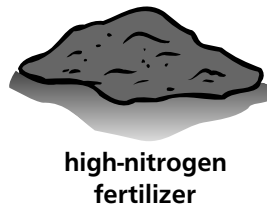
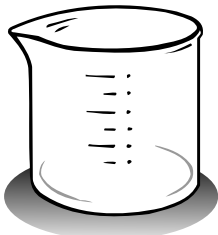
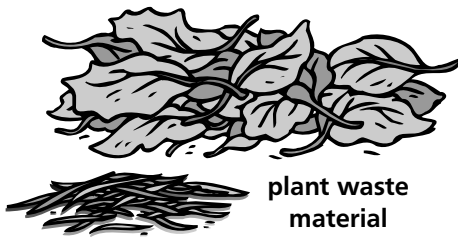


Making a Compost Pile

WHAT YOU NEED



Find Out

Do this activity to see how new soil is made.

Process Skills

Hypothesizing
Measuring
Observing
Communicating

Time

- One hour the first day
- 15 minutes every two weeks for eight weeks





WHAT TO DO

1. Write a **hypothesis** about what you think will happen when organic material is left to break down.
2. Bring scraps of fruits and vegetables to school. The vegetables can be raw or cooked, but be sure they do not contain any oil or grease. Do not bring scraps that include meat.

Safety! *Be sure there is adult supervision when sharp objects are used.*

3. Have your teacher punch 20 or 30 holes in the sides and top of the trash can. This is so your compost has good air circulation.

4. Find a warm, sunny spot outside for your trash can. Fill the bottom with bulky, lightweight plant material. Use dead leaves, grass clippings, sawdust, or shredded newspaper.

Safety! *Wear gloves when handling plant material.*

5. Put the scraps in the can and cover with more plant material.
6. Have your teacher **measure** 500 mL of the fertilizer and add it to the trash can. Add just enough water to moisten the mixture.
7. Use the shovel to mix the compost mixture well. Put the lid on and leave the can.
8. Check your compost in one week. The center of the pile should be warm. **Record** your **observations**.



Safety! *Don't touch the compost with your hands. Hold your hand above it to see if you can feel the heat.*

9. Every two weeks, have your teacher help you use the shovel to turn the pile over. What's on top of the pile needs to be moved to the center so it can decay. Keep the pile damp, but not wet. **Observe** how the pile changes from one turning to the next.
10. Compare your **hypothesis** with your observations. Was your hypothesis correct?

Hypothesis: What do you think will happen in your compost pile?

Changes in a Compost Pile	
Time	Observations
After 1 week	
After 2 weeks	
After 4 weeks	
After 6 weeks	
After 8 weeks	

Conclusions

1. How did your compost pile change during the first week?
2. How was it different at the end of the second week?
3. What natural factors work together in the process of producing compost?

New Questions

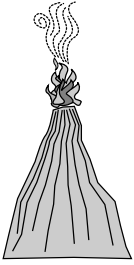
1. What could compost be used for?
2. Write a new question you have about making compost.



Activity Journal

Lesson 1 • Rock Types and Formation

Name _____



ACTIVITY

Classifying Rocks

Record your **observations** in the table below.

Name of Rock	Drawing of Rock	Description

Activity Journal

Lesson 1 • Rock Types and Formation

Name _____

Conclusions

① Did you change your original groupings? Why or why not?

② Are your groups like your classmates' groups? Is there only one way to group the rocks? Explain.

③ Did some rocks fall into more than one category? Why or why not?

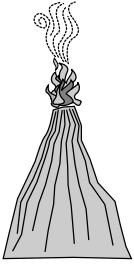
Asking New Questions

① **Explain** why you grouped your rocks the way you did. What characteristics did you look for?

② What other characteristics could you look for?

③ After looking at the different properties of the rocks, try to **describe** how each rock could have been formed.

Name _____



ACTIVITY

Naming Minerals

Record your **observations** on the chart below.

Mineral	Luster	Streak Color	Heaviness	Softness/ Hardness Rank

Name _____

Conclusions

- ① Did any minerals produce a surprising streak?

- ② Which samples stood out as being heavy? Can you suggest a reason why this might be?

- ③ Which sample was the hardest? Which was the softest?

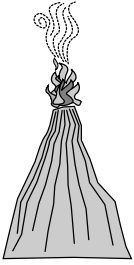
- ④ Which samples could be scratched by a fingernail? By a penny? By the steel file? Which could scratch glass?

Asking New Questions

- ① Which tests seemed to be best for classifying minerals? Which tests were not so good?

- ② Why are some of these minerals harder than others?

Name _____



ACTIVITY

Testing Soil Characteristics

Record your **observations** in the table below.

Soil Sample	Characteristics	Which Soil Is Harder?	Soaking Time
1			
2			

Name _____

Conclusions

- ① What similarities and differences did you find between the two soil samples?

- ② Where was water absorbed more quickly?

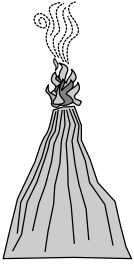
- ③ Remember the results when you poked the soil at each spot with your pencil. Do you think there is a relationship between soil characteristics and water absorption? Explain.

Asking New Questions

- ① **Explain** the relationship between your findings and the growth (or lack of growth) of plants at the soil locations.

- ② How might you get grass to grow better on bare spots where little grass grows?

Name _____



ACTIVITY

Modeling Earth's Limited Resources

Draw a circle and divide it to show the different parts of your model. Try to keep the same proportions as your clay model.

Name _____

Conclusions

- ① Why are there more yellow sections than green sections?

- ② Why should we try to conserve topsoil for growing crops?

- ③ On which section of your model do you live?

Asking New Questions

- ① Where else on Earth could people look to produce food?

- ② What can we do to keep the green part of Earth from getting even smaller?