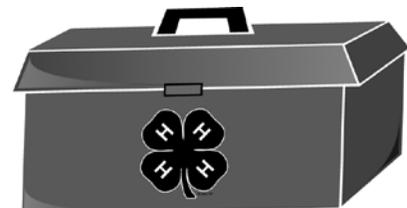


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"Texture Feely Bags"

Lesson Plan





Learning Objectives

1. Differentiate three basic types of soil that comprise a soil's texture.
2. Identify soils and other textures by feeling.

Intended Audience

4-H Club members



Supplies & Resources Needed

- Lesson plan outline
- 12 paper lunch bags
- 12 plastic produce bags to fit inside paper bags
- 12 large rubber bands or one-foot lengths of string or yarn
- 1/2 cup each of at least twelve of the following things:
 - peanut butter
 - wheat flour
 - stone-ground, whole wheat flour
 - baking soda
 - corn meal
 - cornstarch or baby powder
 - cream of wheat (dry)
 - powdered sugar
 - salt or granulated sugar
 - modeling clay
 - M&M's candies
 - Red Hots (candies)
 - dry beans (lentils)
 - coarse sand or gravel
 - fine sand
 - loamy soil
 - clayey soil (sticky when slightly wet)
 - silty soil
- Marking pens
- Scratch paper and pencils
- Damp paper towels or nearby sink to wash hands



References

Purdue University Cooperative Extension. (1984). *4-H Soil & Water Conservation - Level A (4-H 795)*. West Lafayette, IN.



Projected Length

20-30 minutes

Introduction



In nature we find that things are different from one another. Animals have hair and legs, while snakes are cold and slither on the ground. Trees have one big woody stem, but grasses have softer, shorter stems. Soils are different, too. In this lesson, we'll look at the differences in the textures among various soils. And, we'll get some practice identifying various textures using only the sense of touch!

Objective 1

Differentiate among three basic types of soil that comprise a soil's texture.

Soil texture is determined by describing the way the soil feels when you hold it between your fingers when it is slightly wet. The texture of a soil depends upon the various amounts of sand, silt, and clay that are in the soil. Soil with a lot of sand feels gritty. Soil with lots of clay is hard when dry and sticky when wet. Silty soil feels more like flour.

Definitions of the three types of soil are:

Clay - very small particle of soil that cannot be seen by the unaided eye

Sand - soil particle that can be seen by the unaided eye; bigger than silt, but smaller than gravel

Silt - soil particle bigger than clay, but smaller than sand

Objective 2

Identify soils and other textures by feeling.



Your sense of touch can help you identify lots of things, even without using other senses. How well can you guess what something is just by feeling it? Let's try an activity to see just how good your sense of touch is!

This is an activity that can be set up for your 4-H Club members to see how well they can guess what is inside bags filled with things of different textures.

1. Mark paper lunch bags starting with the letters A, B, C, and so on.
2. Measure about ½ cup of each substance into (recycled) plastic produce bags.
3. Place one plastic bag including the substance in each paper bag. You may want to write down on a



separate piece of paper what is in each bag.

4. Fit the rubber band or string around the end of the paper bag so someone could stick a hand inside without seeing what is inside or dumping the contents out.
5. Ask your 4-H Club members to feel what is inside the bag (using their non-writing hands) without looking.
6. Have them write down their guesses on scratch paper.
7. When the group has finished feeling the stuff in the bags, tell them and show them what was inside.

NOTE: Put the peanut butter last (if used at all), since it is very messy!

Group Discussion

Ask the group some of the following discussion questions.

- Which bags were most like gravel?
- Which bags were most like sand?
- Which bags were silty?
- Which bags were sticky?
- Which bags were like very fine powder?
- Ask club members to describe the textures they felt. How many did they guess correctly?
- How can the textures they felt in the bags compare to different types of soils?

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