



Erosion Control

STEM Sims

Lesson 1: How Does the Steepness of a Hillside Affect Erosion?

Soil erosion is a serious problem that affects all areas of the country. Erosion refers to the movement of weathered materials from one location to another. Can you determine which factors reduce soil erosion?

Doing the Science

1. Start the Erosion Control Simulation by clicking on the "Sim" tab.
2. Click the "Sand" container to place the sand on the stream table. Note that the stream table is currently positioned as a "Flat" slope.
3. Click the red "On" button on the stream table controlling station.
4. Note and record in Table 1 the farthest distance traveled by the sand.
5. Click the red "Reset" button on the stream table controlling station.
6. Click the "Sand" container to place the sand on the stream table.
7. Click the "Gentle" button on the Table Angle selector.
8. Repeat steps 3 - 6.
9. Click the "Steep" button on the Table Angle selector.
10. Repeat steps 3 - 6.

Table 1. Stream Table Angle and Erosion Distance

Table Angle	Farthest Distance Sand Traveled (meters)
Flat	
Gentle	
Steep	

Do You Understand?

1. Discuss how the slope of the stream table affected the distance traveled by the eroded soil.
2. Based on the results of your experiment, is it more likely the land would be eroded around a home on flat land or a home positioned on a hillside?