

# Revolutionizing Earth System Science Education for the 21st Century

**Principal Investigator:** Dan Barstow and Martos Hoffman

**Funders:** [National Oceanic and Atmospheric Administration](#)

**Website:** <http://www.oesd.noaa.gov/>

## Research Report

The National Oceanic and Atmospheric Administration (NOAA) commissioned TERC to complete a review of science education standards for all 50 states. The study analyzed K-12 Earth science standards to determine how well each state addresses key Earth-science content, concepts and skills.

*Revolutionizing Earth System Science Education for the 21st Century: Report and Recommendations from a 50-State Analysis of Earth Science Education* reveals that few states have thoroughly integrated climate, weather and oceans studies into their curriculum.

Earth science integrates oceanography, meteorology, geology, biology, chemistry, physics and other disciplines to understand Earth's processes as an integrated system. In addition to practical applications in a variety of fields, Earth science also addresses environmental challenges such as climate change, hurricanes, and ocean issues. The study examined how state standards support integrating materials such as remotely sensed imaging, satellite photography, and data visualization tools into classroom education. The report shows a great variation in the states' Earth science education standards.

- Download a PDF of the [full report](#).