

Soil! It's Not Just Dirt Anymore

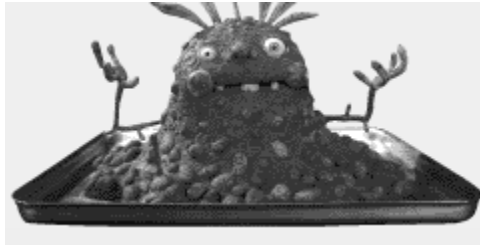
Objectives: To teach students the importance of soil to all living things, how the ground can contain horizons, and different types of soil.

Materials:

- Soil quiz and candy prizes
- Large clear glass bowl or jar
- Vanilla pudding
- Plastic bags
- Chocolate sandwich cookies
- Vanilla sandwich cookies or vanilla wafers
- Graham crackers
- Coconut, shredded
- Red and green food coloring
- Raisins (optional)
- Chocolate or butterscotch chips (optional)
- Gummy worms or gummy frogs (optional)
- Small plastic cups
- Spoons

10 to 15 minutes; What's Your Soil IQ?

As a group, take the soil quiz. Ask the class each of the eight questions below to become a soil expert. Have students raise their hands after each question is read. Give the students with the right answer a small candy prize.



1. Where does soil come from?
 - a. Dirty Football Jersey's
 - b. Pigs
 - c. Decomposed Organic Matter (including plants, animals, and other living things) and weathered rocks.
2. How many living things inhabit a pinch of soil?
 - a. About five.
 - b. More than six billion.
 - c. About 100,000.
3. What is the difference between topsoil and other types of soil?
 - a. Topsoil is the layer that is most loaded with nutrients.
 - b. Topsoil never erodes.
 - c. Topsoil can only be bought by a plant nursery.
4. Which of the following is true about soil?
 - a. It's extremely important for food production.
 - b. It has an argumentative attitude and spits dirt when it talks.
 - c. It's as deep as the Earth is thick.
5. Worldwide, soil erosion is causing which of the following problems?
 - a. Mud slides
 - b. Dust storms
 - c. Loss of growing potential of agricultural lands
 - d. All of the above.
6. How much topsoil erodes into the waterways of the US every year?
 - a. About a thousand pounds.
 - b. About 3 billions tons.
 - c. About a thousand tons.
7. How long does it take for an inch of soil to be eroded?
 - a. Five hundred years
 - b. One growing season
 - c. One year
8. Which of the following activities helps stabilize soil?
 - a. Putting pink flamingoes in your yard.
 - b. Using more pesticides to kill bugs.
 - c. Planting trees and ground cover on yards, vacant lots, hillsides, and streamside areas.

Answers

1. Decomposed Organic Matter (including plants, animals, and other living things) and weathered rocks.
2. More than six billion.
3. Topsoil is the layer that is most loaded with nutrients.
4. It's extremely important for food production.
5. All of the above.
6. About 3 billions tons.
7. Five hundred years
8. Planting trees and ground cover on yards, vacant lots, hillsides, and streamside areas.

20 to 25 minutes; Dirt Pudding

Using a large clear glass bowl or jar, the following is a demonstration that can be done to show the different layers, or horizons, in a soil. It not only looks cool, but is edible too! Enjoy!

Crush chocolate sandwich cookies, vanilla sandwich cookies or vanilla wafers, and graham crackers in separate plastic bags. Alternate layers of vanilla crumbs, graham cracker crumbs, and vanilla pudding into the glass bowl to make horizons. Add the chocolate crumbs to the top to make the topsoil layer. Coconut dyed with green food coloring can be used to make grass.

Dye some coconut red and place within your soil profile to represent a spodic horizon, or a layer high in iron and organic matter.

Use raisins, chocolate chips, or butterscotch chips to represent rocks or other less weather materials in your soil profile.

Add gummy worms or gummy frogs to the top to add animal life!

~ Explain the horizons and enjoy!

