Gregory Stress and Charles McGruder of St. Charles Borromeo Academy built this exhibit. Judging it are S. L. Albert and Jon P. Hardway, San Diego engineers.

2 Student Artists Design Covers

Work Of Mission Bay Juniors Picked For April Science Fair Publications

Plans for the Eighth Greater San Diego Science Fair yesterday were off to a good start because of two young artists.

A five-member fair coordinating committee announced that the designs of Joan Steinkamp and Roy Porello, juniors at Mission Bay High School, had been selected to appear on fair publications.

The fair, sponsored by The San Diego Union in cooperation with business and service groups, will be April 4-8 in the Federal Building, Balboa Park.

Both Joan and Roy are members of a 26-member advertising art class at their school. All the class members prepared designs for the covers and submitted them to the committee.

ON BOOKLETS

Roy's painting of an abstract eye was selected to appear on 500 tour guide booklets which will be printed and distributed to student exhibitors.

Joan's design, a montage of geometric figures and scientific symbols, was chosen for the cover of the 5,000 fair programs.

Committee members are Howard Weisbrod, Dr. Levin C. Leatherbury, Tom Pike, Dolores Diehl and Wendell Stoye. The committee received technical advice on reproduction from William Dewgaw, chief clerk for San Diego City Schools.

Weisbrod, committee chairman, noted that in previous years fair designs have been created by professional artists.

1ST STUDENT PROJECT

"This use of student art work is a first for the San Diego Science Fair," he said. "It conforms with the desire of the Science Fair Advisory Board to keep this, as much as possible, a student event."

Robert Steed, Mission Bay High art instructor, said the whole class benefited from the project.

"This is the first practical application in which the class has been able to use the principals of advertising psychology and layout design," he said. "Having an opportunity to produce something which has the meaning of this project serves as a great incentive."

A committee spokesman said some of the other designs of the class members may be used inside the pamphlets or on other paraphernalia promoting the fair.

Mission Bay High School students Roy Porello and Joan Steinkamp show their winning designs for Science Fair pamphlets to Howard Weisbrod, of fair committee. Professional artists have done designs in past.

21 Schools Tell Science Fair Plan

Twenty-one city secondary schools, led by Hale Junior High School, will conduct science fairs in a five-week period starting next Wednesday, it was announced yesterday.

Howard Weisbrod, assistant supervisor of science for city schools, said judges will select the best projects and exhibits in the individual fairs for entry in the Greater San Diego Science Fair April 4-8 in Balboa Parks' Federal Building.

Entries from city public schools will be exhibited at the April fair along with exhibits from county public schools and private and parochial schools in San Diego and Imperial Counties.

Weisbrod, coordinator of the eighth annual Greater San Diego Science Fair, said the Hale fair will be next Wednesday through Feb. 16, with screening scheduled on the first day followed by a public showing the second day.

In the Greater Science Fair, the senior division boy and girl sweepstakes winners will enter their projects in the National Science Fair-International at Seattle in May. All expenses will be paid.

Junior division sweepstakes winners will receive a set of Popular Science Encyclopedias.

Following is the schedule of city school fairs, with the period for public viewing indicated in each case:

SENIOR HIGH SCHOOLS

Claremont—March 5 in the gymnasium; public showing, 3 to 4:30 p.m. and 7 to 8:30 p.m.

Crawford—March 1 in the library; public showing, 7:30 a.m. to 3 p.m. and 7 to 8:30 p.m.

Hoover—February 28 in the science department; Public showing, 7 to 9 p.m.

Kearny—March 5 in the science department; public showing, 7 to 8:30 p.m.

Mission Bay—February 20 in the cafeteria; public showing, 8 p.m.

Point Loma—March 1 in the science department; public showing, 7 to 9 p.m.

San Diego—February 28 and March 1 and 2 in the library; public showing, 7 to 9 p.m. March 1; 8 a.m. to 2:30 p.m. and 7 to 9 p.m. March 2.

Snyder Continuation—March 6 in the auditorium; public showing, 9 a.m. to 4 p.m.

JUNIOR HIGH SCHOOLS

Collier—Feb. 23 to Feb. 26 in the cafeteria; public showing, 7 p.m. Feb. 24.

Dana—Feb. 19 to 21 in the auditorium; public showing, 8:30 a.m. to 3 p.m. Feb. 19, and 8:30 a.m. to 9 p.m. Feb. 21.

Gompers—Feb. 26 and March 2 in the auditorium; public showing, 8:30 a.m. to 3 p.m. Feb. 26, and 8:30 a.m. to 1 p.m. March 2.

Hale—Feb. 14 to 16 in the library; public showing, 7 to 9 p.m. Feb. 15.

La Jolla—March 5 to 7 in the gymnasium; public showing, 6:30 to 9 p.m. March 6 and 7.

Mann—Feb. 19 to 21 in the library; public showing, 7:30 to 9 p.m., Feb. 21.

Marston—Feb. 19 to 21 in the library; public showing, 8 a.m. to 4:30 p.m. and 8 to 9:30 p.m. Feb. 20; and 8 a.m. to 4:30 p.m. Feb. 21.

Memorial—March 1 and 2 in Science Room 513; public showing, 9 a.m. to 2 p.m. March 1, and 11 a.m. to 2 p.m. March 2.

O'Farrell—Feb. 20 to 23 in the auditorium; public showing, 8:30 a.m. to 2:30 p.m. Feb. 20; 7:30 to 9 p.m. Feb. 21, and 8:30 a.m. to 12 noon Feb. 23.

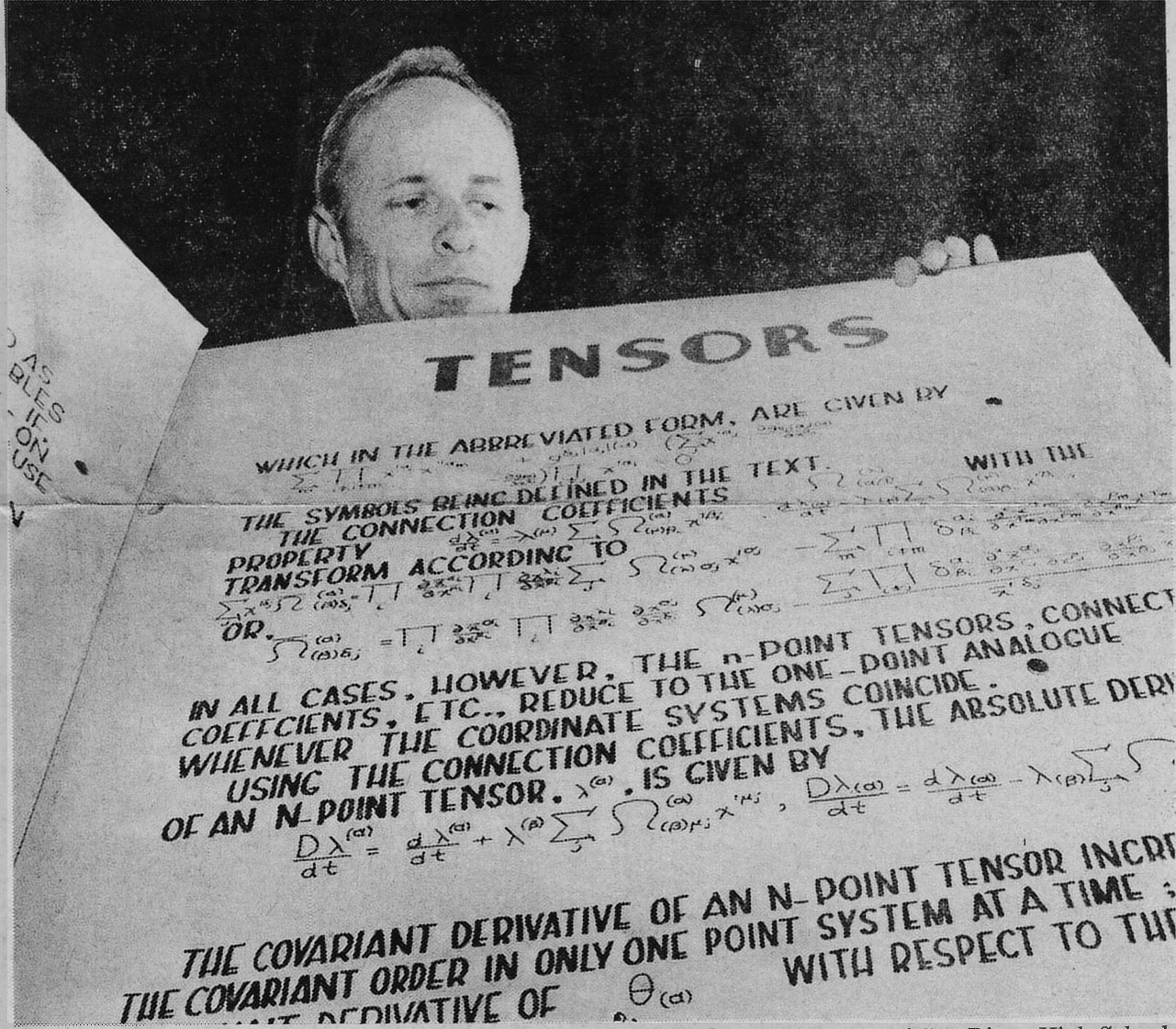
Pacific Beach—March 2 in the science rooms; public showing, 8:40 a.m. to 2:50 p.m. and 6 to 8 p.m.

Roosevelt—Feb. 28 in Room 105; public showing, 9 a.m. to 3 p.m.

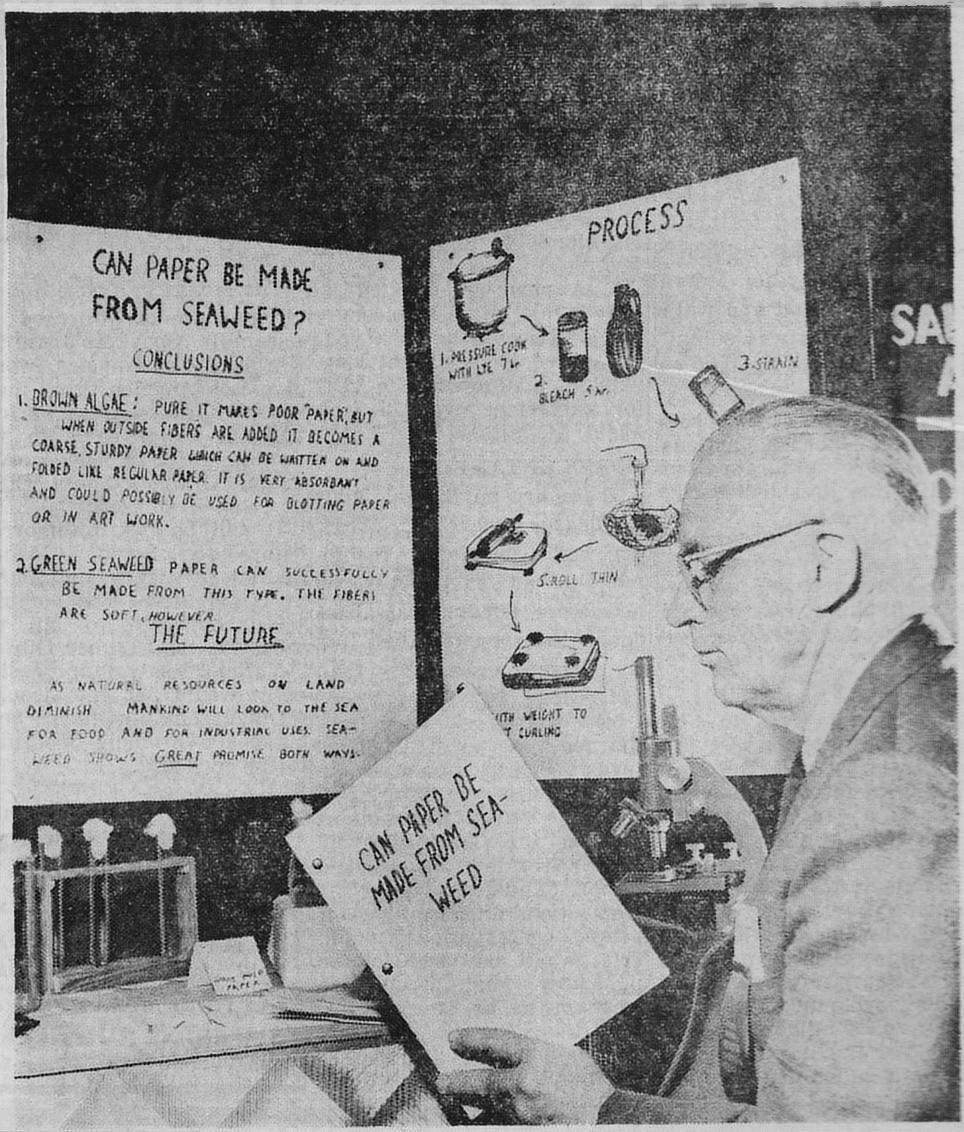
Taft—Feb. 19 and 20 in the cafetorium; public showing, 8:30 a.m. to 9 p.m. Feb. 20.

Wilson—Feb. 26 and 27 in the cafeteria; public showing, 6 to 8:30 p.m. Feb. 27.

Joyce Satir Kostakis, 16, of Mission Bay High School, built this exhibit showing how color affects the apparent brightness of light reflections. A judge, Dr. Ellen Stewart, is checking on Joyce's notebook. Joyce won in one of the two sweepstakes awards yesterday at the eighth annual science fair.



It takes a college course even to understand the title of this senior sweestake exhibit prepared by Gary Wayne Warner, 15, of San Diego High School. Charles Richardson, a judge admires the work.



Henry C. Myers, a Science Fair judge studies junior sweepstake winner project on making paper from seaweed entered by Melinda Louise.

S.D. Union

Names Of All Award Winners Listed At Greater San Diego Science Fair

Here is a complete list of the winners of awards in the eighth annual Greater San Diego Science Fair at Balboa Park:

Senior Sweepstakes—Gary Warner, San Diego, and Joyce Kostakis, Mission Bay.
Junior Sweepstakes—Patrick Harrison, Hale JHS, and Melinda Poiset, Parkway JHS.

Senior Group Sweepstakes—James McCabe and Thomas L. Tracy, Point Loma.
Junior Group Sweepstakes—Charles McGruder and Gregory Stress, St. Charles Borromeo.

Navy Science Cruise—Robert Breeze, Claremont; Michael Koziniak, Grossmont; John Koeth, Hoover.

Chemical Rubber Award—George Rothbart, Claremont; Susan Muench, Hoover.
Air Force certificates—Charles Abel, Hoover, aerospace science; Robert Breeze, Claremont, aerospace electronics; Richard Essery, Clairemont, nuclear sciences; Bob Isaak, Point Loma, aerospace medicine.
Signet Mentor Library Award—Sandra Taylor, Mt. Miguel.
Scientific American Award—Michael Fredman, Dana JHS; Bronwyn Groesbeck, Roosevelt JHS.

Division awards, listed in order:

SENIOR DIVISION

Botany—No awards for first and second among boys; Bob Isaak, Point Loma, third. No place for girls; Susan Halgedahl, Kearny, second.
Medical—William Siegfried, Fallbrook; James Piatt, Hoover; John Murphy of San Dieguito and Johnny Wilson of Kearny, third. No first place for girls; Joan McCurley, Hilltop, second.
Microbiology—James Crawford, Mission Bay; Jeffrey Bear, Clairemont; Royce Riggan Jr., Hilltop. No first place for girls; Terry Smiley, Hoover; second; Susan Chase, Kearny, third.
Zoology—George Rothbart, Clairemont; Christopher Kohrs, Hoover; Kimberley Donn and James Whitt, both of Mar Vista, third. Sandra Taylor, Mt. Miguel, first girl; no second; Joy Miller of Hilltop and Sandra Qualiato of Academy of Our Lady of Peace, third.
Chemistry—Ronald Nellis, Kearny; Richard Oliver, Point Loma; Charles Saltzer, Hilltop. Sarah Debusk, San Dieguito; Susan Muench, Hoover; no third place for girls.
Geology—No first boy; John Thomas, Crawford, second; no third. No girl winners.
Physics — Richard Essery, Clairemont, and John Koethe, Hoover, first boys; Dennis Bowers, Hoover, and George Sharman, Clairemont, second; William Borsum of San Dieguito, Lewis Massie of San Dieguito and Charles Getzoff of Clairemont, third. Joyce Kostokis, Mission Bay, first girl; no second; Catherine Jaegly of Mission Bay and Sandra Woodhouse of Hoover, third.
Electronics—Robert Breeze, Clairemont; Franz Jaggar of Claremont and Walter Pietrzak of Point Loma, second; no third boy. No girl winners.
Engineering—Michael Koziniak, Grossmont; Charles Abel of Hoover and Anton Witzel of Kearny, second; Jonathan Heritage of Clairemont and John McCleary of Mission Bay, third. No girl winners.
Mathematics—David Reed of Point Loma and Gary Warner of San Diego, first; Richard Bron, Mission Bay. No first girl; Rose Aywlla, Academy of Our Lady of Peace second.

SENIOR GROUP

Microbiology—Johnny Wong and Harvey Maurer, San Diego, third.
Zoology—Gary Cockerell and Eddie Roberts, Mission Bay, second; Alex Ayers, Susan Hurlich and Liz Tillery, Hoover, third.
Astronomy—James McCabe and Thomas L. Tracy, Point Loma, first.
Chemistry—Michael Creutz and Carol Russell, San Dieguito, third.
Physics—Robert Barefoot and Walter Konopka, Hoover, third.
Engineering—Robert Pack and Thomas Rodstrom, Crawford, first.

GIRLS GROUP

Medical—Tamra Enselhorn and Joanne Ruth, San Diego, third.
Microbiology—Patty and Katie Pepper, Hoover, third.
Zoology—Karen Tanaka and Kathleen Owashi, Lincoln, second.
Physics—Mary Hicklin and Dianne Sylvester, Sacred Heart, third.

JUNIOR DIVISION

Botany—No first boy; James Cross, Montgomery; Larry Langsdorf, La Jolla. Claudia Graham, Marston; Virginia Owashi, O'Farrell; Ann Fodor of O'Farrell and Ann Purdum of Grant, third.
Medical—Stephen Drew, Hilltop and Patrick Witkowski, Sacred Heart, first boys; Gary Allen of Oak Crest, Wayne Lozier of Greenfield and Gail Warnock of Pacific Beach, second; Gregory Cheung, La Mesa, third. Bronwyn Groesbeck, Roosevelt, and Seonaid McArthur, La Jolla, first girls; Susan Jones and Dana Rufolo, both of La Jolla, second; Cheryl Lundmark, Roosevelt, and Sharon Wilkins, La Jolla, third.
Microbiology—John Studer, Marston; Thomas McGreary, Parkway; Brian Toon, Hilltop. No first and second girls; Kathy Russell, La Mesa, third.
Zoology—Marc Christensen, Grant, and Patrick Harrison, Hale, first boys; Pete Dutton of Earl Warren JHS, Donald Moeller of Marston and Joe Tanalski of La Jolla, second; Daniel Biggs, Granger, and Dave Sayles, La Jolla, third. Nancy Bickerton, La Jolla, and Christina McPherren, Francis Parker School, first girls; Mary Bronson of O'Farrell, Patricia Engman of Sacred Heart and Celina Keistman of Oak Crest, second; Karen Haselton of Collier, Robyn Hillam of Lincoln, Susan Hinck of La Mesa and Susan Wood of Mar Vista, third.
Astronomy—No first boy; Patrick McMillan, Chula Vista, second. Beverley Izor, Parkway, first girl; Elizabeth Saarni, Dana, second.
Chemistry—Felix Li, St. Charles Borromeo; Kevin Manion, St. James Academy; Gregory Simmons, Taft, and Michael Sommer, Wilson, third boys. Melinda Poiset, Parkway, and Connie Yamaguchi, O'Farrell, first girls; no second; Carolyn Shepard, La Mesa, third.
Geology—No first boy; Bill Dougherty and John Inman, both of La Jolla, second and third. Gwen Breslauer, La Jolla, first girl; Kristine Greene, La Jolla.
Physics—Carl Creutz, Earl Warren JHS, and Thomas Utschig of Stella Maris, first boys; Stanley Limpert, La Jolla, and Glenn Scott of Marston, second; Daniel Georgi of Taft; John Valentino of Marston and Stephen Zimmerman of Harvey Lewis JHS, third. No first girl; Mary Spiess and Sherri Weston, both of La Jolla, second; Cynthia Sanders, Hilltop, third.
Electronics—Steven Maioewsky and Gregory Mattson, both of La Jolla, first boys; no second; Larry Vandeventer, Spring Valley, third. No girl winners.
Engineering—Donald Knight, La Mesa; Max McKee, Hilltop; Carlton Turner, Pacific Beach. Joanne Odenthal, Hilltop; Elizabeth LaRue, La Mesa.
Mathematics—Michael Fredman, Dana; Gerald Lame, Horace Mann JHS; William Lipis, Greenfield; Loren Jones, O'Farrell; Lynn Isaak, Dana; Diana Barrows of Chula Vista, Gail Clement of Taft and Sharilyn Heselton of Hilltop, third girls.

BOYS GROUP

Botany—Alan Dumont and Earl Hawkes, Hale, third.
Medical—Gregory Phillips, Larry Crispell and Tom Hodge, Dana, first; Richard Spencer and Robert McGehee, Dana, second; Brad Owens and John Truine of Stella Maris, third.
Zoology—Charles McGruder and Gregory Stress, St. Charles Borromeo, first; Terry Rosales and Joel Chew, O'Farrell, second.
Chemistry—Kenneth and Jon Isaacs of Earl Warren and Roy Myking and Richard O'Brien of Collier, second; Richard Burton and Dana Reinke of Taft, third.
Geology—James Stites and Wayne Kight, Mar Vista, second.
Physics—Don Hubbard and Clyde Scott of Oak Crest and Dann Whalen and Molnor Geza of St. Augusitne, third.
Mathematics—William Rose, O. Eugene Dial and Charles Samuels of Castle Park, first; no second; Mike Payne and Pat Jester of Chula Vista, third.

GIRLS GROUP

Medical—Carolyn Porter and Sheila Kelly, Memorial, first; Lynn Miller and Debbie Eldridge of Marston, Margo Combs and Kathy Way of Collier, and Jewelene William, Lorraine Hoyashi and Gloria Rodriquez of Memorial, third.
Microbiology—Sarabeth Koethe and Leliane Chaney, Wilson, second.

OTHER AWARDS

Institute of Radio Engineers—Lewis Massie, San Dieguito; Robert Breeze, Clairemont; alternate, Walter Pietrzak, Point Loma.
San Diego County Dental Society — Ann Taylor, Parkway; Mark Gosselin and Gregory Cheung, both of La Mesa.
Citizens Forestry Study Group of San Diego County—Donald Miller, Marston; Larry Langsdorf, La Jolla.
American Meteorological Society—Gene Kira, San Dieguito.
San Diego Engineering Council—Walter Pietrzak, Point Loma; Steven Maioewsky, La Jolla.
American Society of Mechanical Engineers—Michael Koziniak, Grossmont; Dan Whalen, Molnar Genza, Jeffre Groves, St. Augustine.
Institute of Traffic Engineers—John McCleary, Mission Bay; Steven Maloewsky, La Jolla.
American Institute of Electrical Engineers—Walter Pietrzak, Point Loma; Stanley Limpert, La Jolla.
Psychological Society—William Siegfried, Fallbrook; Richard Anderson, Marston; Christopher Kohrs, Hoover; Joyce Kostakis, Mission Bay; Preston Chipps, Hale; Craig Nikitas, Taft.
San Diego Nutrition Society—Emory Hoshi and Steven Tomiyama, Memorial; Alan Dumont and Earl Hawkes, Hale; Sandra Taylor, Mt. Miguel.

S D Union Sun. Oct. 6, 1963

—San Diego Union Staff Photos

Seaside sources inspired these junior sweepstake winners in the Science Fair. Leonard Coldwell, at left, a teacher, joins Patrick Harrison at his exhibit on copepods. At right, Melinda Poiset shows her project notebook to her science teacher, Roger Miller.

Proud participants (from left) John German, J. Byron Wood, Larry VandeVenter, Scott King and John Irvine.

young talent in science

■ With everything from electromagnets made of doorbell buzzers and electronic drums made of mom's rolling pin to mice of the white or electronic varieties, Pacific Telephone offspring "made their mark" in the recent Greater San Diego Science Fair. Eight children of employees won in their local school science fairs and qualified to enter the "Greater Fair." Theirs were among 324 exhibits accepted from among 3,000 developed by students in the County. Three of the eight went on to win further honors in the Greater Fair.

Marc Christensen, 13, an eighth grader at Grant Junior High School is the son of Luther A. Christensen, Escondido plant. He was a first-place winner in the Zoology category.

Marc, who plans to be a doctor, entered the 1961 event and won second with his project "Anatomy of a Pig." This year he chose an experiment entitled, "Embryology of the Cavy (Guinea Pig)." In entering, he described the experiment and concluded, "This knowledge will be used to carry out the next step of my project." Asked what that step would be, Marc replied, "If it is all right, I would like to keep it a secret. Someone might read your story and steal my idea."

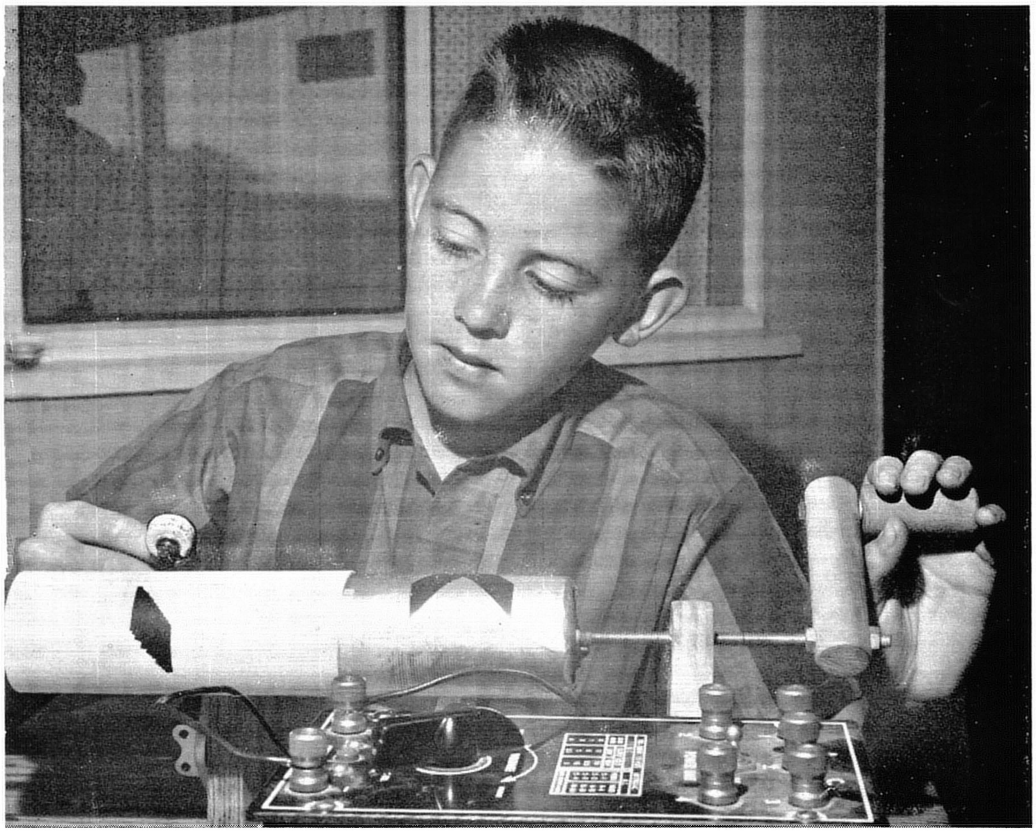
Doorbell buzzers and a rolling pin were part of the "Picture Transmitter" developed by Larry VandeVenter, 13, in the eighth grade at Spring Valley Junior High School and a first-time fair entrant. Larry placed third in the Junior Boys Division of the Greater Fair with his project in the electronics category. According to Larry it "shows in simplicity how to transmit a picture to a distant point over a pair of wires." Every part was built or adapted by Larry, including mom's rolling pin.

Larry, whose dad is D. L. VandeVenter of general plant, wants to be an architect, but indicates he is pretty intrigued with his present project and will try to develop it further by next year.

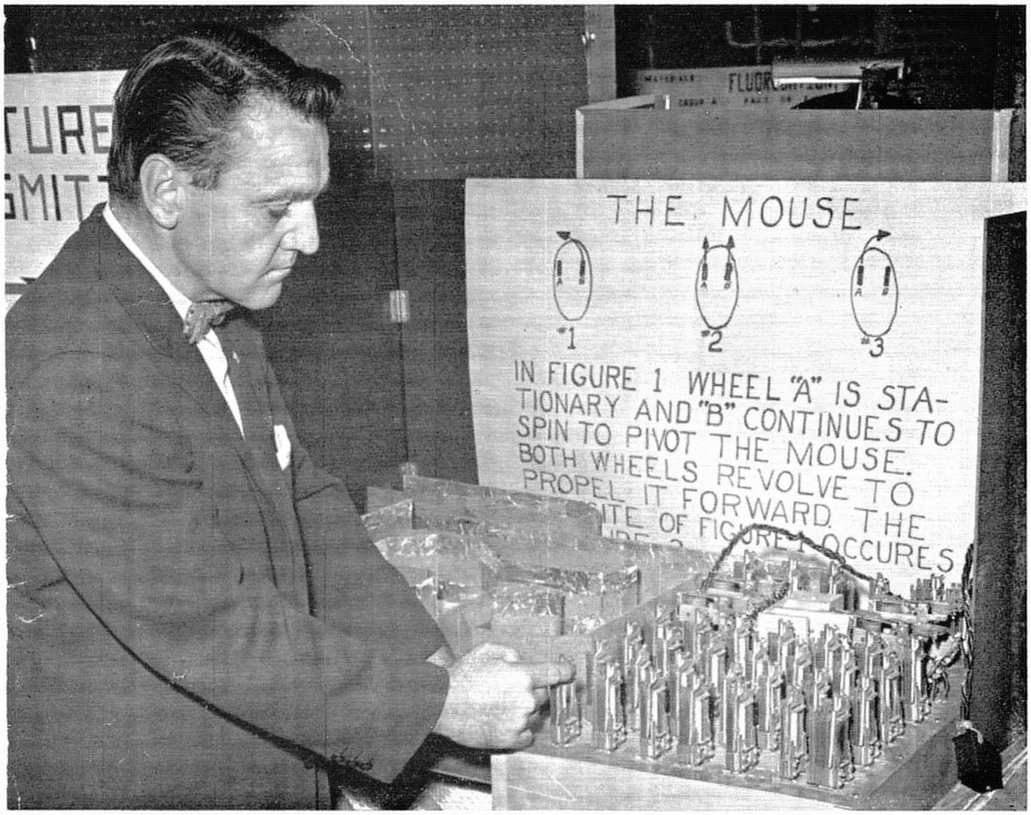
Of the eight young people Sandra Woodhouse was the only girl and the only senior high student. She is the daughter of C. S. Woodhouse, South District plant, and attends Hoover High School.

Sandy won third-place in the Senior Girls Division of Physics, with an exhibit entitled, "Metal Fatigue." She describes it as an attempt to explore "the questions of breaking point and the relation of the length of the bend to the breaking point." Sandy built a machine to break the metal.

During the judging, Sandy was interviewed by three San Diego scientists.



Larry VandeVenter and his "Picture Transmitter."



Glen German, a Southern Counties engineer, checks over Robert Wilson's "Electronic Mouse" project.

"They gave me at least 25 good ideas for developing my project for ne year." Sandra was later awarded a scholarship in the 1962 Summer Science Training Program at Carnegie Institute of Technology, as an exceptionally able high school student.

A first-timer in the fair was Scott King, son of W. S. King Jr. of marketing. Scott is 14 and a ninth grader at Collier Junior High School in San Diego.

His was part of a math assignment. He worked up a project called "My Kookie Number System." "This," he explains, "was the same as the regular number system, only different." His dad said, "I've seen it, he's explained it, but frankly I still don't understand it." Nevertheless, he received a high grade from his teacher and it furthered his interest in an engineering career. He plans to try something similar for next year's fair.

John Irvine, son of J. E. Irvine, general plant, is 13, and in the eighth grade at Stella Maris Academy, in La Jolla.

John teamed with Brad Owens, classmate, in entering the local school fair and the greater fair as group participants. The group approach to science projects is popular with students as typical of today's team approach to scientific problems.

The boys developed a project called, "What are the effects of drugs on the instincts of mice?" They obtained four mice and constructed a maze. They gave the mice tests before and after meals, with and without drugs, to reach a conclusion. The drugs (really tranquilizers) were administered under the guidance of a doctor. All the mice were slowed down by the tranquilizer. One pair, however, was so affected they wouldn't get up. The boys believe that heredity may be the answer to the difference in the results and they plan to continue their project for the next year. What happened to the mice? Well, you'll be reassured to learn that (to no one's surprise) there are now baby mice, and all, including parents, are well and happy.

This was the second Science Fair for John German, son of Glen German of

Sandra Woodhouse (left) explains her project at Fair to Marc Christensen, a 1962 winner, and Diane Brooks Maxey, a San Diego employee, who won a first award in 1955.

chief engineer's. John tackled a project in the field of medical science entitled, "The Psychological Aspect of Stereo." He is trying to find out if the stereo effect is really in the equipment or if some, or all of it, is imaginary or psychological. Last year, he qualified for the greater fair with a project in electronics for which he took a second place award, called, "Can an object be tracked by signals sent from it?" John is 14 and in the ninth grade at Helix High School in La Mesa.

"Tectonic Geology" was the title of J. Byron Wood's project. Byron's 15, a ninth grade student at Oak Crest Junior High School in Encinitas, and is the son of James B. Wood of Escondido plant. He describes his experiment as follows: "Geological formations and functions are produced in the laboratory using materials and processes which faithfully duplicate those in nature. Because of the lessened time element, these processes allow formations to be studied using the camera and graphs." He expects to develop his ideas further for next year.

Robert Dennis Wilson chose to dramatize his specialized computer by building an "Electronic Mouse That Learns From Experience." His father is Jack Wilson of North District plant. Robert is 14, in the ninth grade at Hale Junior High School in San Diego.

He built an electronic mouse and a maze to send it through. When the mouse made a wrong turn, the computer remembered it and corrected the error the next time. "The funny thing is," he said, "that if the mouse gets through the maze the first time without any mistakes, it doesn't mean it won't make a wrong turn the second time through." He says he has a lot of work to do on the project.

Robert used 50 switches and relays which are obsolete telephone equipment, obtained through the school. Glen German of chief engineer's has been administering a program for the past two years in which obsolete equipment of all kinds is distributed to the local schools free of charge so that scientific interests such as Robert's can be developed.

Howard Weisbrod, committee coordinator of the fair, and science curriculum supervisor for the San Diego schools comments, "The assistance to science students which Pacific Telephone has provided in San Diego for several years of the Science Fair demonstrates one of the ways in which industry can assist education. Your telephone engineers and scientists have given advice, and encouragement to these students.

Pacific Telephone was asked to provide some of the programming for student exhibitors and the visiting public during the Science Fair. The new Bell Science Series film, "About Time" proved to be just right for showing to the 381 exhibitors on the April 4 morning while judging was taking place.

In addition, Jack Mayer did a special Science Fair version of the lecture-demonstration, "Adventures in Sound" to keep up the spirits of the youngsters while they nervously waited to be interviewed by the judges.

On April 5, Pacific Telephone was host to 30 student exhibitors on a tour of the Communications Center at 3848 Seventh Avenue. The tour was coordinated by Bob Glaze, South District unit manager.

Pacific Telephone was one of the many industries, businesses, service organizations and individuals contributing to the success of this event for teenagers.

Not all of these students will become scientists, but all have learned more about how to study, analyze, reason, and use their initiative; as well as to take disappointments and turn them into a new challenge.

—Dolores Diehl

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