

# Recycling & Conservation: Recycling -- How It Works

by ReadWorks



*recycling bin*

When you throw your soda can into a recycling bin, you probably never think of where it has been or where it is going. Soda cans are one aluminum product that can be entirely recycled. Manufacturers will take that can from the bin. They will process the aluminum and make new cans or other products. How do other recycled materials get used?

Recycled materials make a variety of products. Recycled paper doesn't just make paper and cardboard. It also is used in insulation and animal bedding. Glass is ground up to make new glass containers. It is also used as a substitute for sand in concrete. There is also organic recycling. That is when plant and food scraps are recycled through composting. With composting, scraps are allowed to decay. Then they are added to soil to make it more fertile.

People are not the only ones who recycle. Many businesses recycle, too. Offices often have recycling bins for paper and cardboard. Cafeterias have receptacles for cans and bottles. The soda cans that get recycled really add up. More than half of all aluminum soda cans in the United States get recycled. Recycling cans, instead of making new ones, saves factories a huge amount of energy. The amount of energy saved by one single 12-ounce soda could light a bulb for almost 4 hours! Recycling benefits the planet in a big way.

# Recycling & Conservation: Why Recycle?

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Recycling is a process where something is reused rather than thrown away. Common items that are recycled include aluminum and steel cans, glass, and newspapers. Recycling can be time-consuming and dirty work. For example, recyclable objects have to be sorted from trash. Then the objects have to be cleaned. Afterwards, the objects are turned into materials that can be used by people and companies. Why should people bother to recycle even though it takes a lot of work?

Recycling helps protect the earth. Recycling means less garbage in landfills. These are places where garbage is taken and buried. Recycling also helps conserve the earth's resources. For example, factories use less energy by recycling steel cans than by making new ones. Recycling paper saves trees from being cut down. Trees are used to make paper.

Every time you are about to drop a plastic bottle in the garbage, stop and think. Is it worth harming the earth? Your actions now can help preserve the environment for generations to come. All you have to do is throw that bottle into a recycling bin.

Get in the habit. Be proud of recycling. Encourage others to recycle. You can make a difference!

# Recycling

It almost always takes less energy to make a product from recycled materials than it does to make it from new materials.

Recycling is the process of collecting and processing materials that would otherwise be thrown away as trash and turning them into new products. Recycling often saves energy and natural resources.

Natural resources include land, plants, minerals, and water. When we use materials more than once, we conserve natural resources.

## **Recycling saves energy in the production of new products**

Making a product from recycled materials almost always requires less energy than it does to make the product from new materials. For example, using recycled aluminum cans to make new aluminum cans uses 95% less energy than using bauxite ore, the raw material aluminum is made from.

Recycling paper saves trees and water. For every one ton of paper made from recycled paper, it saves up to 17 trees and uses 50% less water.

## A Ton of Trash

A group of fourth graders witnessed firsthand proof that one person's junk is another person's treasure. *Weekly Reader* joined the students on their visit to the Garbage Museum in Stratford, Connecticut, where a giant, multicolored dinosaur molded out of garbage towered above them.



Don Heiny/Weekly Reader

*The Trash-o-saurus was made out of a ton of trash, including false teeth, license plates, and tires.*

*Trash-o-saurus* was sculpted out of a ton of trash! That is equal to 2,000 pounds of garbage—the amount of trash each person, on average, threw away each year in the late 2000s. Philadelphia artist Leo Sewell scoured city dumps and created *Trash-o-saurus* out of old junk, from false teeth and license plates to toys, tires, and tennis rackets.

"I think the dinosaur is one of the coolest things I've ever seen," said fourth grader Jahkwe Aquart from Park City Magnet School in Bridgeport, Connecticut. His classmate Julie Pham, 9, agreed. "Instead of throwing away our garbage, we can reuse it."

That is exactly the point. "The museum shows what happens to our trash, how we can reduce our trash, and what we can do instead of throwing our trash away," said museum director

Sotoria Montanari.

## Garbage Trail

Americans created more garbage than ever before in the 2000s. In the early 1900s, most items were packed in containers that could be used again. In the 2000s, most of the food people bought, from cereal to milk, came in boxes and cartons that could be thrown away.

So what happens to trash after it is tossed out? Some trash ends up in **landfills**. In a landfill, garbage gets buried between layers of soil. Because many states have been running out of room for landfills, more and more garbage goes to **waste-to-energy** (or resource-recovery) plants. At these plants, garbage is burned and converted into electricity that people use to power their lights, TVs, and video games.

## The Three R's



World Almanac for Kids

*Plastic bottles can be recycled at centers like this one*

Garbage is a form of solid waste. The Garbage Museum and its recycling plant, which are run by the Connecticut Resources Recovery Authority, provide visitors with ideas to cut down on solid waste. One way is to **reduce**, or make less, trash-by throwing away fewer napkins when you eat, for instance. Another way is to **reuse**, or find new uses for, old items. Paper bags, for example, can be reused to make book covers or wrap gifts.

People also help decrease their solid wastes when they **recycle**. Recycling refers to putting old objects, such as glass, plastic bottles, newspapers, and aluminum cans through a special process so that they can be used again.

Recycling has many benefits. Did you know that recycled plastic soft-drink bottles can be made into park benches, carpeting, and backpacks? The more people recycle, the less garbage ends up in landfills or waste-to-energy plants.

Recycling also helps protect **natural resources**, or materials from Earth. To make an aluminum can from scratch, for example, the metal needs to be mined from the ground. That process harms the land and pollutes the air and water. Making aluminum cans from recycled cans uses 95 percent less energy and protects Earth's natural resources. In fact, the energy saved each year from recycled cans could light Washington, D.C., for nearly four years!

As part of their visit, the fourth graders got a look at the museum's recycling center. Here, they discovered that one **bale**, or bundle, of recycled newspapers can save 17 trees! The message seems to have stuck with 9-year-old Arron Smith. "When you recycle, you save trees and animals' homes."

# Too Much Trash!

## Less Mess

### More people are recycling.

What do bottles, cans, paper, and tires have in common? They all end up as garbage. In the late 2000s and early 2010s, each American threw away about 4½ pounds of trash every day. That adds up to more than 1,600 pounds per person in one year!



Erlanson/Getty Images

Most of our trash ends up in **landfills**. Those are places where people dump trash. The rest of the trash gets **recycled**. When something is recycled, it is made into something new.

Many people have been working to solve the trash problem. One plan is known as "zero waste." Its goal is to teach people to make less trash. The plan is being used in schools, companies, national parks, and restaurants. Here are some ways that the plan is being put into action.

## Recycling Trash



Jupiter Unlimited

*Put items to be recycled in a recycling bin.*

Some people sort their trash to see what can be recycled. Those items often include paper, glass, and certain plastics. Some towns also recycle tires and batteries. Taking items to recycling centers reduces the trash in landfills.

## Buying Recycled Products



Carrin Ackerman/Weekly Reader

*This fleece, by Patagonia, is made from recycled plastic bottles.*

Many products are made from recycled materials. Clothes and bags can be made from recycled plastic bottles. Recycled plastic can also be made into lumber. Lumber is used for building things.

## Making Compost Piles



SuperStock; Trash: iStockphoto

*Plant and food scraps can be put into compost piles.*

Food scraps usually end up in the trash. But some people put the scraps into **compost piles**. Those are mixtures of plant and food scraps. Worms and bugs help break down the scraps. That turns into soil, which helps plants grow.