

PENNSYLVANIA: Wissahickon H.S., Ambler

VIRGINIA: Groveton H.S., Alexandria  
WEST VIRGINIA: Woodrow Wilson H.S., Beckley

Grand totals for the schools placing additional winners this year show the Bronx High School of Science, in New York City, at the top of the list with 32 winners in the 25 years of the Science Talent Search. Erasmus Hall H.S., Brooklyn, N.Y., is second with 30. Forest Hills (N.Y.) H.S. is third with 25, followed by Midwood H.S., Brooklyn, N.Y., with 14 winners over the years.

Nine winners each have been claimed by North Phoenix H.S. in Phoenix, Ariz., and Jamaica (N.Y.) H.S.

Seven, six, five, four, and three winners were credited to Lyons Twp. H.S., La-Grange, Ill.; Central H.S., Philadelphia, Pa.; Wakefield H.S., Arlington, Va.; Hunter College H.S., New York City, and Mayne S. Waggener H.S., Louisville, Ky., respectively.

Two winners are claimed by each of the four other schools repeating past wins. They are Mather H.S., Chicago, Ill.; Walt Whitman H.S., Bethesda, Md.; Long Branch (N.J.) H.S., and Norman (Okla.) H.S.

The 300 most promising science students from whom the 40 winners were selected come from 193 communities in 45 states and the District of Columbia.

These outstanding student scientists include 82 girls and 218 boys. The students selected represent the best of their graduating classes, with 71% of the boys and 88% of the girls in the top 5% of their classes.

All members of the Honors Group will be recommended for admission and scholar-

ship awards to the nation's colleges and universities. Many will receive further recognition in state Science Talent Searches conducted in most states as a part of the national Search.

Already at the work on the world of tomorrow, these students have submitted project reports, required as part of the Science Talent Search entry, which are dramatic evidence of the scope and depth of their interest and ability.

All but 10 of the 300 Honors Group members definitely plan scientific careers. First choice is medical science, by 67 of the group. Second is physics with 28, followed by teaching, chosen by 27. Chemistry, biology and mathematics follow closely, with 26, 25 and 23 aspirants, respectively. Biochemistry is the choice of 21, while 15 plan engineering careers. The remainder cover nearly every other scientific field.

Of the 10 not specifying plans for a career in science, seven still are undecided, while

the other choices were the military, priesthood and journalism.

These young scientists who have a wide variety of interests have been active in extra-curricular activities and their science interest has been heightened by membership in science clubs for 247 of the 300, while 254 have participated in science fairs.

Of the 25,798 sets of aptitude examinations and other entry materials requested for the Science Talent Search, 2,883 fully qualified entries were judged. Requirements included taking the Science Aptitude Examination, submission of school records and faculty recommendations and writing a report on an individual science research project.

For a copy of the honors and winners lists of this year's Science Talent Search, send a self-addressed, long envelope, 10-cent stamped, to Science Service, 1719 N St., N.W., Washington, D.C. 20036.

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#### TECHNOLOGY

## New Wind Tests Devised

See Front Cover

► THE NATIONAL PHYSICAL LABORATORY in England learned a hard lesson. It had tested a new type of a very high electric-power station cooling tower which wind tunnel tests indicated would stand up to winds above 275 miles per hour. Six such towers were built, but so close together that three of them collapsed when a wind of only about 100 mph ricocheted between them.

That catastrophe showed that every structure and every collection of structures must be tested en masse.

The lesson learned from those tumbled-down cooling towers is likely to pay off handsomely in the construction of the new complex of buildings planned in New York, as a World Trade Center.

On Jan. 18, 1964, the Port of New York Authority announced a massive building project to be known as the World Trade Center. As its name implies, this new center is intended to become the focus of the administration of the enormous volume of international trade passing through the Port of New York.

To provide the necessary accommodation, the Port Authority proposed to erect the world's tallest buildings, a pair of skyscrapers, each 208 feet square and 1,350 feet in height. These buildings will be at least 100 feet taller than the Empire State Building, the world's tallest building for the past 35 years.

The consulting engineers, Worthington, Skilling, Helle and Jackson, requested the British National Physical Laboratory to undertake a study of the oscillatory behavior of the two skyscrapers.

After a visit to the United States, C. Scruton, one of the chief scientific officers from the NPL Aerodynamics Division, started an involved program of wind-tunnel work.

In addition to the observations of oscillation amplitude made in the smooth uniform flow normally present in the wind tunnel, part of the program required the use of a wind structure more representative of that likely to occur at the site.

This involved the introduction of both turbulence and shear into the wind stream which was achieved by the use of a grid of tubes, a nonuniform spacing, placed normal to the flow up wind of the models.

The introduction of high turbulence had a marked effect on the amplitudes of oscillation. The peaked response due to vortex shedding normally found in wind with low turbulence was replaced by a continuous increase in amplitude with wind speed in the highly turbulent wind.

Using streams of water with minute particles of plastics materials floating in it, as shown on this week's front cover, the National Physical Laboratory in England has been able to see how winds may affect the high towers in New York. The wind tunnel tests revealed that there would be extreme turbulence from certain directions.

The mishaps with British power-station cooling towers will hopefully prevent similar accidents in the United States.

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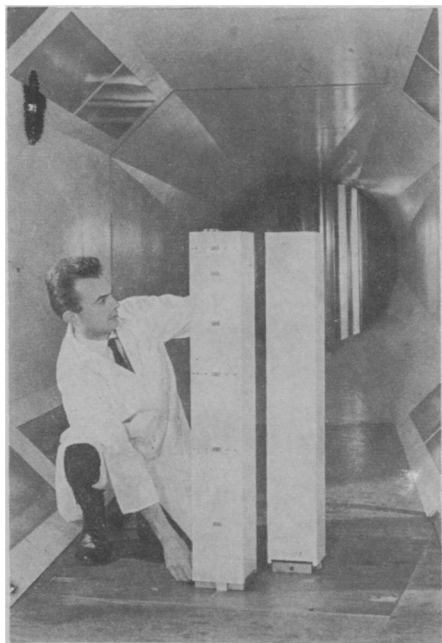
#### BIOCHEMISTRY

## Snail Research May Lead To Rheumatism Cure

► SNAIL RESEARCH will hopefully provide basic knowledge leading to a greater understanding of rheumatic diseases.

The British Arthritis and Rheumatism Council made a grant to the Department of Human Biology and Anatomy at Sheffield University to support the work of Dr. Geoffrey Meek, senior lecturer in electron microscopy, on the synthesis of collagen in snails.

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National Physical Laboratory

**WIND TESTING**—World Trade Center skyscrapers will be 400 times the height of the scale models being tested at the National Physical Laboratory in England