

Name: _____

Date: _____

Waste & Our World

How Are Plant and Animal Waste Recycled in Nature?



Discover: What is Decomposition?

Question

What is decomposition and how do decomposers help?

Decomposition is the rotting of dead plants and animals. Nature's recyclers, **decomposers**, break down these dead plants and animals! This natural waste, the dead plants and animals, is food for the decomposers. Decomposers may seem to have a gross job, but it is a very important job! Without decomposers, we would be smothered in dead plant and animal waste. Small creatures such as bacteria, fungi, snails, earthworms, flies, slugs, termites, and beetles are decomposers who work to clean up **natural waste**.

Resources

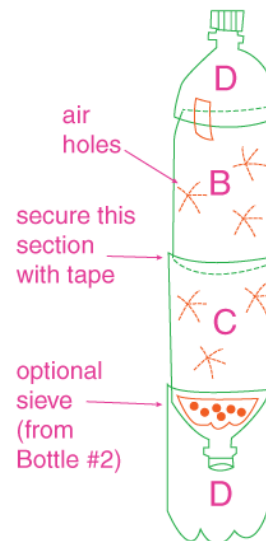
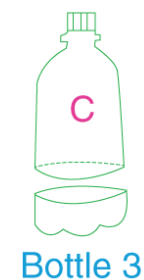
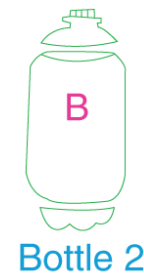
Access the website links from the online course.

- Food Chains Video (website)
 - Username: 0099
 - Password: students
- utility knife or scissors
- tape
- ruler
- thermometer
- three 2 L clear pop bottles, emptied and cleaned
- one bottle cap
- ingredients for decomposing: leaves, clippings of plants and grass, soil, food scraps (fruit and vegetable waste), used tea bags, etc.
- *Decomposition Bottle Data Chart*

Instructions

You will make a **Decomposition Bottle** where you can watch natural waste decompose.

- 1 Remove labels from the pop bottles.
- 2 Cut the top from **one bottle**, about 2 to 3 cm *below* the curve. The bottle should now have straight sides.
- 3 Cut the top from **another bottle** about 2 to 3 cm *above* the curve. In addition, cut the bottom off 2 to 3 cm *below* the bottom curve. This bottle should have straight sides with a tapered top and bottom.
- 4 Cut the bottom from the **last bottle** about 1 to 2 cm *above* the curve so it has a straight end.
- 5 Put 'C' upside down, but put it into 'D'.
- 6 Put 'B' into 'C' and tape the seam.
- 7 Poke air holes into 'B' and 'C'.
- 8 Add 'A' as the top. Put a piece of tape between 'A' and 'B' as a hinge so that you can open the decomposition bottle to fill it.
- 9 Fill your decomposition bottle with various kinds of natural waste such as grass clippings, leaves, fruit and vegetable peels, eggshells, newspaper pieces, and soil.
- 10 Add some water to the column. If you have a stream or pond nearby, you can use some water from it!



When your **Decomposition Bottle** is finished, record the following observations on the data chart on the first row.

- a. Date
- b. Temperature: Take the cap off and take the temperature.
- c. Height: Use the ruler to record the height of the stuff inside your bottle, measuring from the table up the side of your bottle.
- d. Color(s): Record the colours of all the stuff inside.
- e. Texture: Record with such words as soft, hard, mushy, chunky...
- f. Odour: Take cap off and sniff.
- g. Critters: Observe for evidence of small bugs such as flies or beetles.

Check on your decomposition bottle **every three days** and record your observations on the data chart. Keep the decomposition bottle moist by adding a little water after each time you check it. Continue observing the decomposition for at least a **few weeks**. Keep it for a few months to see results that are more drastic.

Observations

Decomposition Bottle Data Chart

Waste I put into my Bottle:

Date	Temperature	Height	Colours	Texture	Odour	Critters

