

SHOVELING SOIL

BENCHMARKS and TASKS

SC.A.1.1.1 The student knows that objects can be described, classified, and compared by their composition (e.g., wood or metal) and their physical properties (e.g., color, size, and shape).

SC.D.1.1.1 The student recognizes that the solid materials making up the Earth come in all sizes, from boulders to grains of sand.

- The student observes, describes, and classifies rocks according to their observable properties.
- The student recognizes that the surface of the earth is composed of different types and sizes of solid materials (e.g., sand, pebbles, rocks, clumps of dirt).

KEY QUESTION

How many different kinds of soil can be found on the school campus?

MATERIALS

Per student

magnifier
small plastic sandwich bag
Shoveling Soil data collection sheet
tool for digging (plastic spoons, scoops, hand shovels)

Per group

glue



TEACHING TIP

This activity may require more than one day.

ENGAGE

Write the word “soil” on the board. Have students discuss their experiences with soil (e.g., making sand castles, making mud pies, digging holes, planting a garden).

EXPLORE

1. Before going out, ask students where they might be able to find different types of soil on the campus. Also, review some of the properties of soil discussed in the previous lessons (e.g., color, texture, smell).
2. Allow students to set a time limit on this activity.
Ask:
How much time do you think you’ll need to gather your soil?
Remind them they are to work in cooperative groups, but that each person needs to gather a soil sample.
3. Organize students into groups and provide each student with a magnifier, a sandwich bag, and one digging tool.
4. Instruct students to stay within a set boundary, as well as together with their group. Each individual student within a group should try to collect a different type of soil and scoop it into a baggie.

EXPLAIN

1. Upon returning to the classroom, have students glue part of their soil collection on the data collection sheet.
2. While students are still working in their groups, encourage “soil talk”.
Ask:
What kinds of things do you see in your soil sample?
How is your soil sample different from other soil samples?
How is your soil sample like other soil samples?
3. As the students finish entering their data, ask them to share the information on their data collection sheet.
Ask:
Are there any students who have the same type of soil?
Did you get this soil from the same spot?
Is it the same color?
Did you have to dig very far down to get the soil?
Does all of the soil on our school campus look the same, or do we seem to have different kinds of soil?
4. Display all of the data sheets on a bulletin board.

EXTEND/APPLY

Instruct students to take home the rest of their soil in a baggie and compare it to the soil in their yard at home.

SHOVELING SOIL DATA COLLECTION

Soil Scientist: _____

Glue soil sample here:

I found my soil _____

My soil smells like _____

My soil looks like _____

The unusual thing about my soil is _____

I learned this about my soil: _____

