

**What is GLOBE?**

- GLOBE is a hands-on, school-based program that will:
- Enhance environmental awareness of individuals throughout the world,
  - Enable students to make environmental observations that will contribute to improving the health of planet Earth,
  - Give students the opportunity to work with world class scientists, collaborating together through a worldwide network,
  - Involve students, teachers, and scientists in sharing information about the global environment,
  - Enrich and supplement existing school curricula in science and mathematics, and
  - Help all students reach higher standards in science and mathematics.

The GLOBE concept was announced by Vice President Al Gore on Earth Day, April 22, 1994. Since then, over one hundred nations have expressed interest in joining the U.S. in the GLOBE Program. GLOBE will begin operation on the 25th Earth Day, April 22, 1995, and schools in the U.S. and throughout the world are invited to join in this exciting new venture.

**How to Become a GLOBE School**

- A school can register to become a GLOBE school if the school meets the GLOBE “basic requirements,” by agreeing to:
- Have its students acquire environmental data using scientific measurement instruments at their school,
  - Have its students transmit these data to a GLOBE processing center as often as required for each measurement,
  - Have its students study the global environmental images that will be generated based on GLOBE data taken by students around the world,
  - Have its students participate in GLOBE guided by one or more teachers trained through the GLOBE Program, who will use GLOBE-provided educational materials,
  - Send at least one teacher to a GLOBE-provided 3-day training workshop at a location in the school’s general part of the country,
  - Have the necessary GLOBE scientific measurement instruments, as identified below, for use by students, and
  - Have a suitable school computer configuration, as described below, to be available for use at least 20% of each school day to support participation in GLOBE, i.e., to be used for data entry and transmission

to a GLOBE processing center and for viewing of global environmental images and related information generated from GLOBE data by a GLOBE processing center.

**GLOBE Scientific Measurement Instruments**

The GLOBE environmental measurements are in the following study areas:

- Atmosphere/Climate
- Hydrology/Water Chemistry
- Biology/Geology.

The initial GLOBE measurements and their respective instruments are:

Measurement	Instrument	Grade
<b>Atmosphere/Climate:</b>		
Air temperature.	Maximum/Minimum Thermometer.	K–12
	Calibration Thermometer..	K–12
	Instrument Shelter.	K–12
Precipitation ..	Clear Plastic Rain Gauge.	K–12
Cloud cover ..	Cloud Charts ....	K–12
<b>Hydrology/Water Chemistry:</b>		
Water pH .....	Litmus Paper ....	K–5
	pH Pen .....	6–8
Water Temperature.	pH Meter .....	9–12
	Alcohol Thermometer.	K–12
Soil Moisture .	Soil Moisture Meter and Gypsum Blocks.	9–12
	Auger and PVC Piping.	9–12
<b>Biology/Geology:</b>		
Habitat Study	Compass .....	K–12
	Meter Measuring Tape.	K–12
	Surveying Markers or Stakes.	K–12
Tree Height ...	Hand-made Clinometer.	K–8
	Clinometer. ....	9–12
Tree Canopy .	Hand-made Densiometer.	K–8
	Densiometer .....	9–12
Tree Diameter	Diameter Tape.	K–12
	Dichotomous Keys.	K–12
Phenology (seasonal change).	35 mm camera and film.	K–12

The total cost of the instruments, if they are not already available at the school, is estimated to be between \$300–350 for elementary schools, \$350–400 for middle schools, and \$800–950 for high schools. After the initial year of GLOBE operation, additional measurements will be added, based on

continuing work on the part of the GLOBE scientists and educators and the results of evaluation of the initial GLOBE Program by GLOBE teachers and others. The additional cost of the instruments necessary at that time to make these additional measurements is estimated to be about \$100 for elementary schools, \$300 for middle schools, and \$500 for high schools.

*School Computer Configuration and Internet Connectivity*

Either an IBM-compatible PC or an Apple Macintosh computer can be used. An IBM-compatible PC must have at least a 386, 20 Mhz processor, 4 MB (preferably 8 MB) of RAM memory, and at least 60 MB of available hard disk. An Apple Macintosh computer must have at least a 68030, 20 Mhz processor, 4 MB (preferably 8 MB) of RAM memory, and at least 60 MB of available hard disk.

The computer must have either a direct Internet connection or a dial-up capability to the Internet using a 14.4 kbps or faster modem, preferably employing V.42 bis data compression, and using either SLIP or PPP protocols. The computer must be configured with a World Wide Web browser that supports the “forms” capability. If a school is not now connected to the Internet, the GLOBE Program will provide information and assistance, if needed, to help the school make contact with an Internet access service provider.

*Registering as a GLOBE School*

Schools that agree to meet the “basic requirements” listed above in “How to Become a GLOBE School,” are invited to complete the registration form included below. The form must be signed by the school’s principal, its designated GLOBE lead teacher, and by an official authorized to make the necessary certification on behalf of the school if the principal is not so authorized. The completed form, with original signatures, should be mailed to The GLOBE Program, 744 Jackson Place, Washington, D.C. 20503. Facsimile copies are not acceptable.

- For each registered school, the Federal Government will provide:
- Global environmental images accessible through the Internet, based on the measurement data taken by GLOBE students around the world and a broad range of other information relevant to the study of the global environment,
  - An opportunity for students and teachers to work interactively through the Internet with world class scientists, collaborating in the study of the environment,