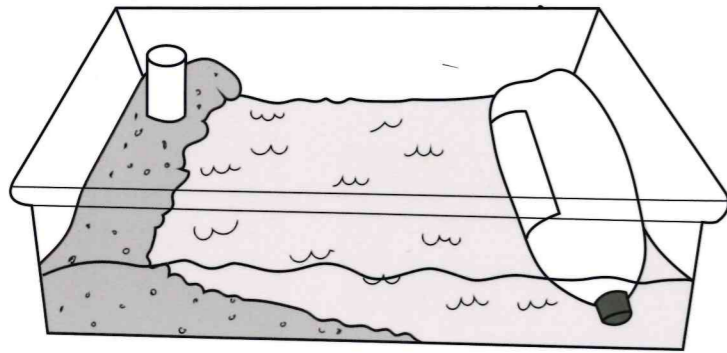


Slowing Erosion



Experiment with different ways to control beach erosion.

1. Pour 4 liters of sand into a clear plastic container. Add just enough water to wet the sand. Push the sand to one end of the container to make a sloped beach. Carefully add water to the container until it's 2.5-cm (1-in.) deep. Add a model building or two to your beach.
2. Place an empty soda bottle in the water. Gently push it down to make a wave. Watch the wave roll up on your beach. Make 20 waves in a row. (If the water slops out of your container, make your waves smaller.) What happens to your beach and your buildings? Record your observations on your data sheet.
3. Push the sand back to its original condition. Reposition your buildings.
4. Look at your selection of inventor's materials. Choose one. Add it to your model beach. (You can leave it on top, bury it completely, or leave it sticking partway out.)
5. Repeat Steps 2 and 3. Record your observations. Do the same with two other materials.
6. Make an Erosion Control Plan using one or more of your materials. Describe it on your data sheet. Then repeat Steps 2 and 3 to test it. Record your observations.
7. How could you improve your Erosion Control Plan? Think of one thing to change. Describe your change on your data sheet and repeat Steps 2 and 3.
8. Keep improving and testing until you have the best erosion control possible. (If needed, use the back of your data sheet to continue recording your test data.)
9. **Think:** With your erosion control in place, would beach lovers still want to visit? How might your design affect wildlife?

Materials

- ★ 4 liters of sand
- ★ large, clear plastic storage container*
- ★ water
- ★ model buildings*
- ★ empty 2-liter soda bottle
- ★ inventor's materials: toothpicks, pipe cleaners, plastic bags, waterproof cardboard from milk cartons, aluminum foil, cloth scraps, what else?
- ★ "Slowing Erosion" data sheet

Name: _____ Date: _____

Slowing Erosion

1. Do Steps 1 and 2 of the Task Card. What happened to your beach and buildings? Record your observations below.

2. Do Steps 3–5 of the Task Card. Record your observations below.

Materials	Observations

3. Do Steps 6–8 of the Task Card. Record your observations below.

Erosion Control Plan	Observations
Original design:	
Improvement 1:	
Improvement 2:	

4. With your erosion control in place, would beach lovers still want to visit? How might your design affect wildlife? Record your answers on the back of this sheet.

* Teachers: See Hands-On Hints on the back of the folder.