



# The GLOBE Program

*Global Learning and Observations to Benefit the Environment*  
*An International Environmental Science and Education Program*

GLOBE (Global Learning and Observations to Benefit the Environment) is a worldwide hands-on, primary and secondary school-based science and education program. GLOBE promotes collaborative environmental research from local to global scales by bringing together students, teachers, scientists and community members from around the world in support of student learning and research. The GLOBE Program seeks to teach students, from the beginning of their formal educational experiences through university studies (grades K-16), inquiry-based research skills through conducting scientific experiments to answer their research questions, and through collaboration with students in a global network of over 100 participating nations.

GLOBE is an interagency program funded by the National Aeronautics and Space Administration (NASA) and the National Science Foundation (NSF), supported by the U.S. Department of State, and implemented through a cooperative agreement between NASA and the University Corporation for Atmospheric Research (UCAR) in Boulder, Colorado.

The founding organizations of the GLOBE Program include the National Oceanic and Atmospheric Administration (NOAA), NASA, NSF, the Environmental Protection Agency (EPA), the U.S. Department of Education, and the U.S. Department of State. In addition, many organizations from around the world collaborate with GLOBE.

## **History, Vision and Mission**

GLOBE's vision promotes and supports students, teachers, scientists and community members to collaborate on inquiry-based investigations of the environment and the Earth system working in close partnership with NASA and NSF Earth System Science Projects (ESSPs), as well as with international scientists and their ESSPs from GLOBE countries around the world, in study and research about the dynamics of Earth's environment.

- **1994** - The GLOBE Program announced by former U.S. Vice-President Al Gore on Earth Day, April 22
- **1995** - GLOBE Program activities began
- **2003** - NASA selected the University Corporation for Atmospheric Research (UCAR), to operate The GLOBE Program Office
- **2005** - GLOBE celebrates its 10th birthday
- **2011-2013** - GLOBE Student Research Campaign on Climate Change

## **GLOBE Vision**

A worldwide community of students, teachers, scientists, and citizens working together to better understand, sustain, and improve Earth's environment at local, regional, and global scales.

## **GLOBE Mission**

To promote the teaching and learning of science, enhance environmental literacy and stewardship, and promote scientific discovery.

## **Goals**

- Improve student achievement across the curriculum with a focus on student research in environmental and Earth system science;
- Enhance awareness and support activities of individuals throughout the world to benefit the environment;
- Contribute to scientific understanding of Earth as a system; and
- Inspire the next generation of global scientists.

### **For Students, GLOBE provides the opportunity to learn by:**

- Asking questions and making observations about the world around them;
- Collaborating with international scientists and GLOBE students to plan and conduct their research;
- Collecting research quality environmental data using GLOBE scientific protocols in the fields of atmosphere, hydrology, soils, and land cover/phenology - depending upon their local curricula;
- Reporting observations to the GLOBE data archive located on the GLOBE Web site;
- Creating maps and graphs with GLOBE visualization tools available on the GLOBE Web site;
- Analyzing data and seeking additional data sources from international scientists and community members;
- Writing and publishing research reports on the GLOBE Web site;
- Sharing research results at local community events as well as at national, regional and international student events and at GLOBE Learning Expeditions (GLEs);
- GLOBE increases student awareness of their environment from a scientific viewpoint, without advocacy relative to issues;
- GLOBE improves student understanding of science because it involves them in performing real science - taking measurements, analyzing data, and participating in research in collaboration with scientists; and
- GLOBE provides students with a greater understanding of what scientists do and the important role that scientists play in monitoring our environment.

### **For Teachers, GLOBE provides assistance through:**

- Training at professional development workshops offered by GLOBE Partners around the world;
- Access to the Teacher's Guide, "how-to" videos, and other educational materials aligned to local, state and national education goals and standards;
- Continuing support from the GLOBE Help Desk, scientists, and Partner Network;
- Collaboration opportunities with over 50,000 GLOBE-trained teachers worldwide; and
- Opportunities to work with GLOBE's international scientist network and becoming actively involved in current research activities occurring around the world.

## Contribution by schools

Since 1995, over a million primary and secondary students in more than 22,000 schools have taken part in the GLOBE program, making observations following GLOBE's scientific protocols and reporting their findings via the GLOBE Web site. Through the use of the Internet, these schools monitor environmental changes both locally and worldwide. Over 19 million environmental measurements have been submitted to the GLOBE database. All data is in the public domain.

GLOBE Students study environmental topics in the classroom and expand their educational experiences through participating in GLOBE Program activities. Measurements are made by students in five GLOBE investigation areas of atmosphere/climate, hydrology, soil, land cover/biology and phenology as needed to answer their research questions. The data acquired in these areas support environmental research and other environmental science programs.

## Contribution by scientists

Members of the international science community are involved in the design and implementation of the GLOBE Program. Their involvement helps to ensure that GLOBE environmental measurements make a significant contribution to the global environmental data base.

Scientists worldwide have been involved in helping select GLOBE environmental measurements, developing measurement procedures (protocols), and helping to ensure overall quality control of data as well as confidence about results obtained through student interpretation of their research findings.

## Joining GLOBE

GLOBE welcomes all students, teachers, scientists and community members who would like to join the international GLOBE community.

Teachers and other educators that wish to lead students in GLOBE Program activities must attend a professional development workshop in order to fully participate in the program. The first step to participate in GLOBE is to contact your country or U.S. State GLOBE Point of Contact to find out more information about joining activities underway.

## Miscellaneous facts

- The GLOBE program logo is a picture of three students making measurements of the environment and solving a puzzle on the surface of the planet Earth.
- GLOBE was the winner of the 2004 Goldman Sachs Foundation Prize for Excellence in International Education, selected for the unique reach of its work around the world and its ability to bring international education to life through the process of scientific inquiry.
- Phi Delta Kappa International has included GLOBE in their International Studies Resource Guide.
- Many scientific publications have reported findings based on GLOBE student research.
- Each year, extensive evaluations document GLOBE's impact on students and their teachers around the world.

Visit the GLOBE Program at [www.globe.gov](http://www.globe.gov)

