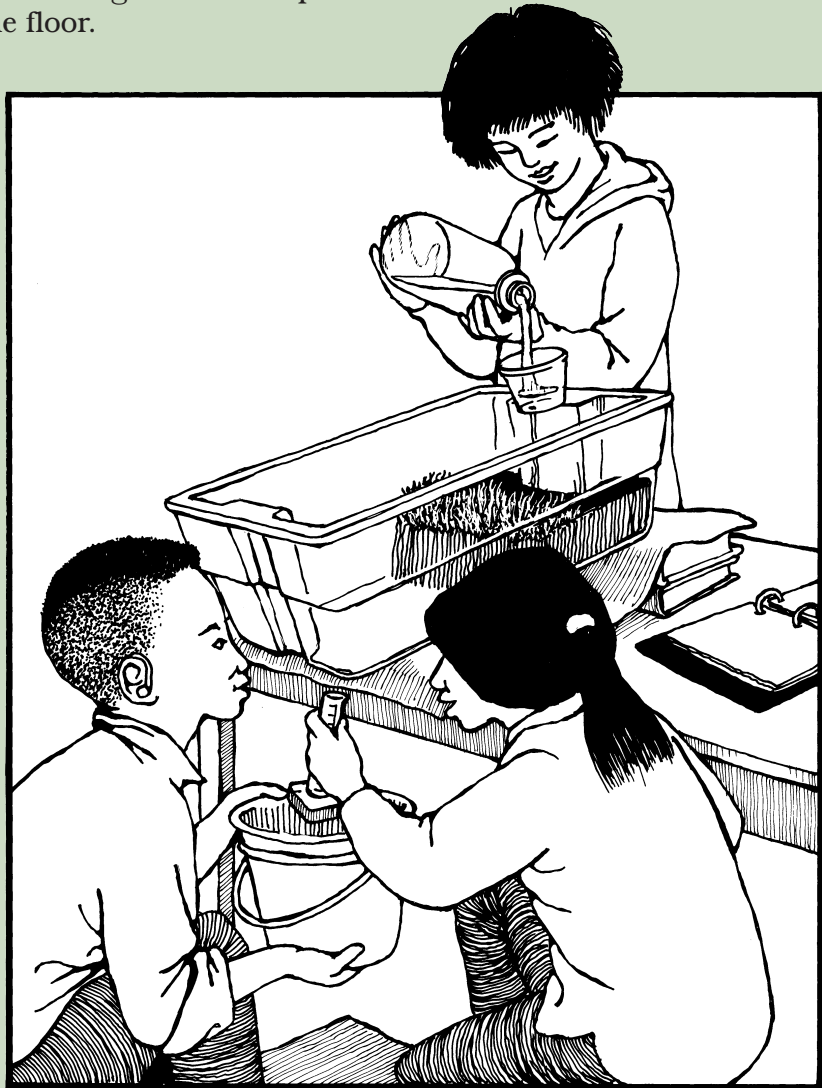


Student Instructions for Investigating the Effects of Plants on Erosion

Part A: Investigation with Plants

1. Label one of your cylinders "14A" for this part of the investigation.
2. Stack your books about 18 cm (7 in) high on your work space. Cover the books with the large absorbent pad. Place the smaller pad on the floor.
3. Raise the end of the stream table and set it on the covered books as you did in Lesson 13. Use the illustration to help you. The drain hole should be near the edge of your work space.
4. Remove the rubber stopper from the drain hole.
5. Attach the plastic cup with the large hole (red dot) to the stream table.
6. Hold the catch bucket under the drain hole.
7. When you are ready, run only *1 liter* of water (one-half of the bottle) through the cup. You may need to hold the cup steady with your hand.
8. When you are almost at the 1-liter mark on your bottle, collect a sample of runoff in the cylinder marked "14A." Fill the cylinder to the 50-ml mark if possible.



Part B: Investigation with Some Plants Removed from the Soil

1. Label the second cylinder “14B” for this part of the investigation.
2. Remove a section of plants from the *middle* of the stream table. Use the illustration to help you. You should be able to see soil where the plants used to be. Place the plants you removed on the paper towel.



3. Pour the water from your bottle into the stream table. Try to keep the water at the line on the cup at all times.
4. When your bottle of water is almost empty, collect another cylinder of runoff in the cylinder marked “14B.” Fill it to the 50-ml mark.
5. Now complete **Record Sheet 14–A: Investigating the Effects of Plants on Erosion.**

Record Sheet 14-A

Name(s): _____

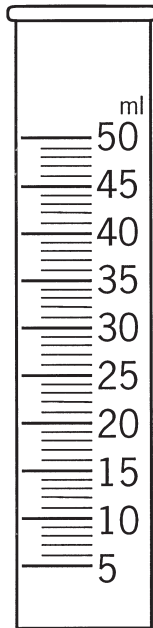
Group: _____ Date: _____

Investigating the Effects of Plants on Erosion

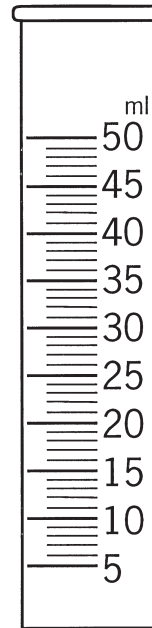
Observing the Cylinders of Runoff

1. Place your two cylinders of runoff (14A and 14B) side by side. Let them sit for a few minutes. Then draw what you see.

Cylinder 14A: With Plants



Cylinder 14B: Some Plants Removed



2. Compare the two cylinders. How are they alike? How are they different?

3. Look at the soil in each cylinder. In which cylinder do you see more soil? _____

What happens when you remove plants from soil?

Record Sheet 14-A

Name(s): _____

Investigating the Effects of Plants on Erosion, *continued*

Thinking about Plants on Earth

1. Why do people plant grass or other vegetation? List as many reasons as you can.

2. Think of some situations in which people remove trees and other plants from the soil. List as many as you can.

3. How does removing plants affect the land?

4. Do you think people should remove plants? Explain.
