

2-3 Activity

Activity

Where Did The Soil Go?

Students will construct erosion models and observe the effect of water erosion on soils.

Objectives:

1. Student will construct two erosion models; a sod model and a bare soil model.
2. Students will observe the effect of water flowing through soils.
3. Students will use measurements to gather and record data.

Materials:

Container of grass grown in phase one

Reused food container (does not have to be clear or have a lid but should be the same size as container of grass)

Water	Coffee Filters	Measuring Cups	Plastic Bowls
Scissors	Rubber Bands	Small Watering Cans	Student Worksheet (Pg 20)

Discussion:

What is soil erosion?

(Water or wind carries soil from one location to another.)

Why is soil erosion a problem?

(Each year 6.4 billion tons of soils are eroded from land in the U.S. Soils are a necessary to support life.)

Activity:

1. Instruct students to fill their empty food container half full of packed down soil, this becomes their bare soil model while their container of grass becomes their sod model.
2. Have students cut a V-shaped notch on one side of each container. The V should be about one inch wide and extend from the top edge of the container down to the top of the soil.
3. Demonstrate to the students how to place their models on an incline. Place both containers at the edge of a table or their desk. Use a book to elevate the container so that it tilts towards the edge of the table.
4. Students should measure one cup of water and place in the watering can.
5. Instruct one student to hold a plastic bowl under the notch of the sod model while another student slowly pours the water over the model so that it drains into the bowl.
6. Repeat steps 4 & 5 with the bare soil model.
7. Have students pour the water & soil mixture from the sod model through a coffee filter into a measuring cup. Repeat this process with the bare soil model.
8. Students should measure both the collected water and soil from each model and record the results on their worksheet. (Page 20)

Visit: http://urbanext.illinois.edu/soil/less_pln/exp_se/exp_se.htm for example of making erosion model.



Student Worksheet

Pg 11 activity

Where did the soil go?

Measurements:

	Sod Model	Bare Soil Model
Amount of water collected.		
Amount of soil collected.		

Answer the following questions:

1. Which model had the most water run-off?
2. Which model had the most soil erosion?
3. Why did one model have more soil erosion than the other?
4. Why is soil erosion a problem?
5. Why do we need soils?
6. What are some ways you use soils every day?

Extension:

Invite students to bring in objects from home and relate the steps between soil and the object.

Example:

Leather shoes, boots or coat

1. Leather comes from cows
2. Cows eat grass in pastures
4. Grass depends on soil