



EDUCATION AND OUTREACH

Increasing Earth Science Literacy

EarthScope's science outcomes are ideally suited for place-based Earth science education in museums, schools, and STEM festivals.

Developing Educational Content

A large variety of educational materials using EarthScope data is available online.

Collaborating

Scientists, educators, policy makers, park rangers, museum staff, and others work together to bring EarthScope discoveries to students and the public.

Communicating

EarthScope highlights and research are disseminated through social media, our website, and a quarterly newsletter.

For more information visit
earthscope.org



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earth scope

Exploring the structure and evolution of
the North American continent



EARTHSCOPE



Since 2003, EarthScope has deployed thousands of seismic, GPS, and other geophysical instruments to study the structure and evolution of the North American continent including the processes that cause earthquakes and volcanic eruptions.

High-quality research, technology, and outreach programs are the foundations of the largest NSF-funded project in the Earth Sciences.

SCIENCE



What forces are making and breaking the continent? What is the structure of the North American crust and underlying mantle? How is the continent deforming? How are these related?



To understand the complexity of North America's geological processes, EarthScope scientists collect data from many sources, including seismic waves, crustal movements, Earth's magnetic field, infrasound, rock and soil samples, and images obtained from aircraft and satellites.

Scientists analyze these diverse sets of data alongside innovative laboratory experiments and theoretical modeling to provide new insights into the past, present, and future of our continent.

DATA & OBSERVATORIES

EarthScope observatories provide high-precision and freely available data.

USArray



400: transportable seismic stations rolled across the U.S. and now deployed in Alaska and western Canada.



2000: total locations occupied in North America by the end of the program.

Plate Boundary Observatory



1200: GPS and strain instruments, installed primarily throughout the western U.S. and Alaska.



19: kilometers of boreholes drilled by EarthScope crews during installation of the PBO network.

San Andreas Fault Observatory at Depth



3: kilometers drilled through the active fault zone to observe the conditions under which earthquakes occur.



1.5: million miles EarthScope facility crews have driven in the construction, operation, and maintenance of the facilities (~60 times around the planet).

