



REDUCE, REUSE, RECYCLE

Reducing and Reusing Basics

The most effective way to reduce waste is to not create it in the first place. Making a new product emits greenhouse gases that contribute to climate change and requires a lot of materials and energy - raw materials must be extracted from the earth, and the product must be fabricated then transported to wherever it will be sold. As a result, reduction and reuse are the most effective ways you can save natural resources, protect the environment and save money.

Benefits of Reducing and Reusing

- Reduces greenhouse gas emissions that contribute to climate change.
- Prevents pollution caused by reducing the need to harvest new raw materials.
- Saves energy.
- Helps sustain the environment for future generations.
- Reduces the amount of waste that will need to be recycled or sent to landfills and incinerators.
- Allows products to be used to their fullest extent.
- Saves money.

Ideas on How to Reduce and Reuse

- **Think Green Before You Shop**. Reduce associated greenhouse gas emissions by thinking green when you shop.
- **Reduce your food waste** by shopping smart, buying what you need, composting food scraps, and donating unused food to food banks or shelters. More ways to [reduce](#) your impact.
- **Reuse or repurpose items** such as old clothing, cloth grocery bags, and containers to prevent waste.
- **Buy used items** to reduce waste as well as the emissions created by producing new materials or disposing of them in landfills. [Donate](#) unused clothing, electronics and building materials to make sure others can reuse them too!
- **Buy products made with recycled content**. Check labels to see if a product or its packaging is made from [recycled materials](#).
- **Know before you throw**. Know what items [your local recycling program](#) collects and encourage your household to [recycle right and recycle more](#).
- **Learn about** what else [you can do](#) at home, at school, at work and in your community!
- **Maintain and repair products**, like clothing, tires and appliances, so that they won't have to be thrown out and replaced as frequently.
- **Borrow, rent or share items** that are used infrequently, like party decorations, tools or furniture.

Donation

One person's trash is another person's treasure. Instead of discarding unwanted appliances, tools or clothes, try selling or donating them. Not only will you be reducing waste, you'll be helping others. Local churches, community centers, thrift stores, schools and nonprofit organizations may accept a variety of donated items, including used books, working electronics and unneeded furniture.

Benefits of Donation

- Prevents usable goods from going into landfills
- Helps your community and those in need
- Tax benefits may be available

Recycling in the United States

Recycling is the process of collecting and processing materials that would otherwise be thrown away as trash and turning them into new products. Recycling can benefit your community, the economy, and the environment. Products should only be recycled if they cannot be reduced or reused. EPA promotes the [waste management hierarchy](#), which ranks various waste management strategies from most to least environmentally preferred. The hierarchy prioritizes source reduction and the reuse of waste materials over recycling.

Benefits of Recycling

Environment

Recycling provides many benefits to our environment. By recycling our materials, we create a healthier planet for ourselves and future generations.

Conserve natural resources: Recycling reduces the need to extract resources such as timber, water, and minerals for new products.

Climate change: According to the [most recent EPA data](#), the recycling and composting of municipal solid waste (MSW or trash) saved over 193 million metric tons of carbon dioxide equivalent in 2018.

Energy savings: Recycling conserves energy. For example, recycling just 10 plastic bottles saves enough energy to power a laptop for more than 25 hours. To estimate how much energy you can save by recycling certain products, EPA developed the [individual Waste Reduction Model](#) (iWARM).

Waste and pollution reduction: Recycling diverts waste away from landfills and incinerators, which reduces the harmful effects of pollution and emissions.

Economy

EPA released significant findings on the economic benefits of the recycling industry with an update to the national Recycling Economic Information (REI) Study in 2020. This study analyzes the numbers of jobs, wages and tax revenues attributed to recycling. The study found that in a single year, recycling and reuse activities in the United States accounted for:

- 681,000 jobs,
- \$37.8 billion in wages, and
- \$5.5 billion in tax revenues.

This equates to 1.17 jobs per 1,000 tons of materials recycled and \$65.23 in wages and \$9.42 in tax revenue for every ton of materials recycled. For more information, [check out the full report](#).

Community

Environmental Justice: Across the country, waste management facilities are concentrated in underserved communities, and they can have negative impacts on human health, property values, aesthetic and recreation values, and land productivity. Recycling provides these areas with a healthier and more sustainable alternative.

International: Waste generated in the United States also affects communities in other countries. Recycled materials are exported to some countries that are not able to manage those materials in an environmentally sound manner.

U.S. Recycling System Overview

The recycling process is made up of three steps that are repeated over and over again. This creates a continuous loop which is represented by the familiar chasing arrows recycling symbol. The three steps of the recycling process are described below.

Step 1: Collection and Processing

Businesses and consumers generate recyclables that are then collected by either a private hauler or government entity. There are several methods for collecting recyclables, including curbside collection, drop-off centers, and deposit or refund programs. Visit [How do I recycle... Common Recyclables](#) for information on specific materials.

After collection, recyclables are sent to a recovery facility to be sorted, cleaned, and processed into materials that can be used in manufacturing. Recyclables are bought and sold just like raw materials would be, and prices go up and down depending on supply and demand in the United States and around the world.

Step 2: Manufacturing

After processing, recyclables are made into new products at a recycling plant or similar facility. More and more of today's products are being manufactured with recycled content.

Recycled materials are also used in new ways such as recovered glass in asphalt to pave roads or recovered plastic in carpeting and park benches.

Step 3: Purchasing New Products Made from Recycled Materials

You help close the recycling loop by buying new products made from recycled materials. There are thousands of products that contain recycled content. When you go shopping, look for the following:

- Products that can be easily recycled
- Products that contain recycled content

Below are some of the terms used:

- Recycled-content product - The product was manufactured with recycled materials either collected from a recycling program or from waste recovered during the normal manufacturing process. The label will sometimes include how much of the content came from recycled materials.
- Post-consumer content - Very similar to recycled content, but the material comes only from recyclables collected from consumers or businesses through a recycling program.
- Recyclable product - Products that can be collected, processed, and manufactured into new products after they have been used. These products do not necessarily contain recycled materials. Remember not all kinds of recyclables may be collected in your community, so be sure to check with your local recycling program before you buy.

Some common products you can find that are made with recycled content include the following:

- Aluminum cans
- Car bumpers
- Carpeting
- Cereal boxes
- Comic books
- Egg cartons
- Glass containers

- Laundry detergent bottles
- Motor oil
- Nails
- Newspapers
- Paper towels
- Steel products
- Trash bags

Challenges to Recycling System

While the benefits of recycling are clear, the current system still faces many challenges.

- Many people are confused about what items can be recycled, where they can be recycled and how. This often leads to recyclables going in the trash or trash going in the recycling bin.
- America's recycling infrastructure has not kept pace with today's waste stream. Communication between the manufacturers of new materials and products and the recycling industry needs to be improved to prepare for and optimally manage the recycling of new materials.
- Domestic markets for recycled materials need to be strengthened in the United States. Historically, some of the recycled materials generated in the U.S. have been exported internationally. However, changing [international policies](#) have limited the export of materials. Improving communication among the different sectors of the recycling system is needed to strengthen the development of existing materials markets and to develop new innovative markets.
- We need to better integrate recycled materials and end-of-life management into product and packaging designs.
- More consistent measurement methodologies are necessary to improve recycling system performance. These more standardized metrics can then be used to create effective goals and track progress.

Reducing Waste: What You Can Do

Find out what you can do to help make a difference in our environment every day. Whether you're at home, on the go, in the office, or at school, there are many opportunities to go green by Reducing, Reusing, and Recycling.

Tips for Home

The best place to start making a difference is right in your own home. Learn how you can reduce, reuse, and recycle materials to decrease household waste. The tips below will help you get started.

Lawn and Garden

- [Learn to compost at home](#). Use food scraps, yard trimmings, and other organic wastes to create a compost pile. Adding the compost you make to soil increases water retention, decreases erosion, and keeps organic materials out of landfills.
- Raise the cutting height of your lawnmower during hot summer months to keep grass roots shaded and cooler, reducing weed growth, browning, and the need for watering.
- If you need large lawn and garden equipment such as tillers and chainsaws, you can reduce waste (and save money) by setting up a sharing program with your neighbors.
- When you mow, "grasscycle" by leaving grass clippings on your lawn instead of bagging them. The clippings will return nutrients to the soil instead of taking up space in landfills.
- Donate healthy plants that you want to replace to community gardens, parks and schools. (Inserted note by Emily Swihart, Horticulture Extension Educator: Free of jumping worms)
- If you have a wood burning fireplace, save your ashes instead of throwing them away. Once cooled, wood ashes can be mixed into your compost heap and provide nutrients to your garden.

Home Improvement

- Use insulation made from recycled paper, glass, and other recovered materials.
- Clean and properly store tools, toys and outdoor furniture to protect them from damage and keep them out of landfills.
- Turn off or unplug lights during the day. Doing so will save energy and help your lights last longer.
- Storms can cause power outages. Prevent waste by keeping rechargeable batteries for your flashlights. If you do use disposable batteries, reduce hazardous waste by buying ones with low mercury content.

Moving & Cleaning

- Have a yard sale to find homes for clothes, toys, appliances, and books that you no longer need.
- When moving, use old newspapers to wrap fragile materials.
- Use moving boxes with the highest content of recycled paper and bubble wrap containing recycled plastic. Be sure to recycle packaging materials after your move. Many organizations, such as U-Haul, have places where you can drop off unused boxes for others to reuse.
- Be sure to properly dispose of any non-recyclable items that you won't be taking with you. Look for household hazardous waste collection days in your community to properly dispose of cleaners, paints, automotive supplies and other hazardous items.
- For cleaning chores, buy reusable mops, rags and sponges. When using cleaning products, use only the amount you need and follow the bottle's directions for use and disposal.

Tips for Students and Schools

Students, parents, and teachers can all make a difference in reducing waste at school. By practicing the "3 R's" of waste reduction—reduce, reuse, and recycle—we can all do our part.

Green School Supplies

- [Think green before you shop](#). Before starting the new school year, look through last year's materials. Many items can be reused or recycled.
- Purchase and use school supplies made from recycled products, such as pencils made from old blue jeans and binders made from old shipping boxes.
- Keep waste out of landfills by using school supplies wrapped in minimal packaging and buying in bulk when possible.
- Save packaging, colored paper, egg cartons and other items for arts and crafts projects. Look for other ways that you can reduce the amount of packing that you throw away.
- Maintain new school supplies. Keep track of pens and pencils. Make an effort to put your things in a safe place every day. This will not only reduce waste but save you money in the long run.

In the Cafeteria

- If you bring your lunch to school, package it in reusable containers instead of disposable ones. Carry food in reusable plastic or cloth bags and bring drinks in a thermos instead of disposable bottles or cartons. Read EPA's [Pack a Waste Free Lunch](#) guide for more tips.
- When buying lunch, grab only what you need. Too often extra ketchup packets and napkins go to waste.
- Remember to recycle your cans and bottles after you finish eating.
- Work with your teachers to set up a composting program at school.
- Make posters that remind students what can be composted or recycled.

Tips for Work

Engage and motivate your coworkers to buy green products and help reduce waste. Learn more about how your office can go green.

In the Office

- Instead of printing hard copies of your documents, save them to your hard drive or email them to yourself to save paper.
- Make your printer environmentally friendly. Change your printer settings to make double-sided pages. Use small point fonts when possible and use the “fast draft” setting when possible, to save ink.
- Pay your bills via e-billing programs when possible, to save paper.
- Use paperclips (over staples) when possible.
- Reuse envelopes with metal clasps and reuse file folders by sticking a new label over the previous one.

Green Purchasing at Work

- Purchase recycled paper and keep a recycling bin nearby your desk.
- For information on how to buy more recycled-content products for your office, see [EPA's Comprehensive Procurement Guidelines](#).
- Buy energy efficient items with the ENERGY STAR ® logo or items that are [EPEAT registered](#) for the office.

Tips for Communities

Citizens in every community can do many activities to work together and reduce waste. Each of us can make a difference by reducing, reusing, and recycling materials throughout our communities-and encouraging our neighbors to do the same.

eCycling

- Donate your old computers and tablets to a school. Many schools will be able to make good use of your old machine.
- Before replacing a computer that no longer fits your needs, consider enhancing the computer's capacity by upgrading the hard drive or memory. This can save you money too.
- Donating used (but still operating) electronics for reuse extends the lives of valuable products and keeps them out of the waste stream for a longer period of time. [Learn where to donate your TVs, computers](#).
- Be smart with your smart phone! It contains precious raw materials. Learn how to keep your information and our environment safe when donating your old device. [Check out our guide](#)

Starting Community Projects

- On Earth Day, April 22, show your commitment to a clean environment by volunteering for a cleanup effort in your community.
- Organize a recycling drive in your neighborhood or at school. Collect bottles, glass, plastic, newspapers or books and take them to your local recycling center or a charity in need.
- Create a community drop-off site for old computers at a neighborhood school.
- Set up a composting program for your neighborhood or school. It only takes a small amount of land space to collect organic waste into a compost pile. The compost can be bagged and sold for community and school funds.
- Hold a “donation picnic” at your local park or rec center. Participants can eat, talk and bring their old toys, clothes, books, furniture and other items for charitable organizations.

Tips for Travel

Travelers create a lot of waste, even with the best intentions. Whether you are traveling for business or pleasure, you can do a few simple things that will reduce your waste, conserve resources, and minimize the overall environmental impact of your visit.

Trips and Vacations

- When visiting beaches and parks, be sure to take back everything you bring in, so that you can leave places uncluttered and undisturbed.
- To pass the time on long drives or rainy vacation days, bring scrap paper for drawing and games.
- Hot summer days make you thirsty. Be sure to recycle your used drink containers. Consider putting a filter on your water tap and refilling bottles with the filtered water. Instead of buying many small drink bottles, buy drink mixes in bulk and fill your reusable bottles.
- Share the ride and the road. Public transportation and carpooling reduce pollution.

Car Maintenance

- If you change your own motor oil, collect and store used oil in a sturdy plastic container and center. Dumping oil down storm drains or on the ground can contaminate groundwater.
- Purchase extended life anti-freeze for your car. When it's time to change it out, take your used anti-freeze to a recycling center. Call 1-800-CLEANUP or visit [Earth 911's website](#) to find the recycling center nearest to you.
- Take used or damaged car batteries to auto stores that stock or repair lead-acid batteries for safe disposal. The batteries contain toxic amounts of lead and acid, and should not be thrown out with your regular trash.
- Return used car tires to retailers or wholesalers that recycle or retread them. Tires are banned from most landfills, and illegally dumped tires become breeding grounds for mosquitoes and other pests.
- Make sure your car has a clean air filter—a dirty air filter can increase your car's fuel consumption by as much as 10 percent. Instead of sending your car to a low-value car to a landfill, offer it to a local charity. The gift will be tax-deductible.

Tips for the Holidays

Holidays are the best time to connect with family and friends, but parties and gift giving often creates extra waste. Learn what you can do to keep your holidays as green as possible.

Giving Gifts

- [Think green before you shop](#) the holiday sales. Bring your own reusable cloth bag for carrying your purchases and try to buy items with minimal packaging and/or made with recycled content.
- Wrap gifts in recycled or reused wrapping paper. Also remember to save or recycle your used wrapping paper. Give gifts that don't require much packaging, such as concert tickets or gift certificates.
- Send recycled-content greeting cards and remember to recycle any paper cards you receive. You can also try sending electronic greeting cards to reduce paper waste.
- Bake cookies or other goodies and package them in reusable and/or recyclable containers as gifts. Homemade goodies show how much you care and help you avoid packaging waste.
- When gifting flowers, consider buying long-lasting silk flowers, potted plants, or live bushes, shrubs, or trees that can be planted in the spring as gifts.

Green Parties and Events

- If you host a party, set the table with cloth napkins and reusable dishes, glasses, and silverware. Also save and reuse party hats, decorations, and favors.
- Be sure your guests know where to properly dispose of and recycle their wastes at your party.
- After holiday festivities, put leftovers in recyclable containers, and share them with family, friends, or others. Donate untouched leftovers from parties to a local food bank or homeless shelter.
- After parties, fill your dishwasher up completely before running it. You will run fewer cycles, which saves energy.

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