● RADIO

Saturday, February 13, 1:30 p.m., EWT

"Adventures in Science," with Watson Davis, director of Science Service, over Columbia Broadcasting System.

Some of the winners of the second Science Talent Search will discuss "Science's Next Great Step Ahead."

Monday, February 8, 9:15 a.m., EWT; 2:30 p.m., CWT; 9:30 a.m., MWT; and 1:30 p.m., PWT

Science at Work, School of the Air of the Americas over the Columbia Broadcasting System, presented in cooperation with the National Education Association, Science Service and Science Clubs of America.

"Man Against Insects" will be the subject of the program.

ENGINEERING

Engineers Can Carry Substitutions Much Further

➤ MORE SUBSTITUTE materials can be developed by American engineering as needed for the war effort, John G. Wood, assistant chief engineer, Chevrolet Division of General Motors Corporation, declared at the War Engineering Production meeting of the Society of Automotive Engineers in Detroit.

The extent of substitution to which we must go cannot be foretold. But even if Army vehicles had to be made of cast iron, the speaker maintained that vehicles would be produced to do the job required of them.

On one type of Army truck at present, 107 rubber parts have been replaced by less critical materials such as plastics, cotton, iron and paper, or have been eliminated altogether. Substitutes ranging through lead and cadmium plate to cactus fiber replace 129 copper alloy items. On this same truck, 60 parts of nickel and chromium alloy have been substituted for by steels with less critical elements.

Shorter life of parts must be accepted as the result of some substitutions, Mr. Wood warned. But it has been the policy throughout the automotive industry not to sacrifice durability where safety of our men is involved.

Thorough testing has often produced a substitute just as satisfactory as the original. Present production often cannot wait for extensive field tests. Then special apparatus is set up in the laboratory, Mr. Wood explained. Normal loads are applied and released at a much higher rate of speed than would normally occur in service. Thus in a short time engineers discover weaknesses that would show up only after months of use.

Science News Letter, February 6, 1943

PSYCHOLOGY

Science Talent Test

Over 14,000 copies of science aptitude examination were distributed to teachers for testing their most talented students. Best selected for Talent Search.

By WATSON DAVIS

Director, Science Service.

➤ WHAT IS YOUR ABILITY in science? To answer this question for boys and girls just finishing high school, over 14,000 copies of a science aptitude examination were distributed previous to December 28 so that teachers could give them to their most talented students.

The tests of the second annual Science Talent Search offered to your high school and others throughout the nation have just been completed, so now anyone can try the examination on his own brain.

The test, reproduced in part on this page, is only one step in the selection of boys and girls who are scientifically gifted. In addition each contestant filled out a personal data blank and wrote an essay on what he believes will be the next great step in science. Teachers filled out a recommendation form and principals reported scholarship. All these requisites are used in choosing winners.

Forty contestants will receive free trips to the Science Talent Institute to be held in Washington, D. C., in February. Of these, two will be selected to receive $2,400 Westinghouse grand scholarships to the college of their choice, eight will get $400 Westinghouse science scholarships, and additional Westinghouse scholarships totaling $3,000 will be awarded at the discretion of the board of judges. Honorable mentions also will be awarded to call the attention of colleges and universities to those contestants of outstanding ability.

Leadership Speeded

This will uncover scientific ability among those ready to enter college. Thus, exceptional youths, in the shortest possible time, will take up leadership in scientific research so important to the war effort and be ready to take a hand in the scientific world of the peace to come.

Science Service, sponsoring Science Clubs of America, is conducting the Science Talent Search as a part of the science club movement.

The aptitude examination does not test what a person already knows about science. It is designed to tell how well you can reason and understand. Thus, even those who have no special training in science will want to try it.

The test was devised for the Science Talent Search by Dr. Harold A. Edgerton, director of the Occupational Opportunities Service of Ohio State University and Dr. Steuart Henderson Britt, executive director of the National Research Council's Office of Psychological Personnel. The most advanced testing methods developed over the past two decades, were utilized in constructing the test.

Of the thousands of boys and girls who took the examination last year, not one made a perfect score. When you try this selection of questions from the examination you should, therefore, not expect to find that you have checked all the right answers.

To save your time only typical questions out of the original three-hour examination are reproduced on this page. You should be able to do the 18 questions, aside from the first five warming-up questions, in about a half hour.

Excel in Scholarship

Those who make high scores on the science aptitude test, in general, also excel in scholarship. This is shown by last year's 300 highest-ranking contestants, 99% of whom were in the upper 5% of their high school classes. Many are now making outstanding records in colleges throughout the country.

The life and achievements of each of the 3,200 students who completed the 1942 competition will be closely followed for the next ten years by Dr. Edgerton and Dr. Britt, who are vocational psychologists. Results of the study will be of interest to every educator in the country.

Only experience of the passing years will show to what extent those selected in the Science Talent Search will produce real contributions to science and engineering that will make the world a better place in which to live.

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