

Community Connections

*Supporting local communities through science education
and charitable giving*

The Laboratory is committed to being a valued and contributing member of the community, supporting a wide range of activities in science and engineering outreach and education. Each year employees generously contribute to local communities through charitable giving and volunteer efforts. In addition, the LLNS gift program provides support to community science and math education and cultural arts.

Saturday Science That Sizzles

LLNL's Science on Saturday (SOS) lecture series for middle- and high-school students again played to sold-out crowds. More than 5,000 people attended a total of 12 lectures held in Livermore, Tracy, and Brentwood. Laboratory researchers partnered with local science teachers in discussions demonstrating life-saving diagnostic devices, NASA's NuSTAR mission, detection of pathogens, and development of biofuels. These presentations were recorded for the University of California's TV website (uctv.tv) and YouTube. SOS videos have been viewed via the Internet more than 10 million times over the past five years.

Fun with Science

Each year, more than 6,000 kids in the 4th and 5th grade get up close and personal with science through myriad hands-on "Fun with Science" experiments. LLNL employees and retirees give students an understanding of scientific phenomena and help prepare them for science education at the middle- and high-school level. "Fun with Science" also makes annual treks to remote areas of Alaska to present to Inuit children.



The Laboratory's educational outreach includes LLNL cosponsorship with Sandia National Laboratories of "Expanding Your Horizons," held in Stockton this year. The conference serves to spark interest in math and science for girls in grades 6–12. Wind power was one of the many topics highlighted for the 400 attendees.

Teacher Research Academies

More than 100 current and pre-service science teachers participated in summer Teacher Research Academies. A new academy was launched to introduce teachers to computer modeling and simulation. Technical communication workshops were added for both teachers and students to enhance their skills in technical writing and presentation. LLNL also supported a teacher–student research partnership program in which participants apply bioinformatics tools to sequence DNA samples, leading to publications in the GenBank DNA Sequence Database. This past year, more than 20 student-submitted unique gene sequences were accepted for publication in the gene database.

Curriculum That Cuts to the Core

Throughout 2013, Bay Area K-12 science teachers faced the challenge of supporting new Common Core state standards in literacy and math. In response, LLNL expanded its professional development academies to help teachers gain the key skills needed to meet this challenge for two high-demand topics. In computer modeling, LLNL technical staff teamed with local high school department heads to offer a two-week classroom-ready introduction to basic simulation software. In technical writing, LLNL's practical treatment of ways to meet Common Core requirements received an enthusiastic response from science teachers not only at an on-site summer workshop, but also in highly customized sessions hosted by the San Joaquin County Office of Education and the San Ramon



Wearing defraction glasses, students in Noorvik, Alaska, enjoy a burst of color in an optics demonstration with strobe light. A "Fun with Science" road show reached out to 400 students in villages in the far north. Travel was funded by LLNL's vendor for supplemental labor, Akima, LLC, which has a strong connection to Alaska.



Ghoulish characters show up for the “Run for HOME,” which kicks off the Helping Others More Effectively (HOME) charity campaign at the end of October. Best costume winners receive gift certificates that they can donate to the charity of their choice.

Valley Unified School District. The Tri-Valley Education Collaborative, which coordinates career technical education for Livermore, Pleasanton, Dublin, and Las Positas College, also featured LLNL’s Common Core resources at their December general meeting for teachers.

LLNL-Sponsored Science Fair Continues to Grow

Approximately 600 middle- and high-school students—twice the 2012 number—and more than 100 teachers from 18 school districts participated in the Alameda



Guests find a healthy free meal at the Open Heart Kitchen, which serves those that are struggling in the Livermore, Pleasanton, and Dublin area. LLNL employees and retirees volunteer to help, and the charity is supported through the HOME Campaign.

County Science and Engineering Fair (ACSEF). More than 170 awards were distributed for 1st, 2nd, and 3rd place and honorable mention, and 60 special awards from national and local government and industry sponsors also were presented. This event grew out of the extremely successful Tri-Valley Science and Engineering Fair, organized for 15 years by LLNL. With its countywide focus, ACSEF reaches a very broad and diverse population of students and teachers and provides an avenue of scientific outreach that had previously been missing from Alameda County.

HOME Campaign and Community Gifts

More than \$3.5 million was raised in the Laboratory’s HOME (Helping Others More Effectively) Campaign, an annual charitable drive that benefits community and nonprofit agencies in the Tri-Valley, San Joaquin Valley, and greater San Francisco Bay Area. Employees pledged a total of \$2,540,292, and LLNS contributed \$1 million in matching funds.

At a ceremony at the LLNS office in Livermore, acting Director Bret Knapp presented checks totaling \$100,000 to the recipients for the 2013 LLNS Community Gift Program. LLNS received 72 applications totaling nearly \$670,000 in requests, and 24 were selected for awards through a committee review process. The majority of these awards serve children in the Tri-Valley and San Joaquin County, with a focus on science, math education, and cultural arts.



Livermorium Celebration

On June 24, 2013, Mayor John Marchand (shown with LLNL Director Parney Albright), dedicated Livermorium Plaza, a gathering spot centrally located in downtown Livermore. Element 116, one of six elements discovered by a team of Laboratory and Russian scientists, was named livermorium by the International Union of Pure and Applied Chemistry. The day of celebration included a technical colloquium at the Laboratory and certification presentation by Congressman Eric Swalwell (CA-15).