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consortium of science-related industries, institutions of research and higher education, museums, medical health networks, and science competitions in support of K-12 science education

San Diego

Science Alliance Newsletter

Fall 1998

San Diego Science Alliance www.sdsa.org

The San Diego Science Alliance website is up and running—and looking better than ever! Thanks to a few friends of the SDSA, we have been able to successfully divert the generous \$10,000 in TRW grant funding away from the purchase of a costly new server and new computer hardware. Richard Wenn and Roger Scott from WestEd have agreed to host the SDSA website on one of WestEd's new NETRA servers. . .free of charge! The new NETRA server will offer the SDSA increased storage and database management capabilities, internal "spider" search engines for cross referencing educational data, and a host of other benefits. This new development has allowed us to reallocate the website funding away from the acquisition of hardware and focus on the creation of new content and comprehensive interactive applications for San Diego educators.

Eric Nelson, a section manager for Litton Data Systems San Diego (Eric is also working with a San Diego start-up company, Valiant Technologies) and another friend of the SDSA, has graciously agreed to act as our SDSA webmaster until we can secure a part-time employee to fill the position. Eric has been hard

at work giving the website a new look. He has already simplified the website's navigational tools, added links to SDSA members and partners, and updated pertinent information about upcoming SDSA events. Eric's efforts are truly appreciated.

We thank MENTUS for their continuing design support to SDSA. In particular, we would like to thank Jay C. Nielsen, Multimedia Designer at MENTUS, for his web page design and development. Our special thanks to Dr. George Seymour, Space & Naval Warfare Systems Center-San Diego, for his generosity and support in acting as the SDSA webmaster for the past two years.

These are exciting times for the San Diego Science Alliance, and we are making every effort to reflect this increased level of energy and support through our "window to the world" . . .the SDSA website. Mark Shults of Pacific Bell is chairing the SDSA Website Committee, consisting of a core group of highly motivated and extremely talented individuals working on the new SDSA online resource tools. Be sure to bookmark the website, and keep checking for new and updated SDSA information.

Second High Tech Fair Set For 1999

The San Diego Science Alliance is proud to announce the date for the second annual San Diego County Educational Technology Fair—Thursday, February 18, 1999 between 9 a.m. and 2 p.m.

We anticipate over 3000 students will attend this year's fair in the larger and more spacious arena—the Pat O'Brien Exhibit Hall at the Del Mar Fairgrounds.

The larger hall will allow increased participation by local San Diego companies whose exhibits provide the latest, interactive, hands-on technology and scientific research.

We are most pleased that the five members of the San Diego Congressional Delegation—Congressmen Bilbray, Cunningham, Filner, Hunter, and Packard; the San Diego Office of

Education; San Diego City Schools; and the San Diego Science Educators Association will, once again, be co-sponsoring the Fair with the Science Alliance.

This is truly an exciting and extraordinary opportunity to stimulate students to succeed in the classroom and see their role in the burgeoning technology of our future. The future is here for them

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SANDELI—Not Just Another Acronym

Thanks to the **American Physical Society** and the **San Diego County Office of Education**, ten local school districts participated in the five-day, San Diego Elementary Science Leadership Institute (SANDELI) held May 15–20, 1998. For the first time, district leadership teams consisting of elementary teachers, principals, district administrators (including four Assistant Superintendents) and local scientists from the **San Diego Science Alliance** member companies convened at the Del Mar Hilton to examine critical issues in elementary science programs and develop strategic plans for implementing change.

Teams from Cajon Valley, Cardiff, Chula Vista, Encinitas, Escondido, La Mesa/Spring Valley,

San Diego Unified, Santee, Vista, and Calexico focused their attention on their goals for science education, examined instructional materials in the context of how children learn, and discussed effective science teaching for the elementary schools. These districts were joined by five other districts from around the nation and worked with nationally known leaders in elementary science education as well as outstanding local experts. Dr. Ramon Lopez, Director of Education and Outreach Programs for the American Physical Society, acknowledged the accomplishments of this institute: "The energy and involvement of the San Diego Science Alliance and its commitment to improving science education has

proven extremely valuable for San Diego area schools."

San Diego Science Alliance Board Members and school district administrators, including Dr. Rudy Castruita, San Diego County Superintendent of Schools, and Dr. Carol Pugmire, attended a dinner function during the institute where Dr. Andrew Sessler, President, American Physical Society, shared his thoughts on the importance of physics and the role of technology in society. Each participating school district has proceeded to implement their strategic plans and specifically participate further in the PISCES Project (Partnerships Involving Scientists in Elementary Schools) of the San Diego Science Alliance.

Elementary Institute of Science Puts Science in the Palm of Their Hands

For 34 years the Elementary Institute of Science (EIS) has been offering a science-based curriculum after-school, on Saturdays, and during the summer for children from over 80 schools in San Diego. EIS nurtures the intellectual curiosity of youth by providing hands-on science and technology experiences. Early science education strengthens interest at an age where curiosity is at its height, and opens doors for careers in science and technology for students who are traditionally under-represented in the technological workforce.

This summer, 135 students studied biology, engineering, computer science, natural science, and photography at the Elementary Institute of Science. Students ages 7–13 made wind powered cars, built earthquake-sound structures, and soldered resistors to a circuit board in engineering; they published their own newsletter in computer science; and they dissected squid and sheep hearts in their biology class. In photography, students made cameras and developed prints in a darkroom. In natural science, students made sundials, cooked apple crisps in a solar oven, and launched a rocket.

Unfortunately, the demand for the program is so

great that over 150 students were on the summer waiting list. To accommodate the increased demand, EIS is in the process of raising funds to build a new facility that will more than triple its current enrollment. The new facility should be completed by the fall of the year 2000.

Calendar of Events

- Nov. 21–22, 1998: Teacher Workshop: Scientific Explorations in Tropical Seas, at the Birch Aquarium at Scripps. Call (619) 534-7971 for more information.
- Feb. 18, 1999: Second Annual SDSA High Tech Fair at the Del Mar Fairgrounds
- Mar. 12, 1999: SDSA Annual Awards Breakfast at the San Diego Science Educators Conference
- Apr. 14–18, 1999: Greater San Diego Science and Engineering Fair

S.E.E.D. Fair Held May 1–2

The 1998 S.E.E.D. (San Diego Environmental Education Discovery) Fair was held on May 1–2 at Mission Trails Regional Park, where educators worked with the City, County, and community to bring an environmental education event to 5th–12th grade students. Teams of students from public and private schools competed in The Nature Challenge, a high-spirited competition displaying the students environmental expertise. Other projects were The Environmental Stewardship, a science fair-like display, and Enviromercials, short commercial skits on environmental issues. The top teams won trips on the Floating Marine Lab, a visit to their school from the Splash Van, or a Marine Mammal presentation by naturalist Jim Peckarsky.

The Resource Fair was another important component of the S.E.E.D. Fair. Organizations supporting this effort included the **San Diego Natural History Museum**, San Diego County Office of Outdoor Education, the **San Diego County Water Authority**, the U.S. Forest Service, the **San Diego Zoo and Wild Animal Park**, **SeaWorld**, Ameri-Corp Volunteers, and Rare and Wild.

Next year's S.E.E.D. Fair will take place on April 30 and May 1. If you are interested in learning more about the S.E.E.D. Fair, contact Betsy Leonard at (619) 232-3821 x192 or e-mail a request for an application to sdnhm@earthlink.net.

High Tech Fair (cont. from pg 1)

to see, touch, and experience first hand.

The Steering Committee has already received incredible support from the business, military, and educational communities with the early commitment to the '99 Fair. (See side-bar for a preliminary list of exhibitors.)

For additional information regarding participation in the 1999 San Diego County Educational Technology Fair, visit our website at www.sdsa.org or contact Barbara Abelin (barbara.abelin@cubic.com), Judi Nelson (judi_nelson@rc.trw.com), or Pat Winter (pat.winter@gat.com).

If you would like more information on how your high school can participate, contact Nancy Taylor (ntaylor@sdcoe.k12.ca.us) or Bob Van Zant (bvanzant@mail.sandi.net).

Don't miss out—register early. This is definitely an event you will not want to miss!

HP Leadership Grant

Vista Unified School District is the latest recipient of a **Hewlett Packard** Leadership Grant for school districts who want to improve the instruction of science, particularly physical science in the elementary grades. One of the requirements for participation is having the assistance of a Hewlett Packard Engineer or scientist as a member of the district resource team. Vista was fortunate to have HP engineer, Anthony Parkhurst, volunteer to work with the district. Anthony went to school in Vista, graduated from Vista High School, and has two children who attend district schools. His roots in the community and his willingness to help shape the district vision for "hands-on" science is supported by HP and its community outreach liaison, Mitch Mitchell. Mr. Mitchell explained HP's commitment to this outreach effort and other national education efforts at a school board meeting held earlier this year.

With HP planning assistance, the district is looking at building a materials refurbishment center. HP scientists and university professors such as Dr. Graham Oberem from the physics department at CSU San Marcos will help provide content training in the physics involved in each kit before teachers use the science kits in their classrooms. The district will receive \$90,000 to support leadership activities during the life of the grant.

Confirmed Exhibitors for High Tech Fair

Agouron Pharmaceuticals
Alliance Pharmaceuticals Corp.
Chem-tronics, Inc.
Cox Communications
Cubic Corporation
Dynamic Instruments, Inc.
GDE Systems, Inc.
General Atomics
Hewlett Packard
Hughes Network Systems
Immune Response Corporation
Molecular Biosystems
NutraSweet Kelco
Pacific Bell
Proxima Corporation
QUALCOMM Incorporated
San Diego Supercomputer Center
Science Application International Corp. (SAIC)
SDG&E
SeaWorld San Diego
Sony Technology Center
Southern California Biotech Education Consortium
TRW Avionics Systems Division
US ITER Home Team
ViaSAT Inc.

Kids and Industry Discovering Science (K.I.D.S.) Program

Seven years ago, **TRW Space & Electronics Group's Avionics Systems Division**, headquartered in San Diego, developed the Kids and Industry Discovering Science (K.I.D.S.) program. The program's goal is to bring engineers and students together in a classroom setting to encourage interactive learning of mathematics, science, physics, and technology. Statistics show the number of U.S. college students entering the engineering and science programs to be declining. We hope to influence the future workforce by increasing interest in these highly technical fields at an early age, thereby benefitting the community at large.

While the program is a partnership between industry and education within the Escondido and Poway Unified Schools, the success of the program is due to the dedication and commitment of the TRW employees/parents who volunteer their knowledge, services, and time.

At the present time, there are approximately 40 employees, both engineers and non-engineers, that make up eight teams. The teams are assigned to 5th and 6th grade classrooms, where they present "hands-on" science experiments for the students. The teams visit their class once a week for an hour science lesson. The majority of

time spent in preparation and actual presentation of the experiments is strictly volunteered by the employees. However, employees are paid for one hour of preparation per week through the program. The K.I.D.S. Program is strongly supported by TRW management and school principals, as well as teachers and parents within the school districts.

When the team members are asked why they participate in the program, responses include the opportunity to foster early childhood education and self-esteem for the students, as well as the development of team spirit and morale within the company itself.

News of Our Members. . . .

Joy Wolf, Education Director, **SeaWorld San Diego**, and a Science Alliance Board member, is the newly elected President of the National Marine Educators Association (NMEA). NMEA provides a valuable focus for marine and aquatic studies all over the world.

. . . Ellen Moomaw, Senior Associate Scientist, **Agouron Pharmaceuticals**, and a member of the High Tech Steering Committee, volunteered to spend a morning with the San Diego City Schools science standards consultant and other team members. For each area an "expert" from industry participated.

. . . Larry Woolf, research physicist, **General Atomics**, served as an industry participant for the Science Standards for San Diego City Schools.

. . . George Hellman, **Hughes Network Systems**, and Larry Woolf, **General Atomics**, testified before the state commission working on the California Science Standards.

. . . Nicholas Ghitelman from Newton's Apple Multimedia Collection (an award winning television science education program produced in Minneapolis) contacted the Science Alliance (having found us by searching the web) to see if local teachers would be interested in working on some test sites with them. Jim Parker, **Spring Valley Middle School**, found this to be a valuable opportunity.

. . . Jenny Ferrone, **GDE Systems** and a Science Alliance volunteer, has been accepted in the USD Doctoral program. Her degree will be in Leadership Studies.

She also represented GDE Systems at the 1st Annual North County Best Practices Summit in May.

. . . Leslie Snider, **MiraCosta College** and a Science Alliance Board member, was named Chair of the Biology Department at MiraCosta College.

. . . Two researchers from **Torrey Pines Institute for Molecular Studies**, Sylvie Blondelle and Gretchen Campbell, joined several scientists and engineers from **General Atomics** in a roundtable discussion on Women in Science for high school students in the Howard Hughes program at UCSD. Watch for more news on Science Alliance programs on Women in Science.

. . . Judi Nelson, **TRW** and the Business Chair for the High Tech Committee, attended the kickoff meeting for the second north county regional "Best Practices Competition" where high school teachers display exemplary methods of teaching science and mathematics. **Sony**, **TRW**, and **Lockheed Martin** were also represented on the committee. The finalist from each region will join the county wide competition sponsored by **QUALCOMM**. This event was started in the Spring of 1997 by the Economic Development Corporation (EDC), under the leadership of Julie Meier Wright (an Honorary Advisory Board Member of SDSA). It focuses on high tech employment opportunities available to students, which lends to the event name "High Schools to High Tech." The best practices competition is scheduled to take place mid-May 1999.

Science Alliance Continues to Grow

1998 was a year of great strides for the Science Alliance, a year of many changes. Through the High Tech Fair, several companies became aware of SDSA's existence and are continuing as members. Because of the Fair, our need for more fiscal autonomy became clear and we decided to apply for our own, stand-alone not-for-profit status. A tremendous vote of thanks goes to Lisa Merrill at **Gray Cary Ware and Friedenrich** who did the legal work "pro bono" for our 501(c)(3) status, a designation which came from the IRS and California in record time. We have now established our bank account, are managing our own investment of funds, and handling our accounts payable. Ed Blitz, CPA of **Blitz & Lee** in San Diego, has agreed to serve "pro bono" as our accountant, advisor, and tax preparer.

SDSA thanks the **San Diego State Foundation** for acting as our "fiscal agent" for almost four years. Without their interest and willingness to help us in this way, we would not have made it as an independent 501(c)(3). Our thanks to Frea Sladek, Tim Hushen, Gene Stein, Harry Albers, and Tracy Bowers-Stidham at the Foundation. Thanks also to President Stephen Weber, Dr. Don Short, and Steve Roeder. And a special thanks to Dr. Walter Oechel, our Principal Investigator and a member of the Science Alliance Board. Lisa Ortiz-Gilardi, Administrative Assistant to Dr. Oechel, served often as the liaison between us and the Foundation, making our role easier. The Science Alliance is greatly indebted to all of you.

Science & Engineering Fair

For the second year, the Science Alliance gave Junior Division and Senior Division Awards at the Greater San Diego Science and Engineering Fair. Our criteria stated that the selected project best exemplifies a student initiated partnership with a member of the scientific community. Partnership is defined as a student collaboration with a scientific advisor. The project should show creativity, originality, and use of the scientific method. The judges for the Science Alliance were Dr. Kesh Bakhru, **Cubic Corp.**; Lisa Brazinsky, **Solar Turbines Corp.**; and Jenny Ferrone, **GDE Systems**.

The Senior Division Award went to Jarrett Michael Diamond, a student at Torrey Pines High School for his project "Does a Viral Peptide Have Cancer Fighting Properties?" The Junior Division Award went to Daniel Norman Sharon from Hillsdale Middle School.

SEPA Grant awarded to Morse High School & UCSD

This Science Education Partnership Award (SEPA) will support a three year program for students at **Morse High School** which will focus on public health and promote a student-run organization which will reach out to the 17 cluster elementary and middle schools. Several organizations were invaluable in supporting the grant proposal, chief among them the **San Diego Science Alliance**. According to UCSD and Morse High, the Science Alliance support was a major factor in the committee's awarding of this particular grant. The committee felt that the support of the science business community for education programs is vital, and with SDSA's history of involvement, they realized that this grant program would be supported by the community.

The students participating in the program will have an opportunity to visit many laboratory and hospital venues at UCSD, and, hopefully, to various biotechnology companies in San Diego.

The goals for this project will be achieved through the formation and implementation of a student-run Public Health Education Organization. This organization will be patterned upon current nonprofit agency models charged with basic health education. Morse students will organize and take appropriate roles in group presentations, individual student mentoring, administration, and coordination with feeder schools and public agencies, along with assessment. The target population for this organization will be students in all the feeder schools. Morse students involved with this project are interested in the health sciences as a career and are enrolled in the Science Center Strand.

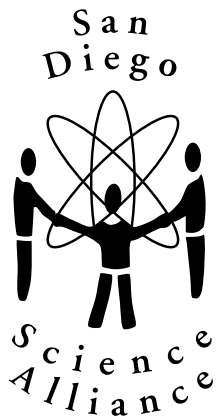
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Newsletter Editor:
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c/o WestEd
3914 Murphy Canyon Rd., Suite A133
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SDSA website: www.sdsa.org



San Diego Science Alliance Nomination for 1998–99 Partner of the Year

*To recognize outstanding efforts towards the improvement
of science education in San Diego County*

Categories: Teacher, Administrator, Partner, and Company
(Two awards in each of the four categories)

Critical Element: The use of partnerships involving member organizations
of the San Diego Science Alliance

Awards to be presented at the SDSA/SDSEA Partnership Awards Breakfast
for School Principals and Administrators on Friday, March 12, 1999

Please send nomination letters to:
Patricia Winter, SDSA Chair
c/o West Ed
3914 Murphy Canyon Rd., Ste. A133
San Diego, CA 92123

Deadline: February 5, 1999

Questions? Call or e-mail Patricia Winter at 455-3335 or pat.winter@gat.com

Please include the following information in your nomination:

- Category (choose one): Teacher, Administrator, Partner, or Company
- Name of Individual or Company: Include mailing address, phone number, etc.
- Description of Outstanding Efforts: How did these efforts increase the science education of K–12 students in San Diego County? (Please include dates of programs, number of students reached, partnerships formed or strengthened, grade level of students impacted.) **Limit to 100 words please.**
- Your name, address, phone, and e-mail.
- In addition, please have **two** other individuals submit a brief statement supporting this nomination. Include their names, addresses and phone numbers please.

Thank you for your nomination.

Address correspondence to:
Patricia Winter, Education Outreach Coordinator, General Atomics Sciences Education Foundation, P.O. Box 85608, San Diego, CA 92186-5608
Fax: 455-3379 e-mail: pat.winter@gat.com Science Alliance Home Page: <http://www.sdsa.org>