

GENERAL SCIENCE

Health Awards Winners

Students at the NSF-I showing unusual ability in dental, medical, pharmaceutical and veterinary sciences were awarded special honors at a Health Awards banquet.

► **OUTSTANDING** work done by high school scientists in the dental, medical, pharmaceutical and veterinary sciences received special honors at the Health Awards banquet given by professional organizations as part of the program of the 15th National Science Fair-International, Baltimore, Md., conducted by SCIENCE SERVICE.

Chosen from 420 NSF-I finalists representing 222 affiliated fairs, Health Awards winners were selected by boards of judges from the American Dental Association, American Medical Association, American Pharmaceutical Association and American Veterinary Medical Association.

The American Dental Association certificates of Superior Achievement were presented to: Ruby Joyce Burriss, 18, Greenville Sr. H.S., Greenville, S. C., for Electrophoretic Investigation of Rabbit Plasma Proteins—Effects of PTH Injection, and to Mary Michael Page, 18, Monte Cassino H.S., Tulsa, Okla., for Regeneration of the Caudal Fin in *Lebistes reticulatus*. These winners will be the guests of the ADA at its annual meeting. Ruby was similarly honored by the ADA at the 14th NSF-I.

Certificates for Meritorious Achievement and \$50 for scientific equipment were awarded to Joseph George Saide, 17, Man-

chester Memorial H.S., Manchester, N. H., for Comparative Study of Effects of Fluoride on Teeth, and Cynthia Matzke, 16, Cy-Fair H.S., Cypress, Texas, for Skin Transplants.

Top American Medical Association citations and plaques were presented to Gail Maxine Houston, 18, Sylacauga H.S., Sylacauga, Ala., for Rous Sarcoma: Preparation of Heat-Killed Vaccine and Antiserum, and to Gregory S. Lumbra, 17, University H.S., Bloomington, Ind., for Thymus Research. These winners will be the guests of the AMA at its annual meeting.

AMA Honorable Mention citations and plaques were given to Sandra Edfort, 16, West Side Central Catholic H.S., Kingston, Pa., for Immunoelectrophoresis, and to Stephen Hayward Sinclair, 18, North Phoenix H.S., Phoenix, Ariz., for Hibernation vs Hypothermia.

The American Pharmaceutical Association First Award was presented to Benny W. Ribelin, 17, Melbourne H.S., Melbourne, Fla., for Antagonistic Effect of Snake Venoms on Staphylococcal Infection. He received a plaque and his choice of a trip to the annual meeting of the APhA or a cash award to further his scientific education.

The second APhA award, a plaque, was given to Suzanne Kirk, 16, Akron-Fairgrove

H.S., Fairgrove, Mich., for Effects of Tranquilizers on Turtle Heart.

The American Veterinary Medical Association Science Youth Award and an invitation to the annual meeting of the Association were presented to Dan J. Cole, 18, St. Edmond H.S., Fort Dodge, Iowa, for Electro-Anesthesia in Small Animals. Donald Lee Jones, 17, Kermit H.S., Kermit, Texas, was given the AVMA Meritorious Achievement Award for Sequential Replication of Chromosomes.

Presentations of the awards were made for the American Dental Association by Dr. James P. Hollers, president of the Association; for the American Medical Association by Dr. Edward R. Annis, president; for the American Pharmaceutical Association by Robert J. Gillespie, president; and for the American Veterinary Medical Association by Dr. Jack O. Knowles, president.

Announcement of the awards was followed by a Health Awards dance for the finalists and members of the Official Party, given at the Baltimore Civic Center by the professional associations.

• Science News Letter, 85:311 May 16, 1964

Further NSF-I Reports

► **THE SCIENCE NEWS LETTER** for May 23 will carry further reports of awards of the 15th National Science Fair-International together with photographs.

NSF-I will be held in 1969 in Fort Worth, Texas. The schedule for future science fairs is: 1965, St. Louis; 1966, Dallas; 1967, San Francisco; and 1968, Detroit.

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ENGINEERING

Dollhouses Studied To Stop Building Cracks

► **DOLLHOUSES** and other toy size buildings are helping engineers prevent cracking in large size concrete buildings and bridges.

A special high-strength gypsum, which is a "muscular cousin" to plaster of paris, acts on a small scale like prestressed concrete does in full-size structures.

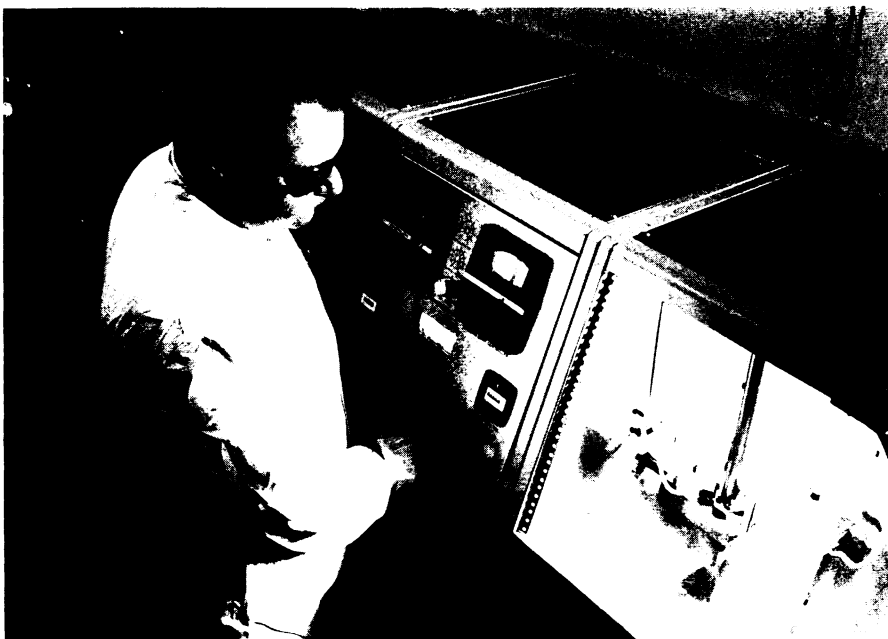
The gypsum is mixed with quantities of sand, finely crushed stone and water to make the model. Tiny, threaded, annealed-steel "wires" take the place of their big brothers in forming a skeletal framework.

Prof. Richard N. White, department of civil engineering, Cornell University, Ithaca, N. Y., believes testing of a building design should be done at the toy size level rather than building a model one-half to one-fourth the size of the finished structure.

In his laboratory are dozens of models of beams, columns and other building components of simulated concrete. They are one-tenth to one-fortieth the size of the actual building.

Prestressed concrete contains high strength metal elements which have been stretched externally. Reinforced concrete, on the other hand, has ordinary metal bars embedded in it. Both prevent cracking and help the concrete to withstand tension.

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Union Carbide

FROZEN WHOLE BLOOD—Blood-freezing equipment such as this developed by Union Carbide's Linde Division, Tonawanda, N. Y., is being used by the Community Blood Council of Greater New York, Inc., for freezing whole blood. Equipment, laboratories and services of technicians are being donated by Linde.