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SCIENCE NEWS LETTER

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Fruit Follows Flower

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A SCIENCE SERVICE PUBLICATION

Show *him* the way to go home



THERE are split seconds when his judgment is the most important thing in the world. The safety of a ship and crew, the fate of a mission, the work and hopes of many men—are in his hands. They are in good hands.

There is no more important task for G-E research and engineering today than in developing equipment to make this—one of the toughest jobs of our time—a little easier and a little safer.

Every day, in every flight, electricity is at work in our bombers and fighters.

Electrically driven gyroscope instruments show the pilot the way to go—in fog, or cloud, or night.

Electric lamps illuminate instrument dials and landing strip.

Radio binds the squadron together and links it to its base; power turrets protect it. The automatic pilot relieves the human pilot at the controls, and unilever power controls give him, in effect, an extra hand by combining the controls for turbosuperchargers and engines.

Electric motors start the engines, retract the landing gear, change the pitch of the propellers.

Electricity heats boots, and gloves, and flying suits of pilot and crew.

Although the American homes of our fliers are half a world away, home base—because of electric instruments in their cockpits, and electric equipment on their planes—is a little nearer, a little surer and more certain. *General Electric Company, Schenectady, N. Y.*

★ **Some Equipment General Electric Builds for Aviation:** gyroscope and other instruments, automatic pilots, remote indicating compasses, radio equipment, motors and motor actuator units, generators, unilever power controls, ignition systems, jet propulsion engines, turbosuperchargers, flying suits, lamps, power turrets, computers and sights, hydraulic systems, electronic devices, etc.

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What 4,400 Science Clubs Do



An increase of 500% in the number of clubs affiliated with Science Clubs of America since 1941 is an indication of the eagerness of youth to do important war jobs and at the same time prepare for careers in peacetime.

Today more than 4,400 science clubs are working long hours in their laboratories and workshops to learn science and apply it wherever possible to real service on the home front. These clubs are composed of approximately 100,000 boys and girls—most of them of junior and senior high school age. Any interested group may join Science Clubs of America without cost. Write to 1719 N St., N.W., Washington 6, D. C.

Well aware of the shortage of trained scientists and skilled technicians, these 10- to 18-year-olds are studying their favorite sciences to prepare themselves as professional scientists or as accomplished amateurs but they are applying their knowledge now to give aid to the war effort.

Like other war-working civilians the members of Science Clubs of America buy war stamps and bonds and help in campaigns to sell them; they collect rubber, metal, paper, fats and other salvage. They volunteer for civilian defense services; take courses in home nursing and first aid; donate blood; build model planes for identification study; conserve food and other war-needed commodities.

SCA members have learned to practice good nutritional habits and are doing what they can to instruct their communities in this war necessity. Although their regular class work is made heavier with pre-induction courses in science and mathematics, they are doing their share to overcome the manpower shortage by lending their boy- and girl-power to filling war jobs during their out-of-school hours.

Many of them assist their rationing boards, serve as nurse's aides, raise Victory gardens, serve as volunteer farm helpers, care for children of war workers, prepare surgical dressings, entertain convalescent service men; and they have had to learn to repair and even make much of their laboratory equipment.

But members of Science Clubs of America are not content to contribute just what is expected of them as civilians. They have discovered a wide variety of war services which they have undertaken as distinct and ingenious means of serving their country.

News of their work comes in regularly to SCA headquarters. Each club passes along their information so other clubs can benefit from their ideas. It is traditional among scientists to share all their findings with one another and these clubs function in the same manner.

Only a few club reports can be given here but enough to show the sincere and effective work being done voluntarily by members of Science Clubs of America from coast to coast.

BIRMINGHAM, ALA.—Last year, the Electrons, a club of 25 members, in Ensley High School, finger printed about 75% of the students in their school. They are trying this year to get the finger prints of 100% of their fellow students. The club has won chemistry project awards for three years at the state meetings of the Alabama Junior Academy of Science. Their sponsor is Miss Kathryn Boehmer, chemistry teacher.

LEPANTO, ARK.—W. F. White, principal of the Stillman Junior High School, is sponsor of the Stillman Science Club which now has a membership of 4 girls. These 15- to 18-year-olds have been stirred by two local situations. These have caused them to study extensively the extermination of rats and the fighting of red spiders in cotton fields.

CHICAGO, ILL.—The Science Observers are 26 girls of St. Louis Academy. Their school is in the midst of a large industrial section and they find enough science in their own neighborhood to absorb all their time. They visit industries manufacturing nationally known paint, soap, canned goods, medical supplies and cosmetics. They have specialists from these industries visit their club and lecture to them on the science of particular procedures. They pass this information on dramatically to their student body by presenting skits and plays which they write and act themselves. Their sponsor is Sister St. Mary of Mercy who is a chemistry and biology teacher.

IOWA CITY, IA.—Alvin F. Walz, instructor in University High School, is sponsor of the U-High Science Club of 7 boys. Their interests include botany, physics, chemistry and zoology. They keep displays in these fields in the school display case, as well as in their own, just outside their science rooms. The members keep written records of their readings in current science magazines and compare notes on these once each week to exchange information. The school has a soil-testing outfit and the boys are offering their services to any Victory gardeners who wish to have soil tests made.

WEBSTER GROVES, MO.—The five boys in this science club are experimenting with rockets. To date their most successful rocket went 244 feet. It was made of ½ x 5 inch brass tubing, filled with powdered zinc-sulfur mixture. Their sponsor is Randall Koenig.

ANDOVER, MASS.—The two science clubs in Phillips Academy have never been formally organized and they function well without any officers. There are no club meetings held since all the time is spent in laboratory work. The members choose their own subjects and time for work. They are now working individually on such projects as: electron electroscope, grinding astronomical mirror, growing crystals, tests on water-hardness, water distillation for laboratory, recovering lab by-products, mechanics of auto engines, classification of mineral collections, spectroscopic studies, preparation of compounds from ores, preparation of cements, glass blowing, simple electrolysis and softening water by ion-absorbing resins.

DIXON, N. M.—Forest preservation and study and prevention of soil erosion and floods are the projects the Junior Omicrons of St. Joseph High School are working on under the sponsorship of Sister M. Dorothy, science teacher. This club has successfully bartered with a West Coast club which sent them a valuable collection of marine plants and animals.

SOMERVILLE, N. J.—The Positrons of Somerville High School, have a club membership of 12 boys and 11 girls. They are sponsored by L. L. Moore, chemistry instructor. They have had discussions and demonstrations of war gases and their experiments have carried them far enough to prepare test papers to be used in demonstrations for civilian defense in their state. In chemistry they have prepared synthetic products such as cosmetics, flavoring extracts, drugs and dyes. They follow the most recent developments in chemistry by discussing with one another what they have learned from scientific magazines, the radio and newspapers.

NEW MILFORD, CONN.—The Photography Club of New Milford High School is 4 years old and this year has 20 boys as members. They make pinhole cameras, take a school movie yearly which is shown at the High School commencement and send their print exhibition on a tour. They make Christmas cards, 35 mm filmstrips, visit local professionals' darkrooms and hold regular lectures on photography. With all this activity they have added a new department to their club this year concerned with aviation. The boys build their own flying models and are planning a flight contest this spring.

WILLIAMSBURG, VA.—The George Washington Carver Club of Bruton Heights School is intensely interested in farming and agricultural problems in their own community. The 50 members have initiated a "Food Fights for Freedom" campaign which will be the keynote of their work and influence in the local area. Busy with poultry raising, plowing for Victory gardens, meat and poultry canning, they plan to inform the community of the results of their experiments and work. Mrs. Olive Hill Scott is their sponsor.

ROSEBURG, ORE.—The Faraday Club of Roseburg Senior High School is 15 years old and has 14 members who are studying mineralogy, radio, microscopy and hydroponics. Each week the club puts on a movie at the noon hour to bring entertainment to the student body and cash income to the club. This year the members will put on their annual assembly program and will also stage a radio broadcast.

CURTIS, NEBR.—The N.S.A. Science Club is 5 years old and now has 25 members. E. A. Hodapp, instructor in physical sciences in the Nebraska School of Agriculture, is the sponsor. The members are interested in first aid, foods, dietetics, disease prevention and health and sanitation. They study soil fertility, improvement of crop varieties and soil analysis. They watch carefully for reports of new discoveries and inventions.

SAN ANTONIO, FLA.—The Vitamin V Club under the sponsorship of Sister Ruth, science teacher, concentrates on the study of biology with special attention on eating habits, food raising, and food preparation. The 30 girl members are students of Holy Name Academy. They have their own Victory gardens and work together on such problems as weed eradication, soil-preparation and care, and the canning of their produce.

COTTONWOOD, IDA.—The Lively Laboratory Legion is 7 years old, has 24 members and is sponsored by Sister M. Alfreda, head of the science department of St. Gertrude's Academy. As a climax to their work in physics and chemistry, they hold assembly programs to which grade school children are invited. They hold a Science Fair annually to which the parents are invited. They contribute their best models, collections and experiments to the school museum.