

## GENERAL SCIENCE

## 220 Fairs Join NSF-I

The National Science Fair-International, welcoming 18 newly affiliated regional, state and national science fairs, began in 1950 with 13 fairs and has grown to 220 this year.

► WHEN the National Science Fair-International is held in Albuquerque, N. Mex., next month it will welcome 18 newly affiliated regional, state and national science fairs.

These new fairs include seven from the eastern United States, four from the central area, five from the West, and two new fairs in the international part of the NSF-I.

In all, there will be 220 affiliated fairs participating in the NSF-I this year from 46 states, the District of Columbia, Puerto Rico, Canada, Germany-France-Italy, Japan and Sweden.

The new affiliates in the East are the Orange County Regional Science Fair, Orlando, Fla.; First Congressional District Science Fair, Savannah, Ga.; Kentucky State Science Fair, Lexington, Ky.; Southeastern Kentucky Regional Science Fair, Middlesboro, Ky.; Western Massachusetts Science Fair, Amherst, Mass.; Gannon College Science Fair, Erie, Pa., and the Eastern Puerto Rico Regional Science Fair, Humacao, P. R.

In the central U.S., the new affiliated fairs are the Northeast Arkansas Science Fair, Jonesboro, Ark.; South Central Illinois Regional Science Fair, Greenville, Ill.; Nemaha Valley Conference, Nemaha, Nebr.; and Southwest District Science Fair, Richardson, N. Dak.

New NSF-I affiliates in the West are the Nevada State Science Fair, Reno, Nev.; Northern Utah Science Fair, Logan, Utah; Weber Regional Science Fair, Ogden, Utah; Eastern, South Central and Southern Utah Science Fair, Provo, Utah; and the Salt Lake Area Regional Science Fair, Salt Lake City, Utah.

The International representation at the NSF-I will be increased by the Niagara Regional Science Fair, St. Catharine's, Ontario, Canada, and the Stiftelsen Unga Forskare (Sweden National Science Fair), Stockholm, Sweden.

In addition to the 18 new affiliates, this year's NSF-I welcomes back two former affiliates, the Southeastern Alabama Regional Science Fair, Montgomery, Ala., and the Louisiana Region IX Science Fair, New Orleans, La.

The National Science Fair, not international until 1958, began in 1950 with 13 affiliated regional science fairs and has grown each year since.

From its inception, the NSF-I has been administered by SCIENCE SERVICE, Washington, D. C., and has been held in a different city each year.

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## GENERAL SCIENCE

## Three Sisters, Six Wins

► FOR THE SIXTH consecutive year, Mr. and Mrs. Wayne Lievan of rural Aurora, S. Dak., will have a daughter competing in the National Science Fair-International. The farm couple has three children, all girls. With the youngest going to Albuquerque in May, each will have participated in the NSF-I twice.

Virginia, the oldest, began the tradition by winning her way to the NSF-I in 1958 at Flint, Mich., and again in 1959 at Hartford, Conn. Then Harriet picked up the science fever and won her way to the national competition the following two years, 1960 in Indianapolis, and Kansas City in 1961.

Bonnie, who credits her older sisters as the source of her science interest, was a 1962 finalist at the NSF-I in Seattle. She has just been designated to represent her regional science fair at the NSF-I to be held next month in Albuquerque, N. Mex. Her project is "Relationships Between Plant Extracts and Their Radio Sensitivity."

The Northeast South Dakota, Southwest Minnesota Regional Science Fair is sponsored by South Dakota State College, Brookings; and the National Science Fair-Inter-

national is administered by SCIENCE SERVICE, Washington, D. C.

After six years of sending a daughter off to the National Science Fair-International, is it all getting to be routine for the Lievans? Not at all, according to Bonnie. Mr. and Mrs. Lievan still get just as happy and excited as they did back in 1958 when it was all new, and have never reduced their interest and encouragement that have provided a home environment conducive to the development of young scientists.

The Lievans have a 640-acre farm near Aurora. Bonnie says, "Daddy never went to college, but if you talked with him you would think he had. He's very well read." Mrs. Lievan holds a Bachelor of Science degree from South Dakota State College.

Science interest is not a passing fancy for the Lievan girls. Virginia and Harriet now are studying at South Dakota State College.

Virginia is a senior in chemistry, and plans to enter medical school next fall. Harriet is a sophomore majoring in bacteriology. Bonnie has another year at Brookings High School, but she, too, plans to major in science at South Dakota State.

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## EDUCATION

## Largest Educational TV Network Successful

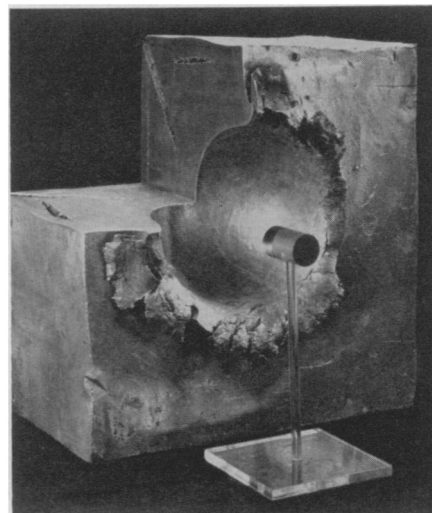
► ALTHOUGH 49TH in per capita income and 47th in literacy, the state of South Carolina has the highest number of school-age children per wage earner in the nation and is now devoting over 50% of its tax dollars to education.

An educational television closed-circuit network now in use in the state is the largest closed-circuit network in the world. Lynn Kalmbach of the South Carolina Educational Television Center, Columbia, told engineers at the International Convention of the Institute of Electrical and Electronics Engineers at New York that South Carolina "suffers from cultural pellagra." The answer, according to Mr. Kalmbach, will be in a "mass-media approach to education with educational television as the focal point."

South Carolina adopted the closed-circuit cable approach to educational television from the outset of its program in 1957-58.

The system now encompasses 155 high schools and nine colleges.

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Naval Research Laboratory

**GAS GUN IMPACT**—A plastic projectile, like the one shown on the stand, slammed into this block of aluminum at a speed of 22,640 feet per second. The projectile was fired from the Naval Research Laboratory's hypervelocity light gas gun facility. Note the internal fractures caused by shock waves.

## EDUCATION

## High Schools Will Teach Chinese and Japanese

► TWO NEW LANGUAGES are being added to the curriculum at several southern California secondary schools. Students will begin studying the Chinese and Japanese languages this fall as the result of a \$180,000 grant to the University of Southern California from Carnegie Corporation of New York.

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