Name_____ Date _____

Erosion Control

STEM Sims

Lesson 3: How Can You Best Protect a Basketball Court from Erosion?

The only location for a basketball court that a school wants to build is located on a steep hillside. The threat of landslides is a real possibility when heavy rains cover the area. Can you design erosion control methods to keep the basketball court safe and not get dunked on by falling soil?

Doing the Science

1. Start the Erosion Control Simulation by clicking on the "Sim" tab.
2. Click the "Court Builder" button at the bottom of the screen. You'll have three trials to build the best erosion control system to protect the basketball court.
3. Check one or more boxes for the erosion control method you want to investigate. Use an "√" to record your selection(s) in Table 1. Some erosion control methods cannot be combined.
4. Once you're satisfied with your selection(s), click the blue "Rain" button on the left side of the screen.
5. Note and record in Table 2 the results and the total costs of your erosion control method.
6. Repeat steps 3 – 5 for a total of three trials. Make sure to record your selection(s) in Table 1 and your results and costs in Table 2.

Table 1. Erosion Control Methods

Method		**Selections**	
	Trial 1	**Trial 2**	**Trial 3**
Terracing			
Ground Cover			
Retaining Wall			
Soil Lifts			
Sloping			

Table 2. Erosion Control Results

	Trial 1	**Trial 2**	**Trial 3**
Results			
Costs			

Do You Understand?

1. Which of the three erosion control methods you tested was the best at preventing soil erosion? Provide a reason why you think this method was best.

2. Which of the three erosion control methods you tested was most *cost* effective in preventing soil erosion? Provide a reason why you think this method was best for the least amount of money.