



COMMUNITY CONNECTIONS

Supporting local communities through science education and charitable giving

LLNL is a valued and contributing member of the community, providing science and technology outreach to a wide variety of students of all ages. Employees volunteer their time to enhance science, technology, engineering, and mathematics (STEM) education or advance community services through work with charitable and support agencies. Many organizations are supported through the Laboratory's Helping Others More Effectively—or HOME—campaign and the Lawrence Livermore National Security (LLNS), LLC, Community Gift Program.

Science That's "Fun"-damental

Each year more than 12,500 children at the fourth- and fifth-grade levels, along with their chaperones, are introduced to scientific concepts through LLNL's much-in-demand Fun With Science program. This program offers young minds a tour of the Laboratory's Discovery Center, followed by participation in hands-on experiments that introduce students to a scientific curriculum. Fun With Science is now a featured event at summer street fairs, science festivals, and other special events throughout the greater San Francisco Bay Area. In addition, educators attend LLNL's Teacher Research Academy to gain key skills they need to bring state-of-the-art science into their

classrooms. During the year, the Laboratory hosted more than 50 teachers and 500 students across the nation—for internships and educational training.

A Flair for Fairs

LLNL promotes science and technology through various fairs and festivals. In November, the Laboratory took part in the seventh Bay Area Science Festival, which attracted more than 30,000 aspiring young scientists and their families to AT&T Park in San Francisco, California. In addition to participating in presentations of Fun With Science, visitors were given a virtual introduction to basic physics challenges, and kids hopped aboard special energy bikes to transform kinetic energy into power to run small household items and make lights glow.

The Laboratory also sponsors the annual Alameda County Science and Engineering Fair, held in March. More than 700 middle- and high-school students and 175 teachers from 18 school districts participated in the fair, earning awards and scholarships. In addition, 60 special awards were given by national and local government and industry sponsors. The science fair winners move on to the Intel International Science



(left) The Laboratory's "Art of Science" exhibit at the Bankhead Theater in downtown Livermore, California, offered a fascinating perspective of researchers' detailed technical work in a unique interplay between art and science. Captured by photographers, graphic artists, and state-of-the-art instruments, the larger-than-life to atomic-scale images were selected as much for their aesthetic quality as their scientific detail. (above) Fun With Science shows fascinated more than 100 underserved students attending STEM Day at LLNL in May 2018.

and Engineering Fair, the California State Science Fair, and the national Broadcom Masters competition.

Expanding Students' Horizons

Sponsored by LLNL, Expanding Your Horizons introduces STEM careers to middle- and high-school girls. The free events are held several times a year throughout the San Francisco Bay Area. They pair women scientists and engineers with students to conduct hands-on demonstrations of science and discuss career paths. The Laboratory also partners with Las Positas College for an annual Science and Engineering Seminar Series, in which LLNL researchers present "behind the scenes" perspectives of how multidisciplinary science really works. The seminars help to connect students to potential career paths.

Saturday Is Science Day

LLNL's Science on Saturday lecture series for middle- and high-school students plays to sold-out crowds every year. More than 6,000 people attended this season's 16 lectures held in the cities of Livermore, Tracy, and Oakland, California. This season the theme was "Marvelous Machines," with each topic highlighting LLNL's cutting-edge science and

technology. Laboratory researchers paired with local science educators to discuss topics such as biologically inspired nanobots, flash imaging with x-ray lasers to show proteins in action, and laser-plasma accelerators to revolutionize medical procedures.

In addition, LLNL scientists challenge Hollywood's perspective on science and technology through the Science on Screen lecture series for middle-school to college-level students. It combines popular feature-length movies with prominent Laboratory researchers discussing the scientific viability of what's depicted in these classic, cult, and science fiction films. This year's series, again playing to sold-out audiences, looked at the evolution of computers, the ability to miniaturize, and advancing human health.

HOME Campaign and Community Gifts

In 2018, employees and LLNS raised more than \$3.7 million in the HOME campaign. The annual charitable drive benefits community and nonprofit agencies in the Tri-Valley, San Joaquin Valley, and greater San Francisco Bay Area. Laboratory staff pledged more



Lawrence Elementary School

In February 2018, Lawrence Elementary School was officially dedicated by Livermore Valley Joint Unified School District Superintendent Kelly Bowers, Livermore Mayor John Marchand, and LLNL Director William Goldstein (shown with students). Named in honor of the Laboratory and its contributions to the community, the school focuses on STEAM—science, technology, engineering, arts, and mathematics. The students voted to call themselves the "Lawrence Labs" and have as mascot a Labrador retriever.

than \$2.7 million and LLNS contributed \$1 million in matching funds.

At an October ceremony at the LLNS office in the city of Livermore, California, LLNL Director and LLNS President William Goldstein presented checks totaling \$100,000 to the 40 recipients of the 2018 LLNS Community Gift Program. These awards serve children in the Tri-Valley, East Bay, and Contra Costa and San Joaquin counties, with a focus on literacy, STEM education, and cultural arts. Other gifts focused on children, families, senior citizens, and individuals in need of assistance.