localities are prepared to offer advice and material assistance to science teachers and students. The Association presents four awards for outstanding exhibits in dental and allied science at the National Science Fair. Two Certificates of Superior Achievement carry with them an invitation to the American Dental Association Annual Session and two Certificates of Meritorious Achievement entitle winners to gifts of books or equipment. A booklet, *Dental Projects for High School Science Students*, is available without charge from many local dental societies; single copies from Science Service (25c handling charge; 20c each for 10 or more). Dental health and hygiene information described in the Catalog of the ADA (single copy on request) provides some additional background material for science projects.

Address: Dr. Sholom Pearlman, American Dental Association, 222 East Superior Street, Chicago 11, Illinois.

American Federation of Labor and Congress of Industrial Organizations

The AFL-CIO supports better schools and encourages scientific education in every possible manner and at all levels. 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 in the nation stand ready to help pupils with their science projects, clubs and fairs. Students wanting assistance are invited to contact the local union bodies in their home-towns or to write the AFL-CIO Public Relations Department at 815 16th Street, N.W., Washington 6, D. C.

American Medical Association

County and state medical societies cooperate with local science fairs by joining in sponsoring committees, giving special awards and scholarships, providing transportation to the National Science Fair, arranging counseling, etc. The American Medical Association presents four citations at the annual National Science Fair and the two top AMA award winners are guests at the AMA annual meeting. A 20-min., color, sound motion picture—I Am a Doctor; a large-scale exhibit on Medicine as a Career; and descriptive literature on the study of medicine are available from the AMA via local medical societies. For information and names of local medical society officers, write to Leo E. Brown, American Medical Association, 535 North Dearborn St., Chicago 10, Ill.

American Veterinary Medical Association

All state, territorial and provincial veterinary associations are being encouraged to lend every assistance to students toward the development of proper scientific attitudes and techniques. Effective 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 10c each. Sponsors may obtain a list of veterinary medical organizations to contact for direct assistance. The AVMA presents two Awards at the National Science Fair, top award winner is guest at the AVMA annual meeting. Address: Brian M. Forster, Director,

Public Information, 600 So. Michigan Ave., Chicago 5, Ill.

B'nai B'rith Women

B'nai B'rith Women participates actively with and contributes financially to three major youth services, namely: B'nai B'rith Youth Organization, Hillel Foundations and Vocational Service.

In these services, direction of young people is carried on by professionally trained personnel. Supervised leisure time activities provide background for youth to explore and express individual interests and learn skills, while developing healthy patterns of human relationships and fulfillment of family and community responsibilities.

Career clinics are conducted to provide guidance in the selection of suitable careers. Through Hillel, B'nai B'rith Women offers scholarships for worthy and needy students. Write: B'nai B'rith Women, 1640 Rhode Island Ave., N.W., Washington 6, D. C.

Chamber of Commerce of the United States

Over 2,200 Chambers of Commerce now have Committees on Education. These committees have been alerted to the nation's manpower problems and to the need for better career planning by young people. Many chambers have cooperated with school officials in planning and conducting "Career Conferences for Teen-agers." 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. For further information consult your local Chamber of Commerce or the U. S. Chamber of Commerce at 1615 H Street, N.W., Washington 6, D. C.

Department of Defense

The Department of Defense cooperates with individuals and groups in providing guidance and assistance on projects which are designed to stimulate interest in scientific pursuits. This guidance and assistance includes speakers' programs, film presentations, furnishing of instructional and informational materials, demonstrations, exhibits and displays of military products, installation tours and briefings, and assistance in certain forms of scientific experimentation. Inquiries may be addressed to the Commanding Officers of local military installations.

Thomas Alva Edison Foundation

The Edison Foundation directs programs to encourage more boys and girls to undertake careers in science and engineering. The Foundation conducts a public information program on behalf of improving the quality and quantity of science education. Science Youth Day, held annually on Thomas Alva Edison's birthday, February 11, is a nation-wide program to interest young people in science and engineering. Participating in this International Edison Birthday Celebration are major companies of American industry, governmental agencies, professional, scientific and educational societies, and other groups in the United States and abroad. Science experiment booklets and other free materials are distributed nationally to students. Special student visits to industrial plants and research and development laboratories are arranged. The Foundation also organizes national conferences and Edison Institutes on scientific manpower and science education problems. Awards are also given in the mass media to encourage better program material in sciences. In cooperation with NBC the Foundation produces a weekly science television program on which outstanding high school Science Fair winners and professional scientists appear. A

list of publications available may be secured by writing to Thomas Alva Edison Foundation, Inc., 8 West 40th Street, New York 18, New York.

Engineering and Science Organizations

Each field of engineering has its own professional society and some of these, including the so-called founder societies, are represented by the Engineers Joint Council, 29 West 39th St., New York, N. Y. Problems of education, personnel training, and utilization, are the concern of the Engineering Manpower Commission at the same 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 connection with science, technology, and careers. The Scientific Manpower Commission also may be consulted on Selective Service and other military problems faced by teachers and students of mathematics and science.

Future Engineers of America

FEA holds periodic tournaments for High School students, freshmen to seniors, interested in getting ahead on their own. Last year through voluntary self study, over 1,000 students from 10 states learned advanced topics in mathematics and solved engineering problems furnished by industrial companies. Self-study kits were supplied in advance, then the students came to two tournaments in the Chicago area to demonstrate what they had learned. The winners took home some 60 prizes ranging in value to \$100. This year, the FEA is expanding this 'do-it-yourself' program to include some 15,000 students. Local contests in schools will be held by the end of October, it is planned. Self-study kits are to be furnished as part of \$2 entry fee. National grand tournament will probably be held in Chicago area, November 27. Events planned include slide rule contests, brainteaser test, math power test, etc. Obtain details by writing Future Engineers of America, 304 W. Randolph Street, Chicago 6, Illinois.

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 in high schools by local industry and/or professional groups throughout the United States and two foreign countries. JETS provides free materials for initiating and operating the chapters. The program includes a National Project Exposition with awards and scholarships. JETS offers the students an opportunity to explore the various technical fields and to compare attitudes, interests and abilities with the requirements of technical professions through actual experiences and contacts with these professions. For information, write to JETS, P.O. 589, East Lansing, Michigan.

Manufacturing Chemists' Association, Inc.

This organization representing the manufacturing chemical industry executes an aid-to-education program that embraces all levels from kindergarten through college. For information on entire MCA program, request free copy: An Industry Helps Our Schools. Counselor's handbook on qualifications for and opportunities in industry careers scheduled for release about September 15, 1959; program of experiments (emphasis on chemical principles for elementary school teachers and science club leaders) scheduled for release February 1, 1960. Other publications free to educators include: Your Food and Chemical Research, brochure on food pro-

duction and processing; Crops and Chemicals, pamphlet on crops and processing and preservation; Chemical Industry Facts Book, single copies with Teachers Guide, 44c to educators. Address: Manufacturing Chemists' Ass'n., Inc., 1825 Connecticut Avenue, N.W., Washington 9, D. C.

National Academy of Sciences-National Research Council

Through its Advisory Board on Education the National Academy of Sciences-National Research Council works with individual scientists and scholarly organizations for improvement of education in the sciences at all levels. Principal attention is given to programs designed to improve the preparation of teachers, at graduate and undergraduate levels, and to expansion of opportunities for continual professional development. Action is also being taken through Committees to promote better planning for production and use of films and television in science education. In cooperation with local and national industries and associations, community action is promoted to develop better local understanding and support of schools. Publications and information may be obtained from: Dr. R. M. Whaley, Advisory Board on Education, National Academy of Sciences-National Research Council, 2101 Constitution Ave., N.W., Washington 25, D. C.

National Association of Broadcasters

The National Association of Broadcasters, which comprises more than 2,200 individual stations and all seven nationwide radio and television networks, has been conducting an industrywide public service project with the theme, LEARN—AND LIVE. The project seeks to stimulate curiosity and inspire young people to grow to their full intellectual capacities and to impress upon their parents their duty to guide and support youth in obtaining more knowledge and training. As part of their activities, broadcasters throughout the country have participated, with a select group of organizations outside of broadcasting, on projects which are in harmony with LEARN—AND LIVE. During October, NAB members will observe National Science Youth Month by emphasizing the excitement and adventure young people can experience through scientific pursuits. NAB will provide members with spot announcements and other material to aid them in their community participation. For information about the LEARN—AND LIVE campaign, write: National Association of Broadcasters, 1771 N St., 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, the NAM Committee on Research and Education Department is promoting development of science talent. Career booklets, "Your Career in Industry as a Scientist and Engineer," and "Your Opportunities in Industry as a Technician," have been distributed in large numbers. Copies free on request. Address: Education Department, National Association of Manufacturers, 2 East 48th Street, New York 17, New York.

National Aviation Education Council

To help secondary school teachers stimulate interest in science or mathematics as they relate to aviation, National Aviation Education Council publishes *Science Teaching Aids for a Stronger America* (75c) and *Mathematics Teaching Aids for a Stronger America* (75c). These books offer suggestions for using aviation

facts and principles in science and mathematics classrooms; also, hundreds of bibliographical references. A companion book, *Guidance Aids for a Stronger America* (75c), is a handbook for guidance counsellors, illustrating how scientists and mathematicians, among other professional and technically skilled workers, are employed in the aero/space industry. *U. S. Aircraft, Missiles, and Space Craft 1959* (\$1.00) describes (with many pictures) the products of the U. S. aero/space industry today. More than 32 pages of this 152-page book are devoted to missiles and space craft. *The Space Frontier* (25c) gives facts about space and space exploration and includes a space age glossary of more than 200 terms. Established for the purpose of providing aviation and space information to schools, libraries, and individuals, NAEC offers for \$5.00 a year a mailing service through which subscribers receive single copies of all NAEC books published during the membership year, monthly copies of *Planes, National Aeronautics*, and *Skylights*, a selection of several previously published books, and monthly packets of up-to-date booklets, pamphlets, charts, pictures, and instructional materials produced by the aero/space industry. Free teaching aids such as units on rockets and space travel, bibliographies, and a source book (*Pictures, Pamphlets, and Packets*) of free and inexpensive teaching aids relating to aviation and space exploration are also available. Address: National Aviation Education Council, 1025 Connecticut Ave., N.W., Washington 6, D. C.

National Committee for Careers in Medical Technology

This committee helps to promote summer jobs in hospital pathology laboratories for outstanding science students attaining honors at local and regional fairs and the National Science Fairs. It also distributes career guidance information, including pamphlets and films describing the profession of medical technology, and including data on aptitudes, training, qualifications, and salaries. NCCMT is sponsored by three professional organizations, the American Society of Clinical Pathologists, the American Society of Medical Technologists and the College of American Pathologists. Address: National Committee for Careers in Medical Technology, 1785 Massachusetts Avenue, N.W., Washington 6, D. C.

National Merit Scholarships

National Merit Scholarships are four-year college scholarships available to high school seniors. The stipend accompanying each scholarship is based on need and may vary from \$100 to \$1,500 a year. The average stipend is now about \$730 a year. The winners choose their college and curriculum during the competition. The college receives an educational supplement for each Merit Scholar in attendance. Last year 745 Merit Scholarships were awarded, including some 417 Merit Scholarships offered by and named for 90 business organizations. Registration for the Merit Scholarship Program is by high school. The National Merit Scholarship Qualifying Test, the first step in the annual competition, is administered to second-semester juniors and first-semester seniors in the spring of each school year. Each principal is sent registration materials in October. Any eligible student may take the examination at the cost of \$1.00. The 1959-60 competitions began with the National Merit Scholarship Qualifying Test in April, 1959. Winners will be announced in the Spring of 1960. The test for the 1960-61 competition will be given either Tuesday, March 8, 1960 or Saturday, March 19, 1960, according to the preference of the school, to students who will graduate from high school in 1961. Since the inception of the Merit Program in 1955, some \$15.5 million in Merit Scholarships have been awarded to 3,132 students. For

additional information see your principal or write National Merit Scholarship Corporation, 1580 Sherman Avenue, Evanston, Ill.

National Science Fair

About 600,000 young scientists in junior and senior high schools annually undertake science projects and build exhibits to be shown in thousands of science fairs in their high schools. The best of these compete in some 180 regional and area science fairs, which send their two top finalists, usually a boy and a girl, to the National Science Fair, conducted by Science Service, each May. The Eleventh National Science Fair will be held May 11-14, 1960 in Indianapolis, Ind. Local organizations, including newspapers, public, private and parochial schools, colleges, industries, scientific and technical societies, clubs, etc., cooperate in local and regional fairs. Science Service offers full information in conducting science fairs. Write Science Service, 1719 N St., N. W., Washington 6, D. C.

National Science Foundation

This agency of the Federal Government conducts an extensive program of support and stimulation to science and research, including scientific personnel and education. Most of its operations are through grants that facilitate activities by other organizations. Extensive programs in science education include support of institutes, summer fellowships, and other training programs for high-school teachers of science and mathematics; limited summer programs for high-school students of science and mathematics; traveling science libraries and traveling science demonstration 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 information about these programs, write for: "National Science Foundation Programs for Education in the Sciences," National Science Foundation, Washington 25, D. C.

National Science Teachers Association

A department of NEA, an affiliate of AAAS. Regular membership, \$6; includes 8 issues of THE SCIENCE TEACHER and the Packet Service. Publications to help students include: *Encouraging Future Scientists: Student Projects*—examples of prize-winning science projects done by students. *If You Want To Do a Science Project*—suggestions to help students plan, carry through, and report science projects. Single copies, 50¢; discounts—2 to 9 copies, 10%; 10 or more copies, 20%. Orders for \$1.00 or less must be accompanied by remittance. *Encouraging Future Scientists: Keys to Careers*—bibliography of science career information and guidance material. *Careers in Science Teaching*. Single copies free. Order from: National Science Teachers Association, 1201 16th St., N.W., Washington 6, D. C.

New England Council

The New England Council has established a Program of Industry Aids to Education, specifically designed to provide a means through which industry, the professional societies and schools may work together. The Program is developing this link first in the sciences and math at the secondary and elementary school level on the basis that industry has, through knowledge, experience and resources, the tools to help meet many of the schools' needs. The Program plans to have available various listings of industry's resources throughout New England, as well as source material that should be very valuable to teachers. Write Robert M. Burnett, Industry Aids to Education, New England Council, Statler Building, Boston 16, Massachusetts.

Oak Ridge Institute of Nuclear Studies

The Oak Ridge Institute of Nuclear Studies is a nonprofit educational corporation of southern universities, operated under direct contract with the U. S. Atomic Energy Commission. Its many activities include the administration of a "traveling-teacher" program, several graduate fellowship programs, traveling atomic-energy exhibits, and student tours of nuclear facilities, the presentation of courses in the use of isotopes, special courses for teachers, and symposia and conferences; the maintenance of a medical-research hospital, a museum of atomic energy, and a technical library; and the provision of lecturers for universities, research opportunities for university scientists, and a mobile radio-isotopes laboratory for on-campus college training.

Science Achievement Awards for Students

For students in grades 7 through 12; 220 regional and national awards (value, \$14,000) based on reports of individual projects in science. Sponsored by the American Society for Metals, conducted by the Future Scientists of America Foundation of the National Science Teachers Association. Closing date for entries in 9th annual program: March 15, 1960. Student entry materials available now from National Science Teachers Association, 1201 16th St., N.W., Washington 6, D. C.

Science Clubs of America

More than 600,000 youths are in some 25,000 Science Clubs of America. Any adult sponsor (usually teacher) is invited to affiliate groups, clubs, classes, and receive free annual SCA sponsor handbook in fall and other useful literature throughout the year. Write to: Science Clubs of America, 1719 N Street, N.W., Washington 6, D. C., and say: "Affiliate my science club."

Science Service

The institution for the popularization of science, with trustees nominated by the National Academy of Sciences, National Research Council, American Association for the Advancement of Science, E. W. Scripps Estate and the journalistic profession. Organized 1921 as a nonprofit corporation, it operates as a news service supplying material to newspapers and magazines, publishes magazines, issues experimental kits, conducts the national science youth program, consisting of Science Clubs of America, Science Talent Search, National Science Fair, etc. Free material available on various activities and samples of publications sent on request. SCIENCE NEWS LETTER, weekly summary of current science, \$5.50 a year, trial \$3.13 for 41 weeks; CHEMISTRY, eight times-a-year, \$4 a year; THINGS OF SCIENCE, monthly experimental kits, actual samples of novel and educational material, membership \$5 a year, collection of 8 kits, \$3.75; *Thousands of Science Projects* listing titles of exhibits actually made, 25¢ a copy, 10 copies for \$1; Science Service Books, each \$2 postpaid: *Science Exhibits, Scientific Instruments You Can Make, Organic Chemistry for the Home Lab, Experimenting with Chemistry, The Chemical Elements*, 55¢ each postpaid, 10 for \$5.00. *Color Slides* of the National Science Fair, 5 sets available, \$6 each. *Color Slides* of the Science Talent Search, 1 set, \$6. Science Service, 1719 N St., N.W., Washington 6, D. C.

Science Talent Search

High school seniors have a chance to win trips to Washington, share in a total of \$34,250 in Westinghouse Science Awards and Scholarships, and be recommended for admission and support in college. The Nineteenth Annual

Science Talent Search for seniors of 1960 is held in the fall of 1959. Teachers should ask for examinations about Oct. 15. Seniors should be working on their projects and reports during the summer. Completed entries must arrive at Science Service not later than midnight, December 27, 1959. Science Talent Search is conducted by Science Clubs of America, a Science Service activity, and sponsored by the Westinghouse Educational Foundation. Ask for "How to Search for Science Talent" sent free on request. Science Service, 1719 N St., N.W., Washington 6, D. C.

Scientific Apparatus Makers Association

This organization represents some 225 of the nation's principal manufacturers and dealers in the scientific laboratory and equipment industry and is vitally concerned that educators and students of all levels of education have at their disposal the finest and most up-to-date tools of their profession. Through yearly awards, cooperation with Federal educational agencies and direct liaison with leading professional societies, the SAMA supplements its member companies' efforts to better prepare our nation's scientists and engineers for tomorrow's space and air age. The following leaflets and reprints of published articles are available without charge:

Selected Bibliography on Science Education and Careers, A Guide to Evaluating Your Science Facilities, Your Career With the Instrument and Control Industry by the Recorder-Controller Section, How to Help Your Town's Editor, I Am the Science Teacher, SAMA Motion Picture Film Directory. Address: Director of Public Information, Scientific Apparatus Makers Association, 20 No. Wacker Drive, Chicago 6, Ill.

U. S. Air Force and Air Force Association

The United States Air Force has indicated that it will participate in future National Science Fairs on an enlarged basis, with the cooperation of the Air Force Association. Additional awards are scheduled in categories other than the Air Power and Air Exploration areas which were selected at previous National Science Fairs. Plans call for recognition at the Regional and State levels in addition to the National finals. Complete details will be forwarded to all fair directors.

U. S. Army

A week at the Army Ballistic Missile Agency, Huntsville, Ala., Army Medical Center, Washington, D. C., Army Signal Center, Fort Monmouth, N. J., or the Army Chemical Center, Fort Holabird, Md., depending on the interest of the student, is given to eight finalists at the National Science Fair; exhibits are judged best in the specialized area of missiles, satellites, electronics, calculators, mathematics, high and low temperatures, instrumentation, meteorology and medicine.

U. S. Navy

The Department of the Navy requests each fair affiliated with the National Science Fair to select one male sophomore or junior high school student whose exhibit is considered best in the broad area of Navy-oriented projects. District Commandants and members of Naval Reserve Units are requested to contact the Director of these science fairs, and offer to assist the judges in the selection of winners to be designated as Navy Science Cruisers. One student from each fair will be given an opportunity to see science in the Navy for about one week on fleet ships at sea. The U. S. Navy judges will honor seven students at the 11th National Science Fair.

ADJUSTABLE "BACK-AID" CAR SEAT

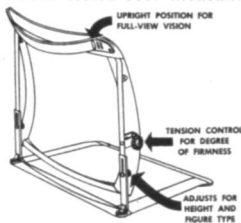
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The result of more than 2 years of research and development in cooperation with orthopedic specialists and road tested over thousands of miles.



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NEW MARK-FORE
3-WAY ADJUSTABLE
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FOR MILES OF
CAREFREE DRIVING



- Fiberglas Mesh Seat and Back (Prevents Sweating)
- Special Alloy Steel Frame
- Heavy Gage Leatherette Trim

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TO MEN WHO JUST "CAN'T LEARN" MATH!

More and more in our dynamic economy, a knowledge of basic mathematics pays off!

Whether in Engineering, Electronics, Mechanics, Construction, Pure Science, etc. — or in Estimating, or Trade and Finance, or Buying and Selling, etc.— the man who gets there fastest with the mostest, MATH-WISE, is likely to be rewarded handsomely!

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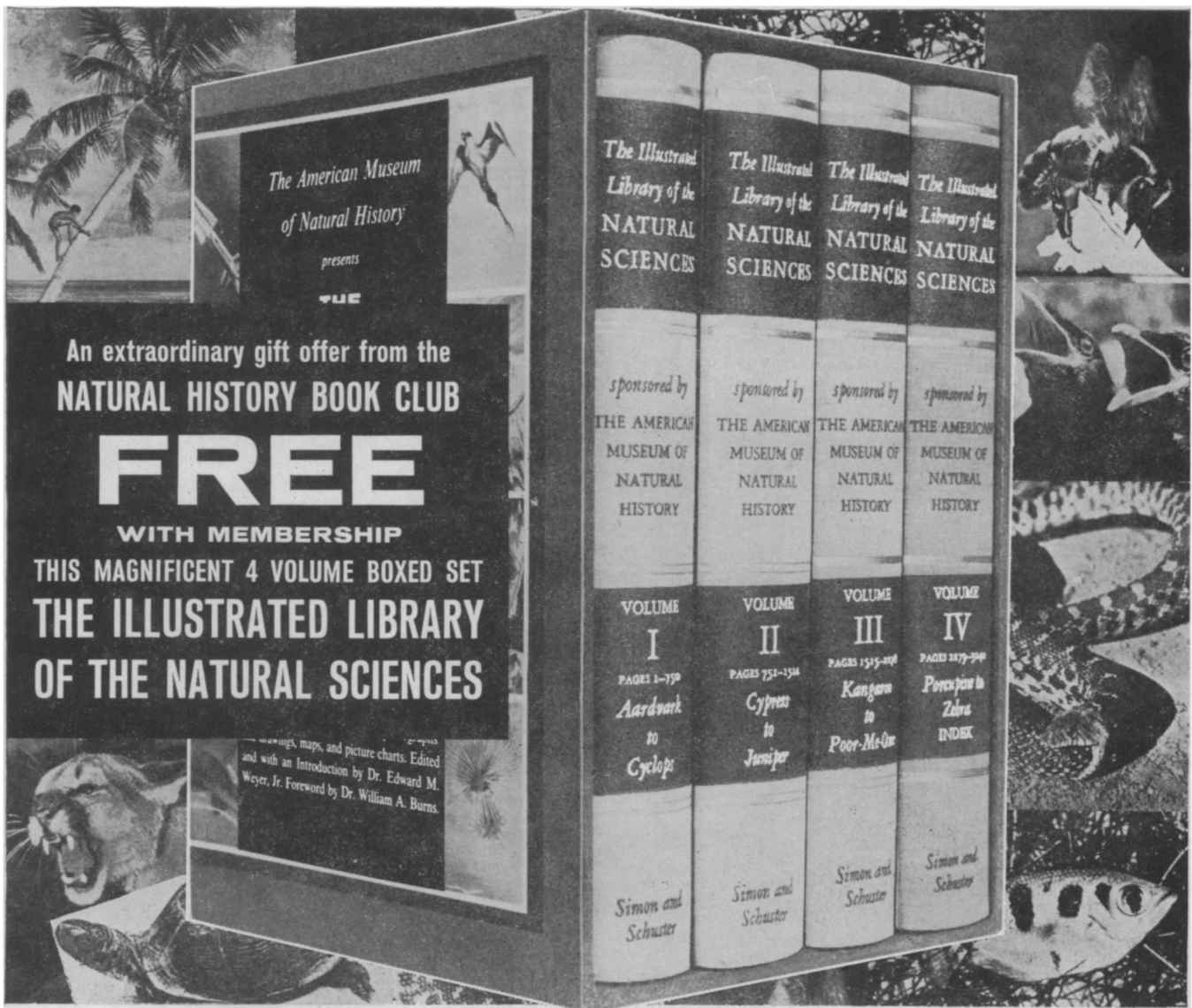
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