



Erosion Control

STEM Sims

Lesson 2: Does Size Matter?

Soil is a mixture of various inorganic and organic materials. Rarely are all of the particles of a soil sample an equal size; some particles are small while others are larger. Are you ready to get your hands dirty and find out how the size of soil particles impact erosion?

Doing the Science

1. Start the Erosion Control Simulation by clicking on the “Sim” tab.
2. Click and drag the large Magnifying Glass over the Mixed Materials container to view the soil sample’s various particle sizes up close. Click the “X” in the upper right hand corner of the magnified view to close the magnifying glass.
3. Click the “Mixed Materials” container to place a sample on the stream table.
4. Click the red “On” button on the stream table controlling station.
5. Note and record in Table 1 the farthest distance traveled by the various-sized soil particles.

Table 1. Particle Size and Erosion Distance

Table Angle	Distance Traveled (in meters) by Particle Size			
	Small	Medium	Large	Very Large
Flat				

Do You Understand?

1. Discuss how the size of the soil particles affected the distance traveled by the eroded soil.
2. What practical implications do the results of your experiment have for homes, schools, and businesses built on hillsides?
3. State one method (relating to particle size) for reducing the erosion of soil from a hillside.