

have been developed to discover and encourage the most promising young research scientists among the nation's high school seniors.

Scores on the Science Aptitude Examination represent the first hurdle in the judging procedures. There is no predetermined "passing" grade and scores are plotted on a curve to discover which contestants may be qualified for further judging. This qualifying score for boys in the 19th Search was 143, 130 for girls. This allowed a large margin, for the highest score among the boys was 211 out of a total possible score of 244. Highest score among the girls, who made up 22% of the entrants, was 198.

As the next step, detailed scholastic records of each student who "passed" the examination were evaluated. Then evidence presented by the student and by his faculty sponsor concerning his activities, drives, hobbies, personality traits and attitudes was weighed carefully to find any of a number of combinations of achievement and promise.

Each entrant is required to submit a written report of an individual research project, usually consisting of a thousand or so words of text, plus relevant diagrams, theorems, pictures, etc. The papers of all students who had survived the first hurdles of the Search were read critically by a board of professional scientists which included specialists in the many fields explored by the student-scientists. This board worked its way through everything from an idea for a flat video display panel for television to the use of dithioacids to trace esterification reactions with primary, secondary and tertiary alcohols.

Then these professional opinions were added to the other evidence for and against each candidate.

Correlating all of these evaluations, the board of judges selected an Honors Group of 448 students (ten percent of those with complete entries) who showed outstanding scientific potential and who will be recommended to colleges and universities for admission and scholarship aid.

To choose 40 top winners from this Honors Group, each detail was re-examined and weighed on an even more precise scale of values. During the Science Talent Institute, to be held March 3 through March 7 in Washington, D. C., the known data on each of these 40 will be supplemented significantly by personal interviews and weighed again in selecting the five who will be awarded Westinghouse Science Scholarships ranging from \$7,500 to \$3,000. (See p. 86.)

Some of the traits and abilities prominent among these outstanding young people are intense intellectual curiosity, ingenuity, self-discipline, wide scope of interest and an intuitive grasp of why and how facts may relate to each other.

During the five-day Science Talent Institute in March, the 40 winners will meet eminent scientists, visit scientific laboratories of unusual interest, and be interviewed by the judges. The Westinghouse scholarships and awards are announced at a banquet at the close of the Institute.

The five scholarships of \$7,500, \$6,000, \$5,000, \$4,000, and \$3,000 and 35 awards of \$250 may be used at any accredited college or university and will help to assure

these young pre-scientists of professional training in their fields. Recognition in the Science Talent Search brings many thousands of dollars in other scholarship offers to the Honors Group. In addition, 34 states and the District of Columbia conduct State Science Talent Searches in cooperation with Science Clubs of America, awarding some \$600,000 in scholarships to students from their states who were qualified entrants in the national Search.

Science News Letter, February 6, 1960

#### OCEANOGRAPHY

### Bathyscaph Descends To Deepest Part of Ocean

THE U.S. NAVY bathyscaph Trieste has descended to a record depth of 37,800 feet to the bottom of what is believed to be the deepest part of all the world's oceans.

The descent, well over seven miles, is considerably farther below the surface of the sea than Mt. Everest, at 29,028 feet, is above.

The dive was made Jan. 23 in the Marianas Trench in the Pacific, an area previously believed to have been only 35,000 feet deep. Aboard the Trieste were Navy Lt. Don Walsh and scientist Jacques Piccard, whose father, Auguste, designed and built the bathyscaph.

The descent took 4 hours and 48 minutes and the ascent, 3 hours and 17 minutes. During the half hour spent at the bottom the bathyscaph's hull was under a pressure of 16,883 pounds per square inch, yet no difficulties were reported encountered during the dive.

This record penetration of the ocean's unknown areas was the third in a series of dives made in recent months. The other two dives were descents to then record depths of 18,600 feet and 24,000 feet.

The series of dives is providing the Navy with scientific knowledge of sunlight penetration, underwater visibility, transmission of man-made sounds and marine geological studies. Results are expected to have wide scientific and military implications.

Science News Letter, February 6, 1960

## Questions

ASTRONOMY—How is night glow caused? p. 85.

ELECTRONICS—How is molecular electronics expected to replace transistors? p. 87.

MEDICINE—What important disease is very rare in the Bantu people? p. 89.

PUBLIC HEALTH—What is interferon? p. 83.

ZOOLOGY—What does the word "yeti" mean in the Sherpa language? p. 84.

Photographs: Cover, Hughes Aircraft Company; p. 83, General Electric Company; p. 85, U. S. Navy; p. 87, Westinghouse Electric Corporation; p. 90, Science Service; p. 96, Shade Pulls, Inc.

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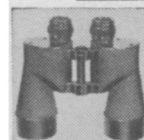
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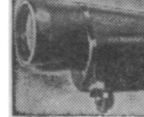
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