Name_____ Date _____

Erosion Control

STEM Sims

Lesson 2: How Does the Size of Soil Particles Affect Erosion?

Soil is a mixture of various materials. Rarely do all of the particles of a sample of soil have the exact same 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 affects 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. Based on the results of your experiment, describe one way that the soil surrounding a home built on a hillside could be protected from erosion.