

The Big Breakdown

OBJECTIVE

Students will learn the differences between objects that *decompose* and objects that can cause *pollution*.

MATERIALS

per student group:

- quart jar with holes punched in the lid
- masking tape
- marking pens
- a few sheets of paper

BACKGROUND

Living or once-living objects decompose (break down) over time when placed in a natural environment. Microscopic organisms, like bacteria and fungus, help break living matter into smaller components. Decomposition recycles nutrients and minerals into the soil to nourish growing plants. Nonliving objects made of plastic or metal often take longer to decompose. For example, some plastic containers may take hundreds of years to fall apart.



ACTION

1. Begin by writing “decomposer” and “pollutant” on the board. Help students define terms. Can students give examples of each?
2. Divide class into student groups of five or less. Ask each student to bring in four small items that would otherwise have been thrown away. Try to collect two decomposers and two pollutants.
3. When trash is collected, give each student group a jar with a lid. Instruct them to put their trash items in the jar and screw on the lid.
4. Distribute the tape, paper, and marking pens. Have each group tape a label on their jar.
5. Place the jars in a windowsill for sunlight and, during the next few weeks, check the progress of the decomposers and pollutants. Have student groups create a progress chart to record results. Information might include trash items, date and time observed, and object descriptions. Circle the decomposers and underline the pollutants on the chart.
6. Ask students to share findings with the class. Did the objects they thought were decomposers break down? What can we do to keep polluters out of our environment? (*reduce, reuse, and recycle*)

DEEPER DEPTHS

Discuss composting with students and encourage them to find out more about how they can compost at home.