

Lesson

6

Conserving Resources by Recycling

WHAT YOU WILL LEARN

To understand how personal choices and public policy affect environmental quality

READING STRATEGY

Create a diagram like the one below. List three things you can do to help reduce waste.



TERMS TO KNOW

landfill, recycling

Do you like to pick up a hamburger, french fries, and a soft drink on your way to the park? When there is a good movie on TV, do you have a pizza delivered? Does your family ever eat frozen dinners? Do you ever wonder what happens to all the food and drink containers after you put them in the garbage?

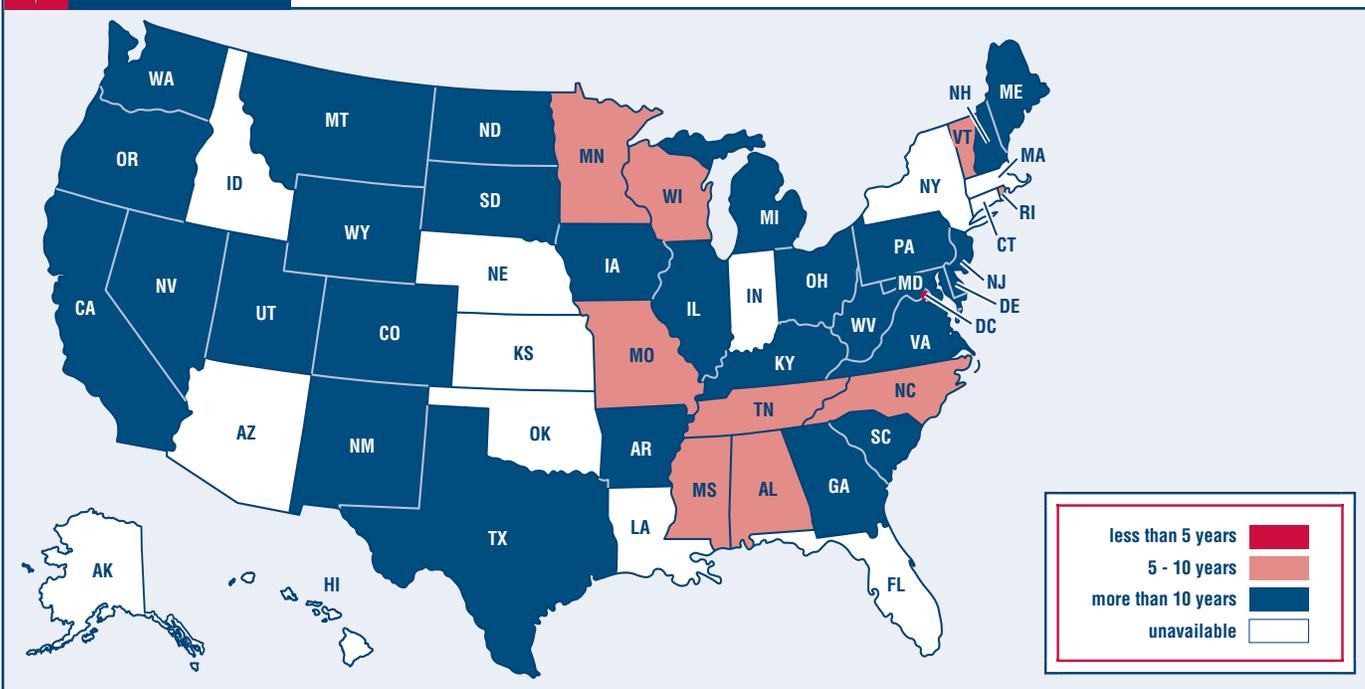
Americans produce more garbage per person than any other people on Earth. Each American throws away about four pounds (2 kg) of waste each day—about 1,587 pounds (720 kg) in a year. All Americans together create more than one-third of the world's trash—200 million tons each year. That is enough to fill a line of garbage trucks that would circle the earth eight times!

Getting Rid of Garbage

In 1996 Americans generated 208 million tons of garbage. Of that total about 57 percent, or about 189 million tons, was buried in giant holes in the ground called **landfills**. As shown in **Map 6-6**, many states are running out of landfill space. By these projections, many states have run out, or are soon to run out of places to put their garbage.

MAP 6-6

Years of Remaining Landfill Capacity



Source: BioCycle Magazine, April 1999

Disposing of garbage is a problem, and no one expects the problem to go away. However, progress is being made in the battle to keep our planet from being buried under its own refuse. The growing mountains of garbage are being dealt with in two main ways: burning and recycling.

Burning Garbage

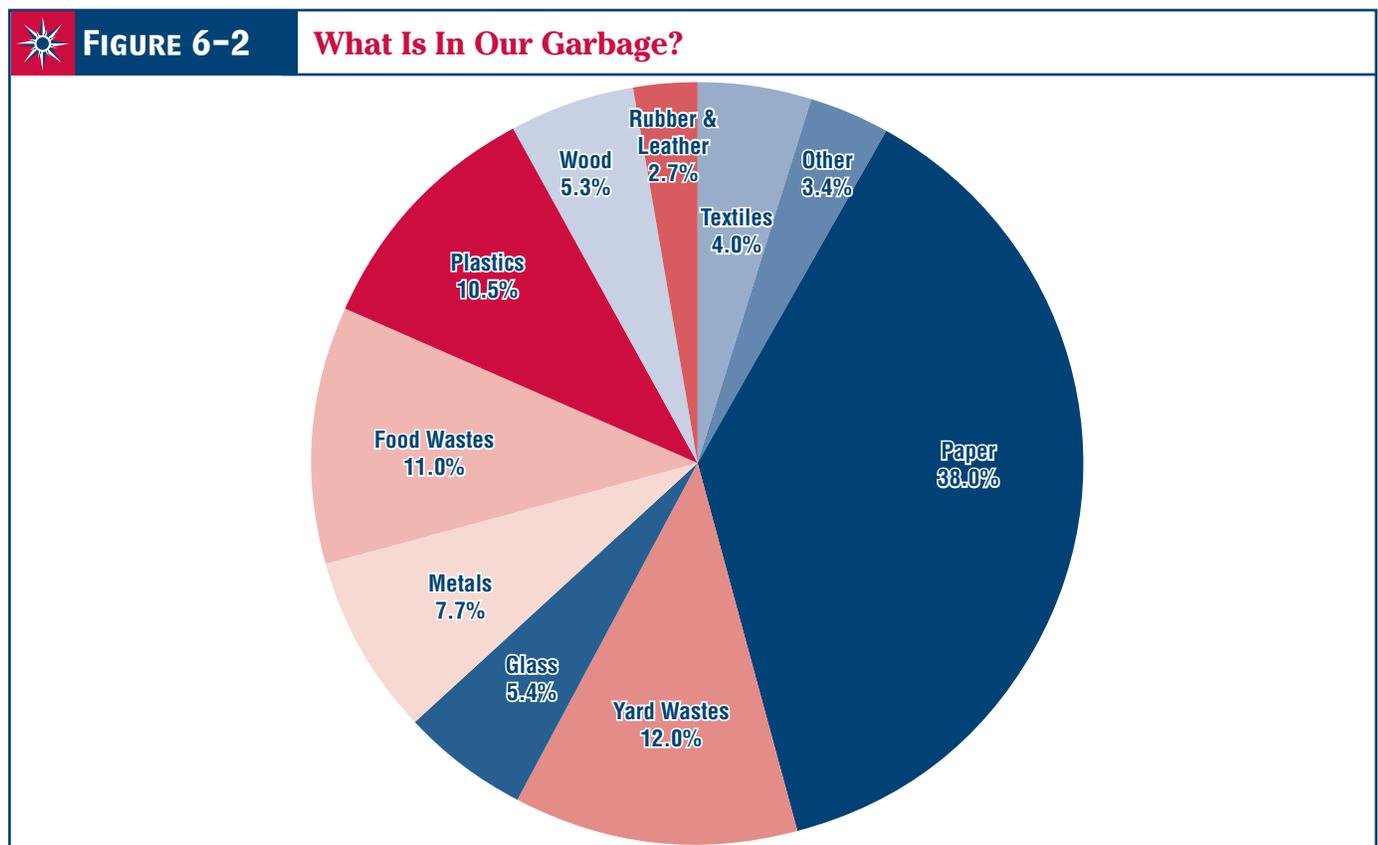
Garbage is being burned so that it will take up less room when buried. Over 100 plants in 32 states in the United States burn garbage in energy recovery plants. About 15 percent of the country's waste is burned at these plants. Some of these plants generate steam to power factories, or create electricity to run motors. The ash left after the garbage is burned must still be buried. However, this takes up only about half as much space as the unburned garbage would have. One problem with this way of getting rid of garbage is that the burning causes air pollution. For example, things made of plastic may give off dangerous gases when burned.

Recycling Garbage

Garbage is being saved and reused. There is an old saying: "One person's trash is another person's treasure." Many things that are thrown away can be saved and put to a new use. We call this **recycling**. Recycling saves money in several ways: (1) Less room is needed in landfills if things are reused instead of thrown away. (2) Valuable metals and other resources are saved when things are recycled. (3) Recycling often takes less energy than making new products.

Look at **Figure 6-2**. It shows what is in our garbage. Paper, glass, metals, and even some plastics can be saved and made into new things.

Recycling is growing in the United States. However, there is much room for improvement. Even the best recycling programs in the United States save only about 28 percent of the garbage. Some materials are recycled at much higher rates. For example, in 1999 42 percent of all paper, 40 percent of plastic soft drink bottles, and 55 percent of all aluminum beverage cans were recycled.



Source: Environmental Protection Agency. "Municipal Solid Waste in the United States: 1999 Facts and Figures."

In some recycling systems, all garbage is dumped into giant machines that separate the metal and glass from the other garbage. The metal and glass are sold to companies that use them to make new things.

The best recycling systems require people to separate their garbage themselves rather than dumping it all into one can or bag. Usually each color of glass must be kept separate. Tin cans must be separated from aluminum cans. Plastic bottles go into another pile. Separating the garbage at home keeps the costs of recycling down.

There are two reasons recycling is not used more widely. One reason is that many people do not want to go to the trouble to separate their garbage. Therefore, even the best programs get only about one-fourth of the people to take part. The second reason is that city and state governments have been slow to set up recycling programs. But as the garbage piles higher and the gates to more landfills are closed forever, more cities are starting to recycle. The states of New Jersey, Rhode Island, and Connecticut have passed laws that require people to recycle. Massachusetts and New Jersey have set up large plants to recycle garbage.

How You Can Help

Many experts feel that the only way to solve the garbage problem is to get each citizen involved. How can you help? Here are some ways that work.

1. **Don't buy things in containers that are made to be thrown away.** Buy products in glass bottles or metal cans. Avoid plastic and paper containers whenever possible. Reuse grocery bags whenever possible.
2. **Recycle paper, metal, glass, and even plastic.** School paper drives are one way to recycle. Some cities have recycling centers where you can take glass, metal, paper, used motor oil, etc.
3. **If there is no recycling program in your town, work to start one.** City leaders know it often costs more money to bury trash than it does to recycle. If enough people are interested in recycling, a program may be started.

As discussed in this lesson, there are many ways to deal with the garbage problem. But everyone agrees this problem won't go away. And the longer the garbage problem is with us, the more impact it will have on our daily lives.

Using Your Skills

A RECALLING FACTS

Use the reading to answer these questions.

1. What problem are cities all over America having with their garbage?

2. Describe the two ways in which people are working to solve the garbage problem.

3. How does recycling garbage help the garbage problem?

4. Why has recycling not been widely used in the United States?

5. How can you help solve the garbage problem?

B RECALLING FACTS

Use the table below to answer the questions.

Country	Garbage Produced Yearly	
	Per Person (in pounds)	Total (in thousands of metric tons)
United States	1,587	202,321
Australia	1,521	13,097
Austria	1,124	4,124
Canada	1,080	14,989
Germany	1,014	37,697
Japan	882	50,698
Portugal	838	3,797

Source: *Statistical Abstracts of the United States*. "Organization for Economic Cooperation and Development," 1999.

1. Which of the countries listed in the table produces the most garbage per year? The most garbage per person?

2. Packaging for prepared foods is responsible for a large part of the garbage in the United States. In which two countries listed in the table would you expect to find few such foods? Why?
