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Observing Soil



After talking about it, Chris's class decided that the garden did not get enough water. They planted several flower and vegetable seedlings. After watering the plants carefully for a month, the garden still looked bare. Now the healthy seedlings they had put in at the beginning of the month were dead. Ms. Clayson suggested that the students take a closer look at the soil in the garden.

CHALLENGE

What does soil look like?



In commercial farming, irrigation systems are used to water crops over a large area.

MATERIALS



For each pair of students

- 1 sample of Soil A
- 1 sample of Soil B
- 1 magnifying lens
- 1 white plastic spoon
- 2 pieces of white paper
- 2 index cards

PROCEDURE

1. Use the spoon to put a level spoonful of Soil A on one piece of white paper. Put a level spoonful of Soil B on the other piece.



Note: Do NOT label the soils A and B.

2. Work with your partner to observe the soils with the magnifying lens.
3. As you examine the soil closely, move the spoon through the soil.
4. Write a description of Soil A on one index card. Write a description of Soil B on the other index card.

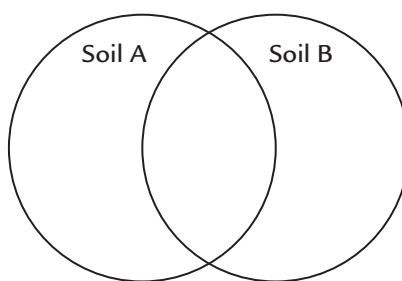
Hint: Make your descriptions complete enough so that someone else could use them to identify the soils.

5. Exchange descriptions of the soils with another pair of students. Read the descriptions and place them next to the soils they identify. Check each other's work to see if you were able to correctly match the soil samples to the descriptions.

ANALYSIS



1. What words were helpful in describing and identifying the soils?
2. Were you able to identify the soils based on the description from the other pair of students? Explain why or why not.
3. In your science notebook, create a larger version of the diagram shown below (called a Venn diagram). Record the characteristics of each soil in the circle with that label. In the space that overlaps, record features that are common to both soils.



4. Use your observations and your own words to answer the question: "What is soil?"

EXTENSION

Gather a sample of local soil to observe. Compare the local soil with Soils A and B by using it in the Procedure with the other two soils.