

How to Measure a Changing Climate



Vocabulary for Students

- **Buoy:** A floating object that instruments can be attached to in order to measure things like wave height, wind speed, and air temperature.
- **Carbon dioxide (CO₂):** A chemical compound composed of two oxygen atoms bonded on either side of a carbon atom. Carbon dioxide occurs in the atmosphere both naturally and due to human activity and traps heat near the earth's surface.
- **Citizen scientists:** Everyday people who volunteer to help scientists with their research.
- **Climate:** The average, long-term conditions of temperature, precipitation, winds, and clouds in an area.
- **Climate change:** A change in the long-term average weather conditions in a region or globally.
- **Data:** A collection of information, such as measurements, descriptions, or observations.
- **Heterogeneous:** Not the same everywhere.
- **Ice sheet:** A massive layer of ice that covers more than 50,000 square kilometers of land. Ice sheets form in places where snow that falls in the winter doesn't completely melt in the summer, and thus builds up over time.
- **Remote sensing:** Taking measurements of the earth from a satellite or plane.
- **Satellite (man made):** An object sent into orbit around the earth (or another planet) to collect information or for communication.
- **Soil:** The loose, weathered material on Earth's surface in which plants can grow.
- **Surface temperature:** The temperature measured near the earth's surface from weather stations, ocean buoys, and sometimes satellites.
- **Uncertainty (in data):** Refers to the fact that when scientists collect data about a phenomenon, they can't possibly collect data everywhere all of the time. They are also limited in how accurate and precise their measurements are by how good their measuring tool or instrument is.
- **Weather station:** A place where instruments and equipment record measurements about the weather.

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