

Grade Level: K

Title of Lesson: Soil!

Unit Title: Earth Science- Rocks and Soils

Performance Standard(s) Covered:

SKE2- describe the physical attributes of rocks and soils

SKCS4- use the ideas of system, model, change, and scale in exploring scientific and technological matters

SKCS5- communicate scientific ideas and activities clearly

Essential Question: What are different ways to describe soils? What do the soil description words really mean? How can I use observation to learn?

Objective: The students will practice using their observational skills through working with soil to understand its characteristics and components.

Key Words and Terms: grainy, smooth, lumpy, soft, black, brown, red, white, sticks, leaves, plants, rocks, dirt, earthworms

Learning Activity

Abstract: The activity aims to help students use their own observational skills to understand the characteristics of soil and the other living and nonliving things that get combined with it. Then, they will draw what they have observed and explain it in writing as well.

Materials Needed:

- large re-sealable plastic bags
- 4-5 different soil samples (ex. sand, broken up red clay, potting soil, etc)
- newspaper
- science journals or a worksheet with space for writing and drawing
- pencils and crayons for every student

Safety Concerns: It should be explained at the beginning of the activity that students should not use their sense of taste for this experiment, especially if the soil is taken out of the bags. Simply explain that scientists never eat their experiments unless they actually involve food!

Procedure:

1. A few days before the lesson, find several different types of soil and put the samples into large re-sealable plastic bags.
2. Before starting, move all the desks together so that students will be in groups of 4-5. Then, cover all of the desks in newspaper just in case any of the bags somehow break open.
3. Discuss all of the key terms to students and make sure that they understand what they all mean. Keep a list of these words on the board throughout the activity.
4. Give one bag of sample soil to each group of students.
5. Explain to the students that they should use their observational skills to understand the soil sample. Also, point out that some bags contain extra items that aren't soil (ex. sticks, leaves, rocks, etc) and that they should observe those as well.
6. Have them to take turns and pass around the bag in order to look, feel, and maybe even hear the sample. Allow them to talk to each about what they are observing.
7. When they have each observed the soil, ask them to place the bag in the center of their grouped desks.
8. Pass out their science journals or a worksheet, and have them draw and write about the observations they have made. Walk around to each of the groups to answer any questions and guide students in the right direction.
9. If there is extra time, have groups swap soil bags and repeat the process.

Notes and Tips: This activity could have been really cool if it was expanded into a multiple day activity and allowed students to really play the role of a scientist. I would suggest that, if time allows, take the students outside and let them each collect their own soil sample from the playground. Then, perhaps on the next day, bring in safety goggles, magnifying glasses, and maybe even gloves for each student and have them take the samples out of the bags, place them carefully on the newspaper, and observe their own sample. On another final day, ask students to then share their findings to the class. In this way, they are truly involved in the whole process and get to practice many different skills throughout one activity.

References:

- Clarke County Kindergarten Science Curriculum