

Rain Drops & Erosion Activity

Source Unknown But Used By Many

In this activity, youth learn about soil erosion by observing soil loss during a simulated rain event.

Materials

- 3 empty commercial size cans
- 1 small container filled with soil only
- 1 small container filled with soil and topped with mulch
- 1 small container filled with soil and sod
- 6 plastic cups
- Cotton balls
- 3 - 11x17 inch sheets of white paper

Preparation

1. Take 3 of the plastic cups. Cut an "X" in the bottom of each cup. Place one or more cotton balls in the "X". This now represents a cloud. Before beginning the activity fill the cloud cups up with water. Place each cloud cup in one of the remaining cups that has not been cut to prevent the cloud cup from leaking.
2. In each commercial size can, place one of the small containers filled with either soil, soil and mulch, and sod.



Soil Only



Soil and Mulch



Soil and Sod

Instructions

1. Begin by discussing what erosion is with students. (Erosion is defined by the Soil Science Society of America as *"the detachment and movement of soil or rock by water, wind, ice, or gravity."*)
2. Show youth the three cans, and each of the cups (soil, soil with grass clippings/mulch, and sod). Discuss which they think will cause the most soil erosion and why, and the least soil erosion and why. (The cup with bare soil will result in the most soil erosion because there is no covering in the form of mulch and no plants to help hold the soil in place. The mulch will help hold the soil in place and reduce erosion. The sod will have the least amount of erosion because the roots of the sod will help hold the soil in place and protect the soil from erosion).
3. Show youth the 11x17 inch sheets of white paper. Place one piece of paper horizontally inside each commercial size can, so that paper wraps around the insides of can.

4. Tell youth that you are going to make it rain. Ask for three volunteers. Have each volunteer stand over one of the three commercial size cans. Have the volunteer hold one of the cloud cups above the can at approximately 12 inches over the cups of soil, soil with mulch, or sod. Remove the bottom cup from the cloud cup. Water will slowly begin to drip from the cloud cup onto the either the soil, soil with mulch, or sod. Make sure to start and stop the rain at the same time over each of the cans. Allow it to rain for a few minutes. Have other students make rain sounds. Have volunteers place cloud cups back in other cup to stop rain.
5. Pull out each piece of paper and show youth. The sheets should show various splashes of soil and water on the white sheets. Discuss that mulch helps hold soil in place and reduce erosion, and that plant roots also help protect soil from erosion.

References

Soil Science Society of America. 2014. Glossary of Soil Science Terms. Available online at <https://www.soils.org/publications/soils-glossary#>.



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