

Investigate

How do different objects decompose?

Materials

safety goggles

newspaper

spoon

potting soil

1-liter plastic bottle with
top 6 cm cut off

metric ruler

piece of paper

fruit peel

lettuce leaves

2 pieces of plastic wrap

piece of aluminum foil

piece of bread

piece of popped popcorn

water

masking tape

What to Do

- 1 Put on your safety goggles. To help keep your work area neat, place several pieces of newspaper on your desk. Then make a model landfill. Begin by using the spoon to scoop about 5 cm of soil into the bottom of the bottle.
- 2 Place the piece of paper in the bottle near the side. You should be able to see the paper from outside of the bottle. Cover the paper with soil.
- 3 Repeat step 3 with the other objects listed in your chart. Use only one of the pieces of plastic wrap. The last layer in the bottle should be soil.

- 4 Add water to moisten the soil and cover the container with plastic wrap. Use masking tape to hold the plastic wrap in place. Draw a picture of your bottle and the buried objects. Label the objects to keep track of them.
- 5 Which objects do you think will decompose easily? Which objects will not decompose easily? Record your predictions in your chart. Explain why you predicted as you did.
- 6 Place the bottle in a warm place, but out of direct sunlight. Observe the bottle after 1, 2, and 3 weeks. Record your observations.

Explain Your Results

1. Which object or objects changed the most? Which object or objects changed the least? Were your predictions correct?
2. The aluminum foil and the plastic wrap do not come from plant sources. The other products do. What can you infer about the decomposition of these products from plant sources?

Data and Observations

	Predictions	Observations After 1 Week	Observations After 2 Weeks	Observations After 3 Weeks
Paper				
Fruit Peel				
Lettuce Leaves				
Plastic Wrap				
Aluminum Foil				
Bread				
Popcorn				