

GENERAL SCIENCE

Space Age World's Fair

Seattle readies a giant international exposition showing the shape of things to come. Biggest single exhibit is the Federal Science Pavilion, David Meier reports.

► FOR VISITORS to next year's Century 21 exposition in Seattle, Wash., dinner at the top of the tallest building west of the Mississippi River promises to be a moving experience, in more ways than one.

While they eat, their "revolving restaurant" will be neatly executing a full 360-degree turn against a natural scenic backdrop of mountains and lakes, seen from 600 feet up.

This unique establishment will crown the exposition's official symbol—a \$3,000,000 steel-and-glass "Space Needle," dominating the 74-acre Century 21 site.

Century 21, the nation's first world's fair since 1939, is an \$80,000,000 "spectacular" slated to run from April 21 to Oct. 21, 1962. The theme is "Man in the Space Age." Ten million visitors are expected.

The Space Needle is only one among many promised wonders that include a Government-sponsored U. S. Science Pavilion, an international art exhibit, commercial and industrial exhibits from at least 35 nations, and the world's first commercial monorail system.

The Space Needle, now under construction, is supported by three pairs of rigid steel legs, anchored 30 feet underground, and a central utility shaft. Visitors can reach the restaurant and the observation deck above it by two high-speed elevators or by a pair of winding, interlacing staircases, each with 832 steps. The restaurant, seating 220, will make one complete revolution each hour.

For Federal participation in Century 21, Congress authorized a \$9,000,000 expenditure, making Uncle Sam himself the largest exhibitor. The Science Pavilion is described as "the greatest science exhibit ever assembled for public showing," larger in size and scope than the U. S. Pavilion at the Brussels World's Fair in 1958.

The exhibit is being planned by the Department of Commerce, in cooperation with the National Science Planning Board and many leading scientists. Dr. Athelstan F. Spilhaus, dean of the University of Minnesota's Institute of Technology, is in charge.

Dr. Spilhaus does not want a science exhibit that can be understood only by scientists.

"Science is one of the highest forms of entertainment," he said. "We plan to entertain the adults and children with the exhibit, and should they happen to become educated by it, that's fine, but education is not the intent of the exhibit—entertainment is."

One announced feature is a "spacearium" co-sponsored by the Government and Boeing Airplane Company. In it, the visitor will be taken on a simulated journey through outer space, making a quick pass at the sun, hovering over Mars, whizzing into and out of the rings around Saturn, and zipping through the Milky Way, with a fast peek at the moon along the way.

The Science Pavilion is designed as a five-unit complex built around a courtyard containing pools and fountains. The five arching towers at the entrance will reach heights of 90 feet, forming a vertical symbol representing man's continuing quest for knowledge.

The State of Washington is financing construction of the Century 21 Coliseum, a \$4,000,000 structure which will house four acres of international exhibits purporting to show how man will work, live and play in the century ahead.

Here, visitors will see models of the cities and homes of the future, plus new concepts



"SPACE NEEDLE"—Tall tower, topped by rotating restaurant that makes a full turn every hour, is a feature attraction of the 1962 Century 21 Exposition in Seattle.

in transportation, industry, food production, automation, education, communications, recreation, crafts, the arts and entertainment. A honeycomb of cubed rooms will hold the displays.

Not a fun ride or a miniature model, Seattle's monorail system is being devised to test ways of solving commuter transportation problems in densely populated regions.

The electrically powered aluminum cars, rolling quietly on rubber tires, will make the 1.2-mile run from downtown Seattle to the fair grounds in about a minute and a half. (See SNL, 80:39, July 15, 1961.) The four coaches will be able to carry 10,000 persons an hour. The double-track line will operate on a T-bar supporting system, with the trains traveling on top. A different type of monorail, suspended beneath the tracks, will travel around the grounds, making scheduled stops at key exhibit areas.

From May 2 to 5, Seattle will play host to the 13th National Science Fair-International, conducted by SCIENCE SERVICE. The more than 400 science-minded youngsters expected to take part will set up their exhibits in 38,000 square feet of floor space in the Civic Auditorium, located in the 16-block area set aside for Century 21.

President Kennedy has said he hopes to be able to officially open Century 21. Former President Eisenhower is the fair's honorary president. Dr. Wernher von Braun, German-born rocket and space expert, is honorary space chairman.

The "space age world's fair," first to emphasize future progress rather than past accomplishments, will provide Seattle with one of the nation's most fabulous civic centers. When the fair ends, most of the buildings on the site will be left intact to form the nucleus of the projected center. The coliseum, for example, will be used for conventions and sports events.

Meanwhile, with some \$22,000,000 worth of construction projects currently under way, the building boom has helped offset any regional recession trends.

Some Century 21 sidelights:

The 65 art masterpieces to be shown at the Fine Arts Exhibition Hall will be insured for more than \$20,000,000.

To get a representative collection of the art work of American Northwest Indians, fair officials had to import many of these anthropological treasures from Europe, where they are highly esteemed.

The bar in the "revolving restaurant" will remain stationary. The management figures that even at 360 degrees an hour, a revolving bar might be a risky proposition.

A fountain designed by two young Tokyo architects, winners in an international competition, uses streams of "sculptured water,"

electronically controlled, to create complex and varied patterns.

A state-wide project called "Operation Smile" has been launched to teach Washington State residents how to welcome tourists and "sell" points of interest to them.

The concrete poured into the coliseum building would be enough to build a sidewalk from Seattle to the state capitol at Olympia, 60 miles away.

The younger set will have access at Century 21 to "thousands of various kinds of hamburgers"—including an open faced hamburger "with a scoop of ice cream and sundae sauce on top."

• Science News Letter, 80:226 September 30, 1961

GENERAL SCIENCE

Great Increases Made In Canadian Research

► EVIDENCE of the great increase in university research in Canada is shown by the record support of \$10,477,031 given for this purpose in 1960-61 by the National Research Council and the Medical Research Council.

The Council's report said the grants were dictated by the steadily increasing student enrollment and the resulting expansion of staff and research facilities. Awards amounted to \$1,110,000 more than in 1959-60 and \$7,000,000 more than in 1956-57.

Science and engineering research received the most support, \$7,169,402, while medical research received \$2,307,467. Awards were made to both student and university staff researchers. The balance of the total was used for publications, conferences, administration of program and other indirect support.

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PUBLIC HEALTH

Flu Vaccination Urged For Possible Outbreaks

► DESPITE a lack of current flu cases, an epidemic may be just around the corner. Predictions are now that Asian flu (type A) and influenza B, caused by a different virus, will hit the United States in the fall and winter of 1961-62.

No specific drug is known to cure influenza, but combined A and B vaccines are 60% to 80% effective in combating the disease.

Health officers and private physicians are being furnished by Surgeon General Luther T. Terry, U.S. Public Health Service, with current recommendations of the Surgeon General's Advisory Committee on Influenza.

Immediate vaccination for persons over 65 years of age, for pregnant women and for those with cardiovascular, pulmonary and other chronic diseases, including diabetes, are advised.

Those who have not had any previous shots should have a second injection in two months. Some good can be obtained within a week from the first shot.

Prediction of A and B outbreaks is based on previous cycles. Both types of flu

were prevalent in England last year. In 1951, when a similar epidemic struck that country, it reached the U.S. the following year.

In the period 1957-60, 86,000 deaths in excess of the normally expected number occurred in this country. More than two-thirds of these deaths occurred in persons 65 or older.

Influenza may be merely a terminal event in an already debilitated patient, but influenza and its accompanying pneumonia may kill a person in active, productive life, although within an older age group, or with definite but compensated chronic disease.

The adult dosage recommended is one cubic centimeter of polyvalent vaccine injected under the skin. Persons previously immunized should be reinoculated with a single booster shot of one cc. each year.

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BUSINESS ADMINISTRATION

Advance Training Helps Handicapped Tradesmen

► A HANDICAPPED person stands a better chance of operating a small business successfully if he gets thorough training before the business is established and expert supervision afterward.

This was confirmed in a study of 150 handicapped persons running businesses in northern Alabama. The three-year study was undertaken by the Alabama School of Trades, Gadsden, using \$47,607 in grants from the U.S. Office of Vocational Rehabilitation.

Those checked included 110 persons in a control group, each set up in business by the State Vocational Rehabilitation Service. Only about ten percent of the group received any preparatory training.

The 40 persons in the second group were screened and trained by School of Trades specialists, and were supervised by project personnel after the businesses opened.

Both the control group and the smaller demonstration group operated skilled trades service enterprises, retail sales outlets and agricultural projects.

Forty-three percent of the untrained control group failed in business, while only 22% of the trained demonstration group failed.

No comparable figures for failure rates among new American businesses in general are available, but a Department of Commerce study shows that 54% of new firms usually survive the first 18 months, 26% survive five and one-half years, and 19% survive ten and one-half years.

The study showed that the most important factors leading to the business success of a physically or mentally handicapped person are managerial ability, emotional stability, aggressiveness, maturity, community reputation and reliability. Age, formal education and business location are less important than personality traits.

Of the 88,000 disabled persons rehabilitated last year under state-Federal programs, about 8,000 were helped by state vocational agencies to become small businessmen.

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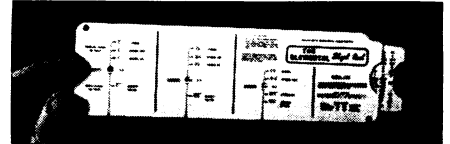
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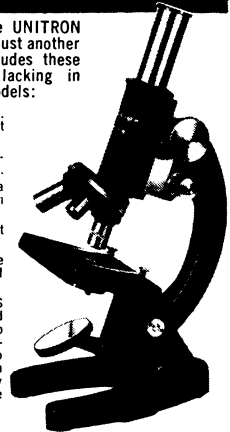


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