



## FREQUENTLY ASKED QUESTIONS

### Who Can Participate in The GLOBE Program?

Participation in GLOBE is now open to teachers and citizen scientists in any participating country.

Teachers who are trained in GLOBE scientific protocols learn how to mentor K-12 students in taking, reporting, and using high-quality data to perform investigations. GLOBE also offers scientists an opportunity to work with students and teachers from around the world to broaden their research. There are also opportunities for organizations interested in recruiting, training, and supporting GLOBE teachers.

Citizen scientists can download apps to their mobile devices with some training materials to become familiar with the scientific protocols and how to enter the data.

### What Countries Participate in GLOBE?

Since 1995, more than 110 countries have participated in GLOBE. (A current list may be found at [www.globe.gov](http://www.globe.gov))

### What are the GLOBE SPHERES?

GLOBE science protocols have been developed for the following four spheres: Atmosphere, Biosphere, Hydrosphere, and Soil (Pedosphere). The GLOBE science protocols are categorized according to the sphere. Learning activities for use in classrooms relating to these spheres are available to teachers.

### Why join GLOBE?

**Benefits for Teachers:** GLOBE includes a variety of grade-level appropriate, interdisciplinary activities and investigations aligned to national and state educational standards that integrate easily with curriculum. GLOBE provides an accessible platform for teaching hands-on science, inquiry, observation, and data collection and data analysis. GLOBE provides a springboard into a variety of educational experiences, such as research projects, science fairs, afterschool activities, and honors projects. It's also an excellent tool for engaging students not previously interested in science. The GLOBE Teacher's Guide (available online) includes more than 50 scientific protocols and 60 learning activities, sample lessons, unit plans, pedagogical hints for using GLOBE in the classroom, and specific scientific explanations to guide the teaching and implementation of all scientific protocols. Elementary GLOBE is designed to introduce K-4 students to the study of Earth system science.

**Benefits for Students:** GLOBE scientific protocols are designed to help students develop a wide range of 21st century skills, including critical thinking, scientific research methodologies, data analysis, independent learning, and big-picture thinking (taking local information and seeing global implications). GLOBE students are able to connect with their community through their research projects, and with students and scientists worldwide for a shared understanding of the global environment and a cross-cultural appreciation of science. GLOBE students are also encouraged to participate in GLOBE sponsored contests, competitions, GLOBE Learning Expeditions (GLEs), and virtual conferences where they can share their talents with the GLOBE Community.



## Why join GLOBE?

**Benefits for Scientists:** Working with GLOBE provides scientists with the opportunity to contribute to science education in schools and other learning centers. Scientists can also join the GLOBE International STEM Network (GISN), which is an international network of scientists that works with GLOBE students around the world conducting science. Through this program, scientists mentor students and teachers, present scientific ideas, and/or collaborate on scientific research.

**Benefits for Citizen Scientists:** Citizen science has a long history and is becoming increasingly popular in countries around the world. It provides opportunities for people to become involved in scientific surveys that can range from local to global in scope. Involvement in these projects benefits scientists, natural resource managers, and the citizen scientists themselves. Such benefits include advancing scientific knowledge, increasing environmental awareness, and it can reduce the costs associated with the management of natural resources while facilitating collaboration across communities. GLOBE, through its Citizen Science app, the GLOBE Observer, engages a larger community in data collection, and scientific research on a variety of scales.

**Benefits for GLOBE Alumni:** GLOBE has been in operation for more than twenty years. We have raised a generation of students who are using the knowledge they acquired from GLOBE as a lens through which they observe the world around them, and engage with it. We have an Alumni Network so inspired by their exposure to GLOBE as students, that they have committed to working to benefit the Program and the environment in their adult years, many of them through careers in science, technology, engineering and mathematics (STEM). GLOBE's high-quality Earth science education has encouraged students worldwide to meet the increasing number of environmental challenges we face, by taking the knowledge and tools they have acquired through GLOBE to become life-long learners and active stewards in their communities.