

inside interdisciplinary science and technology building 4

FIRST FLOOR – VISUALIZING SCIENCE

The first floor invites visitors to explore earth and space sciences through digital media, public lectures, visible laboratories, and interactive displays. A focal point of the building is a state-of-the-art theater, as well as an expansive exhibit hall dedicated to interactive exhibits. The focus of the first floor spaces is on dynamic experiences to invite participatory exploration. The exhibits are as much about communicating how earth and space scientists do science and achieve a scientific worldview as they are about scientific facts and figures.

MARSTON EXPLORATION THEATER

The Marston Exploration Theater is a 238-seat venue for high-definition documentary movies with earth and space science themes, 3-D planetarium-style shows (although on a flat screen), and media-rich undergraduate classes. In addition to regularly scheduled showings of science films, faculty will be providing regular public “chatauquas” on themes such as the origin of the universe, biological evolution, and the measurement of time. Special presentations will include NASA spacecraft launches and landings (with full Surround-Sound). The theater will be a research facility to explore the effective use of high-end media in both formal and informal earth and space science education. The space will be used for scientific visualization research and for public outreach during the weekdays, as well as in the evenings and on weekends.



VISIBLE LABORATORIES

Major research laboratories on the first floor will be enclosed in glass for public viewing of research activity. These facilities will include a control center for future missions, a large assembly cleanroom for the fabrication of satellite and lander instrumentation, and dynamic laboratories for the study of volcanic eruptions, mudflows, and hydrodynamics. Recorded descriptions of research activities by scientists will be streamed to visitors and many viewing stations will be staffed by ASU student docents.

GALLERY OF SCIENTIFIC EXPLORATION

Roughly 4,300 square feet of the first floor is dedicated to interactive exhibits that engage visitors in the history of scientific exploration (from the voyage of HMS Darwin to NASA’s Mars Science Laboratory) and invite them to contemplate future voyages of discovery. The space is outfitted with kiosk-style exhibits and large-format, high-definition monitors that display video from earth-observing satellites and robotic probes of other worlds.

• CURIOSITY ROVER REPLICA

While the Mars rover Curiosity explores the red planet, those of us here on Earth can see a replica of the vehicle in the lobby of ISTB 4. Curiosity weighs nearly 2,000 pounds including 180 pounds of scientific instruments. It is 9 feet, 6 inches long, nearly 9 feet wide and a little over 7 feet tall. The ASU replica matches the dimensions of the real thing except it weighs 450 pounds.

- **EARTHSCOPE**

EarthScope is looking into the past, present and future of the North American Continent through earthquake activity. Check out the exhibit's interactive display, jump and make your own personal earthquake and see instruments used to measure and understand earthquakes and continental movement.

- **MAGIC PLANET**

Magic Planet, a digital video globe, uses internal digital video projectors with a six-foot diameter sphere-shaped screen to present dynamic global and extra-terrestrial information. The system uses data from NASA, NOAA and others to present archived and real-time data about the Earth, Moon, Sun and planets.



- **GREELEY PANORAMA**

The Greeley Panorama is in memory of Ronald Greeley (August 25, 1939 - October 27, 2011). The 360° panorama shows the spectacular view from Greeley Haven, the 2011-2012 Martian winter resting spot for NASA's Mars Exploration Rover Opportunity. It was constructed from 817 separate images taken by the rover's Panoramic Camera between Dec. 21, 2011 and May 8, 2012. The site's informal name, bestowed by the science team for the Mars Exploration Rovers, is a tribute to the late Ronald Greeley, a geologist, science team member, and Regents' Professor in ASU's School of Earth and Space Exploration.

- **INTERACTIVE IMMERSIVE EXHIBIT ENVIRONMENT (I2E2)**

I2E2 allows users to be immersed in a customized version of JPL's "Eyes on the Solar System" as well as exotic terrestrial destinations where SESE scientist work in the field.

- **UNDERWATER SCIENTIFIC EXPLORATION**

The submersible exhibit reproduces some of the challenges involved in the exploration of lakes beneath the Antarctic ice sheet. Visitors can operate an underwater remotely controlled vehicle simulating how scientists can explore regions difficult or dangerous to reach in person.

SECOND FLOOR – VISUALIZING SCIENCE

The second floor houses ASU's meteorite collection and laboratory, as well as a variety of learning spaces for K-12 students and educators.

METEORITE EXHIBIT

The Gallery of Scientific Exploration also features the meteorite display on the second floor, drawn from the extensive collection of ASU's Center for Meteorite Studies. Visitors can explore interactive displays, handle touchable specimens, and watch a video display of the collection's specimens.



TECHNOLOGY-ENABLED ACTIVE LEARNING LABORATORY

The Technology-Enabled Active Learning Laboratory (TEAL), a technology-mediated classroom focused on active learning, stimulates discovery and exploration of earth and space science concepts through hands-on experiments and problem-solving exercises.

THE EDUCATOR'S WORKSHOP

Expanded to include foci beyond the Red Planet, the "Earth and Space Science Education Program" will emphasize the design, prototyping, and propagation of new pedagogies to enhance K-12 science learning. A 75-seat auditorium will be used for professional development courses and seminars.