About ASTC and Science Centers

The Association of Science-Technology Centers Incorporated (ASTC) is a nonprofit organization of science centers and museums dedicated to furthering public engagement with science among increasingly diverse audiences. Science centers are sites for informal learning, and are places to discover, explore, and test ideas about science, technology, engineering, and mathematics. They feature interactive exhibits, hands-on science experiences for children, professional development opportunities for teachers, and educational programs for adults. In science centers, visitors of all ages become adventurous explorers who together discover answers to the myriad questions of how the world works—and why.

The Exploratorium, San Francisco, has engaged visitors in science through interactive exhibits for over 40 years. *Photo courtesy The Exploratorium*

ASTC has nearly 600 members, including 441 operating or developing science centers and museums in 42 countries, who engage over 80 million people annually in intriguing educational science activities and explorations of scientific phenomena. Science centers vary widely in scale, from very large institutions, like the United Kingdom's National Museum of Science & Industry (with 700,000 square feet of exhibits), to very small centers, like Davis, California's Explorit Science Center (with just over 3,000 square feet of exhibits).

ASTC works with science centers and museums to address critical societal issues, locally and globally, where understanding of and engagement with science are essential. As liaisons between the science community and the public, science centers are ideally positioned to heighten awareness of critical issues including climate change and infectious disease; increase understanding of—and exposure to—important and exciting new technologies; and promote meaningful exchange and debate between scientists, policymakers, and the community.

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Connecting science with the community

Science centers offer places where science and citizens can meet. Many centers have scientists on staff and some feature research facilities on-site. Through exhibits and programming, such as lecture series and science cafés, science centers help to bring current research findings to the public and encourage discussion and debate of current science issues. Science centers also encourage the public to become involved in research projects themselves.

Science centers reach a wide audience. Most have membership programs, including family memberships. Many offer programs designed for senior citizens. In addition to the hands-on, experiential exhibits and programs that are the hallmark of science centers, many have large-format theaters, planetariums, and outdoor science parks. Through outreach programs, science centers also extend their work well beyond their buildings.

On Sundays, Maloka, Centro Interactivo de Ciencia y Tecnologia, takes hands-on science into the streets of Bogota, Colombia's Cycle Route using specially designed pedal carts. Activities cover topics such as hydration, nutrition, and equilibrium, and are designed to help participants see the close connections between science, technology, and their everyday lives. *Photo courtesy Maloka*

Liberty Science Center's "Live from..." program gives New Jersey middle and high school students a front-row seat to cardiac surgery, neurosurgery, a kidney transplant or robotic surgery as it happens. As the students watch the surgery live in the science center's 100-seat interactive theater, the surgical team of doctors, nurses, technicians, and physician assistants answers students' questions while they work. *Photo courtesy Liberty Science Center*

An integral part of the global educational infrastructure

School groups make up a significant percentage of science center and museum attendance—an estimated 16.2 million student visits worldwide in 2010 (10.9 million in the United States).

But school field trips are just the beginning: most science centers offer demonstrations and workshops, school outreach programs, professional development for teachers, curriculum materials, science camps, overnight camp-in programs, and resources for home schoolers. Many also offer after-school and youth employment programs.

"Beyond the schoolhouse door, opportunities for science learning abound..."

Learning Science in Informal Environments,
National Research Council of the National Academies

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