Observing Soil

Lesson Overview

This lesson allows students to use their sense to make observation of soil.

Suggested Grade Levels: K-2

Standards for Lesson

Content Standard A: Science as Inquiry
K-4: Ask questions about objects, organisms, and events in the environment.

Time Needed

This lesson takes several class periods. Sample schedule:

Day One:	Complete the **Engage** and **Explore** portion of the lesson
Day Two:	Complete the **Explain** portion of lesson
Day Three:	Complete the **Elaborate** and **Evaluate** portion of the lesson

Materials for Lesson

- shallow trays (cookie sheets, square cake pans, or Styrofoam meat trays) for each student
- Dirt or sand
- A stick for each student
- Word cards
- A set of various small objects (button, toy car, crayon, penny, etc.) for each student in the class and for the teacher

Content Background

Dirt allows children to use their senses to make observations. If possible, pull some soil from around the school yard to allow them to make observations.

Engage

Tell the students that today they are going to use a magnifying lens to examine another part of their world-dirt. Provide the students with a small sample of really good potting soil. Have children take the dirt out of their cups and place it on the paper towel. Tell students to use their hands to feel the dirt. Ask them - what does it feel like? Write their words on the board. **(Shared Writing)**

Ask the students to use the magnifying lens to look at the dirt. What do you see? List ideas on the board.

Have children clean up and wash their hands. Bring them back together on the carpet to write a sentence about their dirt.

Explore

Teacher preparation: Fill a shallow tray with damp dirt or sand for each student in the small group. Prepare approximately 20-25 word cards on sentence strips or index cards. Place a set of objects at the center.

Place the materials at a center. Have the students work at the center with the teacher assistant. Give each student a set of objects.

For five minutes allow the students free exploration time to make imprints of the objects in the dirt.

The teacher assistant should then point out the left and right side of the tray. Instruct students to also find the left and right side of their trays. Have the students make imprints of the objects in a straight line in a certain order starting from left to right per teacher directions. (For example, the teacher would say, "First, make an imprint of the button. Next, make an imprint of the car...")

The teacher and students could then check their work to see if the items were in the correct order from left to right. Do this five times and change the order of the objects each time. Be sure to make the connection with the objects the

students made the imprints from left to right, and this is the same way that words are written.

Tell students that they are going to get to do some writing in the dirt like they do when they are out on the playground. Hold up a word card and read the word for the students. Explain to them that when we write words, we start on the left side and move to the right. Demonstrate for the students with hand motions the correct movement. Give each student a stick. Allow each student to locate the left side of their dirt container and move their stick from left to right making an imprint in the dirt. Pass out one word card to each student and observe as they try to copy the word in the dirt moving from left to right. Students will be able to select more word cards and continue to work with the sticks and the dirt.

Explain

Tell students that dirt can look different but it really is the same. Read the story MUD to the children and ask them if they have ever had the chance to play in mud. Teach students how to use a T chart to write differences about the mud.

Elaborate

Give students another sample of mud and have them use the T chart to compare and contrast the dirt samples.

Evaluate

Have students discuss the similarities and differences between the samples of dirt.

Make Observations

Sample 1: Topsoil

Write down your observations here:

Sample 2: Silt

How are they the same?

How are they different?

Topsoil	Silt