Teacher Survey

As part of the 2001 GLOBE evaluation, students from one of your classes have participated in a pilot study of an assessment of students' knowledge of hydrology and land cover. Please answer the following questions about this class.

1. Name of class (e.g., Earth Science I):

_____

2. Total number of students in this class: _____

3. This class consists of:

- ❑ Mostly high-achieving students
- ❑ Mostly average-achieving students
- ❑ Mostly low-achieving students
- ❑ Students at a range of achievement levels

4. About how often do students in this class take part in the following types of activities, as part of GLOBE or any other classroom activity? (Check one for each activity)	Never	Some-times	1-3 Times per month	1-3 Times per week	Almost every day
a. Memorize basic facts and formulas that are emphasized in the textbook.....	❑	❑	❑	❑	❑
b. Do hands-on/laboratory activities.....	❑	❑	❑	❑	❑
c. Work on projects that take a week or more	❑	❑	❑	❑	❑
d. Suggest or help plan classroom investigations	❑	❑	❑	❑	❑
e. Collect environmental data in the field..	❑	❑	❑	❑	❑
f. Interpret multiple representations of the same data (e.g., table and graph).....	❑	❑	❑	❑	❑
g. Identify possible causes of variation in data (e.g., measurement error)	❑	❑	❑	❑	❑
h. Analyze data from multiple sources about a single phenomenon.....	❑	❑	❑	❑	❑
i. Generate explanations of data related to complex phenomena	❑	❑	❑	❑	❑
j. Write a report in which they are expected to explain their thinking or reasoning at some length.....	❑	❑	❑	❑	❑

5. How much have students in this class studied the following *hydrology* concepts in the past year? (Check one for each concept)	Not at all	1 to 5 class periods	More than 5 class periods
a. Water quality or composition	❑	❑	❑
b. Water temperature	❑	❑	❑
c. Water chemistry	❑	❑	❑
d. pH	❑	❑	❑
e. Water polarity	❑	❑	❑

6. How often did students in this class study the following *land cover* concepts and *special systems* in the past year? (Check one for each concept)	Not at all	1 to 5 class periods	More than 5 class periods
a. Global Positioning Systems (GPS)	❑	❑	❑
b. Classification of land cover from satellite images	❑	❑	❑
c. Classification of landscape or land cover from observation	❑	❑	❑
d. Accuracy assessment in interpretation of satellite images (sometimes called “ground-truthing”)	❑	❑	❑
e. Tree canopy observations	❑	❑	❑
f. Land use	❑	❑	❑
g. Land forms	❑	❑	❑

7. Where did students use computers for taking the Web-based assessment, and how many computers were available in each room? (Check all that apply and enter number of computers)

Number of computers

❑ 1. Classroom _____

❑ 2. Computer lab _____

❑ 3. Media center _____

❑ 4. Other: _____

(Please specify):_____

Questions 8 through13 are to be answered by GLOBE teachers only:

Hydrology

Questions 8 and 9 relate to your classroom's implementation of protocols and learning activities in the Hydrology Investigation Area of GLOBE.

8. Which of the following *Hydrology Protocols* have you implemented with your class this year? (Check one for each protocol)	Already implemented	Plan to implement	Will not implement
a. Water Transparency	❑	❑	❑
b. Water Temperature	❑	❑	❑
c. Dissolved Oxygen (DO)	❑	❑	❑
d. pH	❑	❑	❑
e. Electrical Conductivity	❑	❑	❑
f. Salinity	❑	❑	❑
g. Optional Salinity Titration	❑	❑	❑
h. Alkalinity	❑	❑	❑
I. Nitrate	❑	❑	❑

9. Which of the following *Hydrology Learning Activities* have you implemented with your class this year? (Check one for each learning activity)	Already implemented	Plan to implement	Will not implement
a. *Water Walk* Mapping and profiling Hydrology Study Site to raise questions about local land use/and or water chemistry	❑	❑	❑
b. *Model Your Watershed* Using maps and Landsat images to model watersheds and water flow	❑	❑	❑
c. *Water Detectives* Identifying substances in water	❑	❑	❑
d. *The pH Game* Measuring pH from water, soil, and plant material	❑	❑	❑
e. *Practicing the Protocols* Testing students' skill in taking measurements and exploring variation and error	❑	❑	❑
f. *Water, Water Everywhere!* Exploring and analyzing GLOBE Hydrology data	❑	❑	❑
g. *Macroinvertebrate Discovery* Sorting and counting organisms from Hydrology site and investigating relationships with water chemistry	❑	❑	❑

Land Cover

Questions 10 and 11 are related to your classroom's implementation of land cover GLOBE protocols.

10. Which of the following *Land Cover Protocols* have you implemented with your class this year? (Check one for each protocol)	Already implemented	Plan to implement	Will not implement
a. Qualitative Land Cover Sample Site (site selection, GPS location, photos, MUC class)	❑	❑	❑
b. Quantitative Land Cover Sample Site (site selection, GPS location, photos, MUC class, biometry)	❑	❑	❑
c. Biometry	❑	❑	❑
d. MUC System	❑	❑	❑
e. Manual Interpretation Land Cover Mapping	❑	❑	❑
f. Unsupervised Clustering Land Cover Mapping	❑	❑	❑
g. Accuracy Assessment	❑	❑	❑

11. Which of the following *Land Cover Learning Activities* have you implemented with your class this year?	Already implemented	Plan to implement	Will not implement
a. *Leaf Classification* Collecting leaves and sorting according to a hierarchical classification system	❑	❑	❑
b. *How Accurate Is It?* Evaluating the accuracy of a classification scheme with a difference/error matrix	❑	❑	❑
c. *What's the Difference?* Evaluating the accuracy of a classification scheme	❑	❑	❑
d. *Odyssey of the Eyes (Beginning Level)* Creating maps using student eyes as remote sensors	❑	❑	❑
e. *Odyssey of the Eyes (Intermediate Level)* Translating maps into digital code for translation into a color map	❑	❑	❑
f. *Odyssey of the Eyes (Advanced Level)* Translating maps into digital code for translation into a color map	❑	❑	❑
g. *Some Like it Hot! (Beginning Level)* Using hands as thermal sensors to explore land cover forms	❑	❑	❑
h. *Some Like it Hot! (Intermediate Level)* Using thermometers to explore heat radiating from different land cover forms	❑	❑	❑
i. *Some Like it Hot! (Advanced Level)* Measuring thermal reflectance and creating a thermal map	❑	❑	❑
j. *Discovery Area* Determine location of hospital with least impact to environment	❑	❑	❑
k. *Site Seeing (Beginning Level)* Investigation of Biology Study Site	❑	❑	❑
l. *Site Seeing (Intermediate Level)* Comparing and contrasting inputs and outputs from several study sites	❑	❑	❑
m. *Seasonal Changes in Your Biometry Study Site(s)* Measures of canopy cover at two different seasons	❑	❑	❑

12. In addition to you, how many other teachers are implementing GLOBE at your school:

a. At your grade level? _____

b. At other grade levels? _____

13. Where do students usually use computers for GLOBE-related activities, and how many computers are available in each room? (Check all that apply and enter number of computers)

Number of computers

- ❑ 1. Classroom _____
- ❑ 2. Computer lab _____
- ❑ 3. Media center _____
- ❑ 4. Other: _____

(Please specify):_____

Thank you for participating in the GLOBE survey.