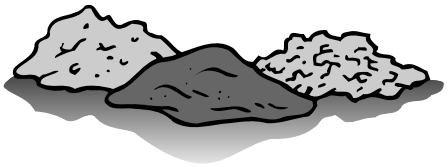
Chapter Science Investigation Name _____

Checking the Ground

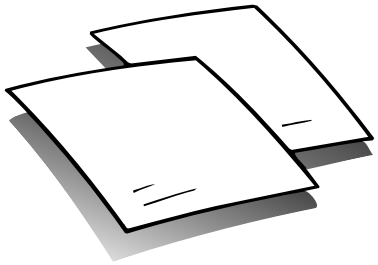
What You Need



soil samples

vinegar

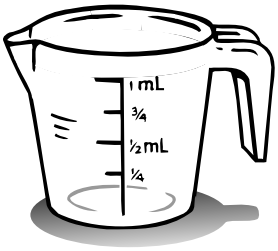
clear jars with covers



paper

water

pencils



measuring cup

Find Out

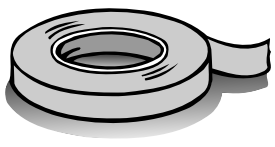
Do this activity to see the similarities and differences of soils found in different areas.

Process Skills

Predicting
Measuring
Observing
Communicating

Time

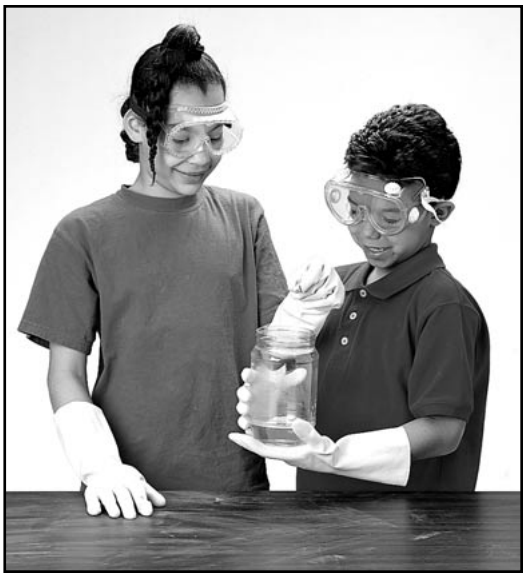
- 45 minutes the first day
- 15 minutes every day for two weeks to add samples, observe, and record information



tape

What to Do

1. **Predict** ways in which soils from different areas are similar and different.
2. Bring in a soil sample from your backyard or a local park.
3. Check the soil for rocks or pebbles. Set these aside.
4. Put the rocks or pebbles on a piece of paper. Label where they came from.



5. **Measure** 60 mL of the soil and put it in a jar.
6. Label the jar with a piece of tape. **Write** where the soil came from on the tape.
7. Add 120 mL of water to the jar.
8. Seal the jar and shake well.
9. **Predict** what the contents of the jar will look like tomorrow.
10. Each day, bring in a new sample and repeat Steps 2–9. You can get samples from a park, a yard, or a playground (with permission).
11. Each day, **observe** the sample from the day before, and fill in the chart.
12. Each day, drop a couple of the rocks from that day's sample into a glass of vinegar. If the vinegar bubbles, you will know there is limestone in the rock.
13. **Record** the results of the vinegar test.

Prediction: _____

_____

_____

Soil Samples				
	Location of soil sample	Does it have rocks or pebbles?	Is there limestone in the pebbles or rocks?	How does it look after settling?
Day 1				
Day 2				
Day 3				
Day 4				
Day 5				
Day 6				
Day 7				
Day 8				
Day 9				
Day 10				

Conclusions

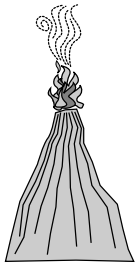
1. Describe what you see in each jar the day after the soil is mixed with the water.

2. Is limestone found in most rocks where you live?

New Questions

1. In what types of jobs would it be important to know about soil?

2. Write a new question you have about the makeup of soil.



Name _____

ACTIVITY

Making a Rock Model

Draw what the inside of your rock looks like.

Name _____

Conclusions

1. How did the shape of the small, colored balls change?

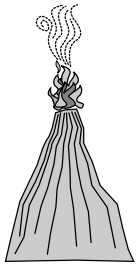
2. What effect did pressure from your hands have on the shape of the small clay balls?

3. What kind of rock does your model represent?

Asking New Questions

1. Look at your rock. Would it be easier to separate the colored balls now or before you pressed the rock model together?

2. How might heat change your rock?



Name _____

ACTIVITY

Observing Soil Types

What do you **predict** you will see in the soil samples?

Observe each sample. **Record** what you **observe** in the chart.

	Color	Size	Shape	How It Feels
Sample 1				
Sample 2				
Sample 3				

Name _____

Conclusions

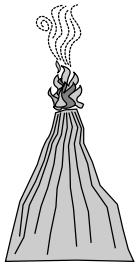
1. What different kinds of materials did you find?

2. Are any of your samples sticky like clay or gritty like sand?

Asking New Questions

1. Which of your soil samples do you think would be best for growing plants?

2. Which of your soil samples do you think would hold the most water? How can you find out?



Name _____

ACTIVITY

Classifying Resources

What do you **predict** most items in each bag will be made of?

Bag 1

Bag 2

Observe what you collected. List the contents of each bag under the headings below. **Group** the items according to what they are made of.

Bag 1

Item	Resource	Renewable or Nonrenewable

Bag 2

Item	Resource	Renewable or Nonrenewable

Name _____

Conclusions

1. Which things on your list can be recycled?

2. What might be made from the recycled items?

Asking New Questions

1. What changes in your habits could you make to help protect natural resources?

2. What suggestions could you make to others to promote more recycling?