**Soil Erosion**

Source:

 <http://lifeisagarden.co.za/articles/soil-erosion-experiment#.U9lN8oBhu-V>

Benchmarks:

-“I can observe simple interactions between biotic/living and abiotic/nonliving parts of an ecosystem.”

-“I can observe and ask questions about the natural environment.”

-“I can communicate about observations, investigations, and explanations.”

Materials:

-Premade 2L soil container set-up

-Soil

-Mulch

-Seedlings

-Water

-Clear cups with attached string

Target Observations:

Students will observe one important reason for vegetation on land. Students will observe the difference in water run off from the three different soils. They will see that the water from the seedlings is the cleanest, and prevented the least amount of soil erosion.

Procedure:

1. Fill all three bottles with soil to the line. Leave the first bottle as is. Add a layer of mulch to the second bottle, and plant the seedlings in the third. (*The seedlings should be planted tightly together, and the students press down firmly to compress the soil*.)
2. The soil set-ups should be on the edge of a table, and the necks of the bottles are pointing out. Using the string, hang the clear cups from the bottle’s neck. (*Before water is poured into the containers, volunteers should check to make sure that the run off water will fall into the cups and not onto the floor.)*
3. The students will slowly pour equal amounts of water into each of the containers. Water should be poured at the opposite end of the bottle’s neck.
4. The water will drain out of the neck and into the cup. The students will be able to observe the color of the run off water.

Final Discussion:

Explain to the students what soil erosion is.

\**Erosion breaks larger things down into smaller things. Example: Rocks turned into sand. The experiment we just did was an example of soil erosion. When the clear water we poured into the 2 Liters came out dirty and a different color, the soil was eroded. The water caused some of the soil to run off with the water.*

Questions to ask the students:

-What were the three containers filled with?

-What was the color of the water before it was poured into the containers?

-Which water was the cleanest after it was poured?

-Why do you think this happened?

-Why do you think this is important?

-Any other questions that might be important to ask the student!