

GENERAL SCIENCE

Science Youth Month

October is set aside as period during which the importance of encouraging scientifically inclined boys and girls will be stressed and science activities for school emphasized.

► AMERICA today is mobilizing its scientifically inclined boys and girls to celebrate October as National Science Youth Month.

Some 16,000 high school science clubs, with a membership of more than a third of a million, are spearheading a campaign to emphasize science activities for the new school year.

Watson Davis, director of SCIENCE SERVICE, which administers Science Clubs of America, emphasized that the solution of the serious scientific manpower shortage lies in the enthusiasm, training and encouragement of American youth today. Pointing out that scores of youth, civic, educational and industrial organizations are being invited to join National Science Youth Month, Mr. Davis said:

"October has been set aside to impress on the nation the importance of encouraging students in public, private and parochial schools to participate in local and regional fairs.

"At these fairs, the students exhibit the results of their work which often goes far beyond the school curriculum. Creative imagination, knowledge and technical skills, which often belie the students' age, are depicted in these exhibits. The two best exhibits at each affiliated regional fair are shown at the National Science Fair."

The Eighth National Science Fair will be held May 9-11 next year in Los Angeles, where it is forecast there will be 300 finalists representing 160 regional fairs from 40 states or more.

Another major activity emphasized in National Science Youth Month is the 16th Annual Science Talent Search for the Westinghouse Science Scholarships (see p. 207). Although the examinations for these 40 trips to Washington and scholarships, ranging in value from \$2,800 to \$100, will not be available until Nov. 15, many students are already preparing for them and are hard at work on the report of "My Scientific Project" that must accompany each entry.

Suggestions to teachers and others interested in increasing activity in science during National Science Youth Month are:

1. Those science clubs not affiliated with Science Clubs of America are urged to do so in order to get free "know-how," free handbook and other materials valuable to members and sponsors.

2. Start plans at once for a science fair. If you have not had one before, SCIENCE SERVICE will help you start one.

3. Ask for Science Talent Search examinations for the seniors who want to go into scientific research.

4. Invite local scientists and engineers to

one or more meetings of science clubs. Get the professionals and youth working together.

5. Ask professional and technical societies to devote at least one meeting this school year to "Science for Youth."

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AERONAUTICS

Hypersonic Wind Tunnel Is Model for Larger One

► THE AIR FORCE has disclosed details about its newest type of wind tunnel, capable of surpassing temperatures of the sun's surface and speeds of 11,000 miles per hour.

Nicknamed "Tunnel Hotshot," the test device is already in operation, helping to solve the problems man faces in traveling through outer space. The wind tunnel is used to test scaled models of long-range missiles and aircraft of the future.

Within the 16-inch-diameter test section of the hypersonic tunnel, speeds of 11,000 miles per hour, temperatures of 15,000 degrees and pressures of 20,000 pounds per square inch have been used. It is expected that even higher speeds and temperatures will be obtained.

Test runs in the new tunnel, in operation at the Air Research and Development Command's Arnold Engineering Development Center, Tullahoma, Tenn., last only about one-hundredth of a second. Runs of any longer duration would melt parts of the tunnel itself.

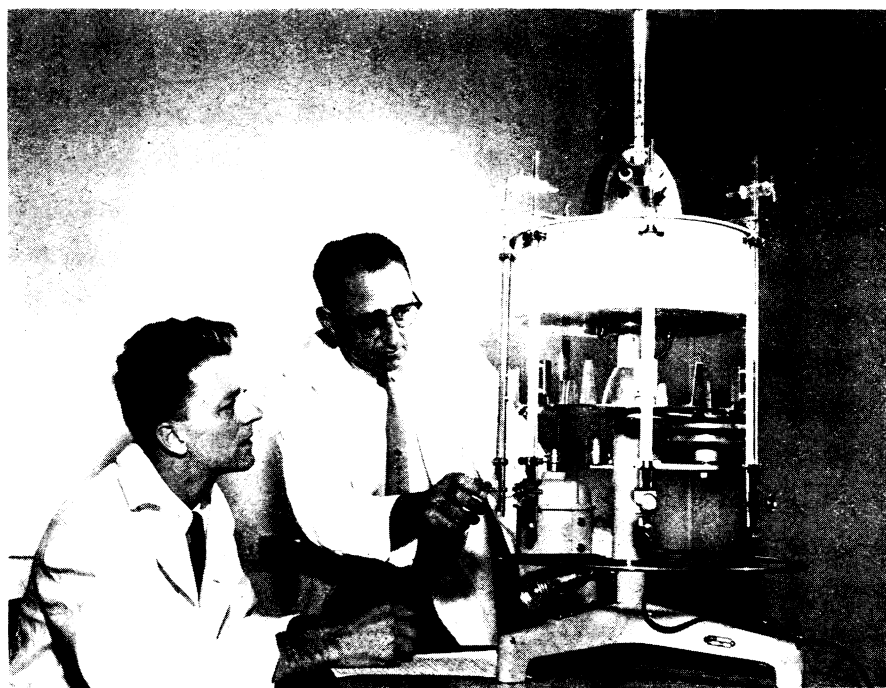
Despite the fact that the flow lasts for this very short period of time, the ARDC scientists pointed out, it is of sufficient duration to melt away portions of the nose of some of the models tested.

"Hotshot" is being used to explore possible methods for cooling the surface of missiles or aircraft as they get up to speeds encountering the "heat barrier."

In simplest terms, ARDC scientists said, "the operation of 'Hotshot' may be described as the process of creating a very powerful electrical explosion and then controlling, stabilizing and measuring the effects of its temperatures and forces as it passes over a scale model test object."

One of the "fastest" and "hottest" of the approximately 300 wind tunnels now in operation in the United States, "Hotshot" is only a model of a larger wind tunnel.

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OXIDATION RATES—At the University of California's new laboratory for sea food research at Berkeley, the present emphasis of the research is to find the causes and possible cures for fish deterioration through oxidation. Shown here are Eystein Einset (left), chemist of the U. S. Fish and Wildlife Service, and Dr. Harold S. Olcott (right), head of the Marine Food Technology laboratory, with equipment that shakes Xasks of fish oil while keeping the temperature right for oxidation experiments.