

GENERAL SCIENCE

News From Science Clubs

► **NEW IDEAS** for successful science and community activities, reported to Science Clubs of America by its 1961-62 affiliated clubs, are compiled by Miss Leslie Watkins, executive secretary, as follows:

THE SCIENCE EXPERIMENTERS from Phillips Academy, Andover, Mass., are publishing a journal of project reports by their students and from other independent schools.

THE SAN FERNANDO JUNIOR HIGH SCHOOL SCIENCE CLUB, San Fernando, Calif., uses displays to keep their school posted on the latest developments.

THE BIOLOGY SECTION of the North Catholic High School Science Club, Pittsburgh, Pa., continues working on their project of atherosclerosis in rabbits which they started over two years ago.

The chemistry students have organized a **CHEMISTRY PROJECTS CLUB** at Henry Snyder High School, Jersey City, N. J.

The young scientists of the **MENA HIGH SCHOOL SCIENCE CLUB**, Mena, Ark., present two radio programs each year in a "Know Your Schools" series.

In West Bridgewater, Mass., **THE SCIENCE PROJECTS CLUB** at the Howard School for Girls holds a group membership in the Science Museum of Boston and uses part of its meeting time as "Work Periods" when the girls develop their individual projects.

In East Bridgeport, Mass., **THE SCIENTISTS of TOMORROW** at Intermediate School are publicizing local stream pollution and initiating a Junior High Science Fair. This club's young scientists give annual awards to their club members based on a point system which they outline in

their constitution.

THE SPENCER SIXTH FOR SCIENCE, the sixth graders at Spencer Elementary School, Spencer, N. C., have demonstrations at their Friday club meetings and "share time" in daily science classes.

Since their organization on Sept. 21, the **WE DOOD ITS** from Bangor High School, Bangor, Wis., are turning the monthly spotlight on the relation of science to local and state industries. Members are choosing projects that can relate to industries and other science interests in their locality.

THE SENIOR SCIENTISTS from the Jackson Jr. High School in Jackson, Tenn., are active in the Tennessee Junior Academy of Science, a cooperator with Science Clubs of America.

THE SHEELEY SCIENCE CLUB at McComb, Miss., furnishes scientific material for the Public Library.

The Educational Director at **CANTERBURY SCHOOL**, Accokeek, Md., reports that this new school uses science teaching equipment mainly handmade or from Science Service. These materials have already been of considerable help and the school plans to make use of all of them, especially the Science Clubs of America aids, during the present year.

Many science clubs publish their own journal or newsletter which they would like to exchange with other clubs. If your group is issuing a publication, it is invited to send a copy to SCA for listing in **NEWS FROM SCIENCE CLUBS** in the near future.

Science Clubs not already affiliated can do so, at no cost, simply by writing to Science Clubs of America, 1719 N Street, N.W., Washington 6, D. C.

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TECHNOLOGY

Underground Atom Test

► **PROJECT GNOME**, the underground nuclear experimental explosion detonated near Carlsbad, N. Mex., has been declared a qualified success.

The experiment, which was approved by President Kennedy less than two months ago, is the first field test of the safety and practicability of the U.S. Atomic Energy Commission's Plowshare Program to develop peaceful productive uses for atomic bombs.

It fell short of fully satisfying safety requirements which, prior to the explosion, AEC spokesmen were confident could be met, when some of the radioactivity released by the explosion escaped into the atmosphere.

For Project Gnome, the AEC detonated a five-kiloton nuclear bomb in a salt deposit 1,200 feet underground in an attempt to convert the released energy into heat for the production of power at low cost for industrial uses. Other objectives of this ex-

periment are to learn more about the physical properties of matter by measuring the vast number of neutrons to be released by the explosion, and to attempt to recover the large amounts of industrially and medically useful radioisotopes such as cobalt, uranium and plutonium produced by the underground blast. These objectives were largely achieved.

But more important for the future use of explosions for peaceful purposes is satisfying the safety requirements. For underground explosions this means containment of radioactivity so that none escapes into the atmosphere or contaminates underground water sources. The AEC objective of full containment was not reached in Project Gnome.

If the radiation can be controlled, the destructive force of atomic weapons can be directed to such AEC Plowshare goals as the recovery of oil from tar sands and oil shales. Present theories are that this

could be done by exploding an atomic bomb beneath a thick layer of oil sand at a depth of about 1,300 feet. A study is currently under way on using nuclear explosives to shatter a buried ore body that cannot be mined economically by conventional methods.

Project Chariot, a study on using A-bombs for excavation purposes and possibly the forerunner of large earth-moving projects, is also part of the AEC program.

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TECHNOLOGY

U.S. Ahead of Russia In Computer Sciences

► **ONE TOP** United States physicist with an advanced American computer can out-produce 1,000 Russian engineers, Dause L. Bibby, president of the Remington Rand Division of Sperry Rand Corporation, said in the keynote address at the Eastern Joint Computer Conference in Washington, D. C.

Pointing out that Russia is graduating three times as many engineers annually as the U.S., Mr. Bibby said, "We have a tool, the computer, that fills the gap."

The computer can extend and magnify the power of every American engineer. America today holds a commanding lead over the Soviet Union in computer technology. Although the lead has shrunk, we can keep it and enlarge it if we ourselves do not fall victims to complacency, he said.

Our industrial plant and equipment is aging. Two-thirds of it was built before 1950. By contrast, two-fifths of West Germany's plant and equipment is under five years of age. Much the same pattern is found in Japan, Italy, The Netherlands, Canada, and Sweden.

To stay ahead of Russia, not to mention the rest of the world, we must use America's human resources to capacity. Our engineers must do more work in less time than their foreign counterparts.

Commenting on the role of Government in helping the U.S. gain computer leadership, Mr. Bibby said that Federal agencies, particularly the military, were the first to perceive the value of computers, and have led the way.

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PUBLIC HEALTH

Ill Less Than 16 Days? Healthier Than Average

► **IF YOU** were ill for less than 16 days a year, you rate more healthy than average.

U.S. Public Health Service figures show that illness and injury cut down usual activity by that amount for the average person in the year ending June 30, 1960, the latest figures available. The average includes six days of bed disability.

More disability was experienced by women than men, and by persons over 45 than by those younger.

The comparable figures for the year ending June 30, 1958, were 20 days including eight days in bed, but that year had a flu epidemic.

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