

# Compost Bags

## Description

Students manage natural decomposition by creating their own compost bag.

## Objective

To introduce composting as a way of managing the nutrient cycle.

## Teacher Background

This project will stimulate students' curiosity and serve as a good motivator for making garden compost. Prepare the bag with them in Part One without telling them what it is for. Let the students speculate. Start this project one month prior to making compost in the garden. This will allow the organic substances in the bag time to decompose.

Note: Before closing the bag, breathe air into it. Decaying matter smells if it does not have enough air and if the anaerobic bacteria that create the smell are active.

## Materials

### Part One

- One large plastic garbage bag with closing tie
- One gallon of wet soil
- Three grapes
- Five pieces of plastic cup
- One handful of grass clippings
- Three leaves of lettuce
- Two nails
- One slice of white bread
- Three squares of wet toilet paper
- One slice of whole wheat bread
- Life Lab journals

### Part Two

- Sifting screen
- Walnut shell
- Apple





I have the ingredients for a very special recipe. When you mix ingredients do you always know what the results will be? Let's see if you can guess while we put these ingredients together.

#### *Part One:*



1. Take the large plastic bag and put a gallon of wet soil in it.
2. Add the rest of the materials.
3. Mix all the ingredients well into the wet soil, so that they are distributed throughout the bag.
4. Blow the bag up with air, and then close it tightly.
5. Record on a card what was put in the bag and the date it was sealed; tape it to the bag.
6. Hang a sign on the bag: What's going on in here?
7. Put the bag in an out-of-the-way place in the room.
8. Ask the students to write in their journals predictions about what will happen, or draw what they think the contents will look like in a month.

#### *Part Two:*



One month later, complete the following steps outdoors:

1. Ask students to read the list of materials that were put in the bag.
2. Ingredient by ingredient, ask students to hypothesize as to what happened to each.
3. Open the compost bag in the garden.
4. Pass the contents through a screen.
5. Have students observe the condition of the ingredients.
6. Ask students to refer to their original predictions made in the classroom and draw conclusions. What changes occurred?
7. Discuss decomposition, decay, and nutrient recycling.
8. Introduce composting as a way to put nutrients back into the soil using natural decomposition. Explain that composting takes nature's process of recycling nutrients and accelerates it. A well-made compost heap creates an environment in which decay-causing bacteria can live and reproduce at the highest rate of activity. As a result, fresh manure, food scraps, leaves, seeds, wood ashes, sawdust, and other compost materials are converted into dark humus.



Hold up a walnut shell and an apple. Ask, How could this walnut shell become an apple and become you? (The walnut shell is dropped under an apple tree. The walnut shell decomposes and adds nutrients to the soil. The roots of the apple tree absorb the nutrients, some of which go into the fruit of the tree. You come along and pick and eat the apple.) How could the apple core become part of you?