GLOBE Evaluation

- An evaluation process, using quantitative and qualitative techniques, has been designed. Implementation began in the Spring of 1996.
- The evaluation uses records of data submissions, and network interactions. Teachers, students, and scientists are being surveyed and observations and interviews conducted at selected sites.

GLOBE Evaluation

- Formative evaluation, to understand how to fine tune and enhance the program, and summative evaluation, to understand the impact, provide valuable information on the processes involved in GLOBE and provide the GLOBE staff with information needed in the planning and design of training activities, materials development and systems design.

GLOBE Evaluation 1997 Teacher Survey

- Sample of 279 U.S. teachers and 65 teachers outside U.S. whose students reported data on a regular basis September 1996-March 1997.
- Survey period from April-May 1997.
- Response rate of 78%.

GLOBE 1997 Student Survey and Assessment

- 4th, 7th, and 10th graders from 44 GLOBE classes and 27 classes of teachers signed up for GLOBE training.
- 777 GLOBE students and 676 non-GLOBE students (response rate of 84%).
- Survey items concerning GLOBE or other science class activities.
- Assessments of knowledge of how to take environmental measurements, general sampling and measurement principles, and ability to form inferences and interpret earth science data.

Teacher Perceptions of Amount of Student Skill Increases with GLOBE (Percent)

Skill Area	Very Much	Some-what	Not Very Much	Not at All
Observational Skills	69	30	1	0
Measurement Skills	68	30	2	0
Technology Skills	60	34	6	< 1
Ability to understand data	51	46	3	< 1
Ability to work in small groups	52	43	5	< 1
Critical thinking skills	36	50	13	2
Map skills	30	51	16	3
English language skills	16	47	25	12

Activities Students "Like a Lot"

Activity	% of 4th Graders	% of 7th/10th Graders
Putting data on the computer	76	44
Taking measurements	69	37
Looking at satellite images	63	56
Talking about earth/weather/water	47	27
Looking at data collected by students in other places	43	28

Students' Attitudes toward GLOBE

Statement	Percentage of Students Agreeing: 4th Graders	7th/10th Graders
I like doing GLOBE activities	95	71
Working with other students makes GLOBE more fun	91	79
GLOBE has taught me how to do more things with computers	60	36
It gets boring taking the same measurements over and over	28	37
I think the GLOBE project will help people understand the earth better	93	72
I don't know why we take the measurements we do for GLOBE	13	14
The measurements my class takes are important for scientists	91	66

Students' Reports of What They Do "Most of the Time or Always" in GLOBE vs Other Science Classes

Activity	Percentage of Students Reporting	
	GLOBE	Non-GLOBE
Work in group with other students	55	35
Use a computer	42	9
Help other students learn	22	13
Answer questions from book or worksheet	2	33
Learn new words	33	42

GLOBE and Non-GLOBE Students' Assessment Performance

Item Type	Mean Percent Correct	
	GLOBE	Non-GLOBE
Measurement taking	53	36
Sampling and measurement principles	56	51
Data interpretation	48	42

Students' Concept of What Scientists Spend "A Lot" of Time Doing

Activity	Percent of Students Reporting	
	GLOBE	Non-GLOBE
Using evidence to support their theory	58	60
Discussing results with other scientists	51	41
Collecting data	75	60
Explaining results of an experiment	61	53
Studying a problem without a clear solution	41	30
Defending their points of view or ideas	54	44
Using scientific evidence to prove a theory true or false	60	54