

## Watching wastes rot

Decomposition occurs everywhere. If everything existed forever, we would be buried in our waste. Our waste products are varied: some are made of easily degradable materials while others will last for thousands of years.

Some materials decompose when buried; other do not. Microorganisms play a vital role in the decomposition process.

### Materials

- ten pieces of each of the following:  
glass  
paper  
steel or other metal  
plastic  
apple, lettuce, or other fruit or vegetable
- ten containers, jars, or flower pots  
(One pound cottage cheese containers would be suitable.)
- soil
- sterile potting mix
- masking tape or labels
- handout: [Watching Wastes Rot: Record](#)

### Activity

1. Display a piece of glass, paper, metal, plastic, and food. Ask the class to predict which of these substances are biodegradable (capable of rotting or decomposing). Conduct the following experiment to determine whether their predictions were correct.
2. Dig enough soil from a garden or vacant lot to fill five containers. Fill five of the containers half full with soil, and the other five half full with sterile potting mix.
3. Place a piece of each type of waste into each container. Continue filling the containers with soil or sterile mix, whichever they already contain.
4. Add enough water to all pots so that the soil or sterile mix is damp but not wet to the touch.
5. Cover the containers. Label the containers to indicate the type of waste and whether it contains soil or sterile mix.
6. After one week, examine the waste in each container. Which wastes are decomposing?
7. Cover the wastes again, and continue to check them once a week for as long as you want. Record your observations.
8. Check the original predictions and draw conclusions about which substances are biodegradable and under what conditions.

### Other things to do:

- Explore degradable plastics. Many producers of plastic bags are now producing plastic bags they say will degrade.

There are two types of degradable plastic bags; photodegradable and corn starch biodegradable. Find out what makes these plastic bags degrade and perform an experiment similar to the one above.

- What makes these plastic bags degradable?
- Does the whole bag degrade? Are there any waste products left over?

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Adapted from *Trash Goes to School*, by the Cornell Center for the Environment, Waste Management Institute; and from *Recycle Alaska Activities Handbook*, by the Alaska Department of Environmental Conservation.