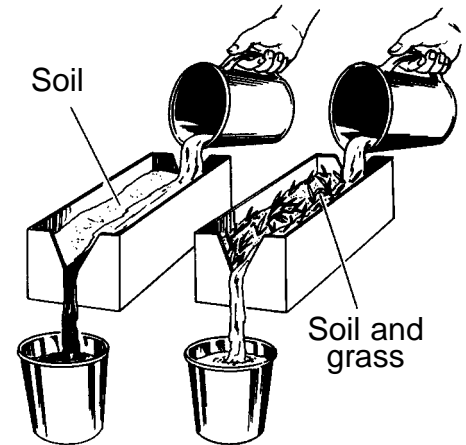


Chapter 12

Use with Section 1

ENRICHMENT**• Surface Water****How does vegetation decrease erosion?***Complete the activity and answer the questions.***Materials**

- | | |
|----------------------|-------------------------------------|
| 2 shoe boxes | water in a container |
| plastic wrap or foil | scissors |
| soil | low table or desk |
| 2 buckets | ruler |
| sod or grass seed | 2 blocks of wood, about 2.5 cm high |

**Advance Preparation**

- Line the shoe boxes with plastic wrap or foil.
- Fill one of the shoe boxes halfway with soil. Throw grass seed on the soil and water it. Allow the grass to grow about 5 cm before performing the activity.
- Cut triangles out of the ends of the boxes as shown.
- Place plastic wrap or foil under the boxes.

Procedure

- Fill one shoe box about half full of soil, and fill the other shoe box half full of soil and sod.
- Place the shoe boxes at the end of a low table or desk, with the “triangle” end extending about 7.5 cm over the edge.
- Put buckets underneath the shoe boxes. Place a block of wood under the back of each shoe box, so that the boxes are sloping slightly toward the buckets.
- Slowly pour about 1 L of water down each box. Pour the water at the same rate for each box.
- Examine the water in the buckets and note which bucket contains the most sediment.
- Repeat the activity again, but this time pour the water quickly over the soil.

Analyze

- How does the rate of water flow affect the amount of erosion? _____

- Which bucket has more sediment? _____

Conclude and Apply

- How does the vegetation affect erosion? What evidence helps you draw this conclusion?

- Would you recommend planting vegetation in areas with exposed soil? Explain. _____
