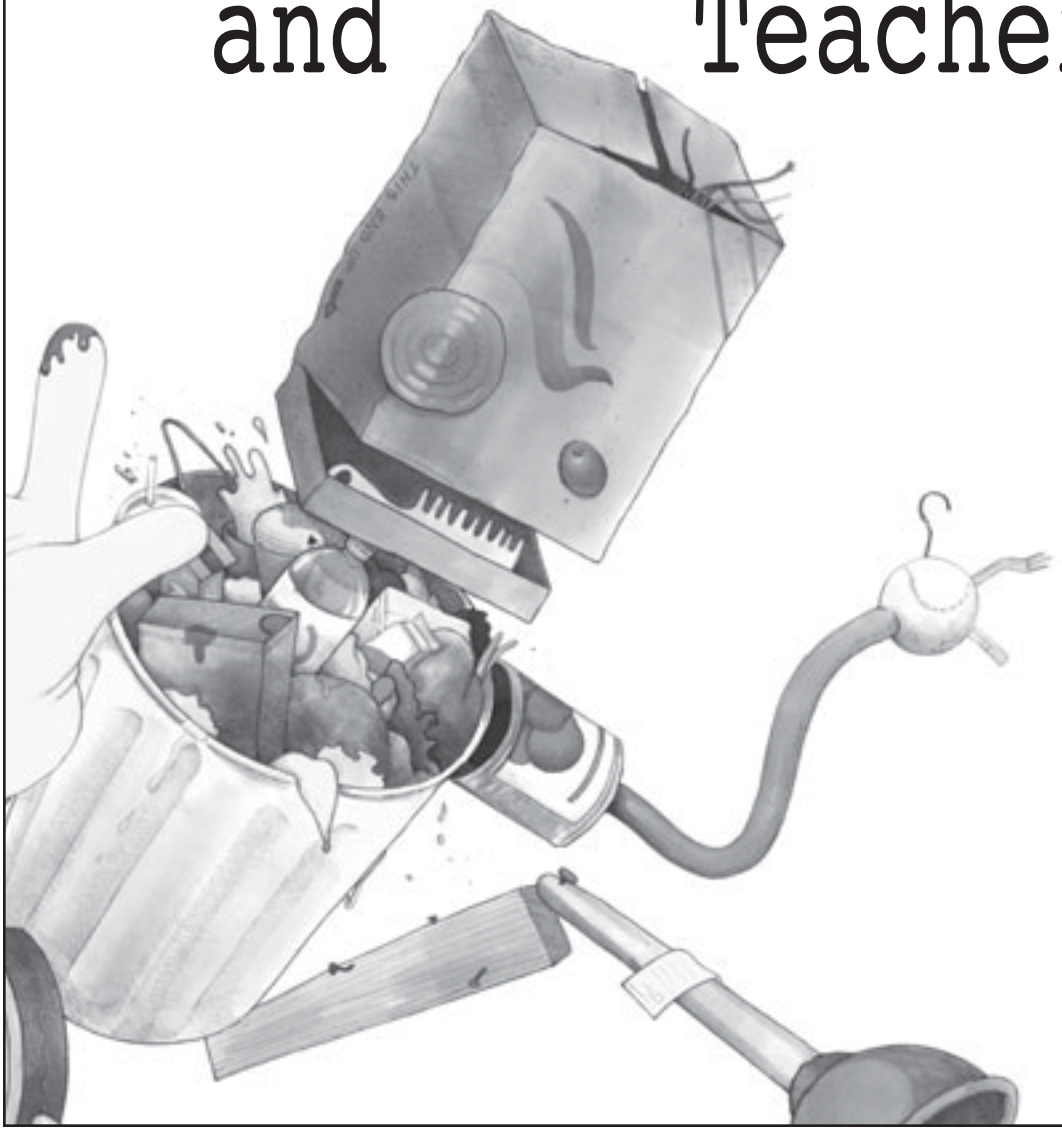
the GARBAGE monster

Guide for Parents and Teachers



Thanks for teaching children about recycling! This guide provides additional information and activities you may wish to share with children or use yourself to enhance your family's recycling activities (and maybe lower your garbage bill).

Key messages

A few key ideas we'd like children to learn from *The Garbage Monster*:

- Garbage causes problems for our families and the planet.
- Lots of the things we throw away don't need to become garbage.
- It's smart to practice the "3 R's:" Reducing the amount we have to throw away, Reusing items, and Recycling.

What's here to help you:

- A very brief history of garbage
- Getting to know garbage: some interesting facts
- What you can do: Three smart Rs and a dumb D
- Fun stuff to do with "garbage"
- How to set up an easy home recycling center
- Glossary of terms
- Sources and other resources

Suggestions? Contact us at the address below to help us improve!

dream factory

P.O. Box 874
Enumclaw WA 98022-0874
www.DreamFactoryBooks.com

A very brief history of garbage

First: Walk away

Once upon a time, tribes of nomadic people who gathered food and hunted by following the animal herds simply left their wastes to be consumed by wild animals, or slowly rot. Even if they stayed in one area for a while, they usually placed their wastes in one spot and when enough waste accumulated, the inhabitants moved on to a different home.

Then: Burn, bury, dump

Later people began to stay in one spot longer to fish, raise domestic animals, and grow their own food as crops. These farmers and ranchers fed their own food wastes to chickens, hogs and other farm animals. Wastes like wood, and eventually other materials such as rubber, were burned. Wastes that wouldn't burn, such as pieces of metal or glass, were placed in pits or open dump sites. Tools and other items were used, repaired, and reused because it wasn't easy to get or make new ones

As villages and cities grew, each had open dumps or pits near, or in, town. Wastes were burned, buried, or simply placed in the dump. Until fairly recently, society had very little packaging to get rid of. Large machines that had outlived their usefulness were scavenged for parts and then abandoned in the dumps or on land that wasn't good for growing crops or much else.

More people, more stuff

In just the last few hundred years, the industrial revolution, population growth, and the growth of cities has brought lots of people into urban areas, created zillions of new products, and intensified garbage problems. Food items need extra packaging so they can be transported further and further from farms to cities, for instance. Other things made by machines are so much less expensive than in the past that it's easier, and sometimes cheaper, to throw them out and replace them than repair them.

Although technology has created more garbage, it has also created some more efficient ways to reuse, burn, or dump waste.

Getting to know garbage

How much is yours ?

Today, each and every American creates almost four and a half pounds of garbage every single day (even Sundays!) That adds up to 222 million tons of garbage each year —twice as much garbage each year as 35 years ago.

A child today will probably create at least 600 times her own weight in garbage over her lifetime. That's between 35 and 60 tons — at least 50 pickup truck loads!

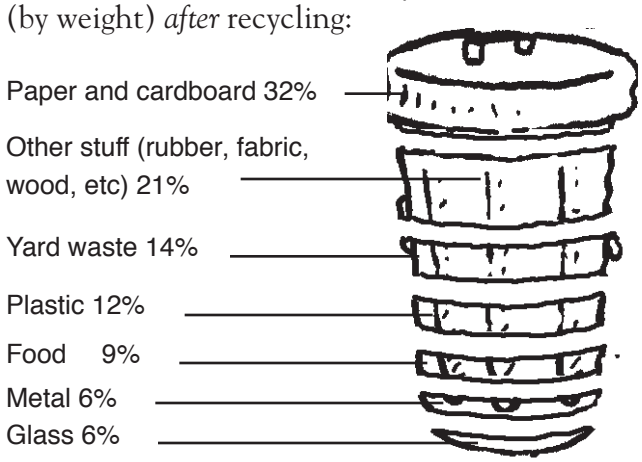
A bad habit in America

When it comes to the garbage we make every day, here's how Americans compare with people in other countries:

What's in the can?

Since 1986, our garbage has somewhat less paper and yard waste, and slightly less metal and glass, and more plastic and "other stuff." Those changes are mostly because of recycling and composting efforts.

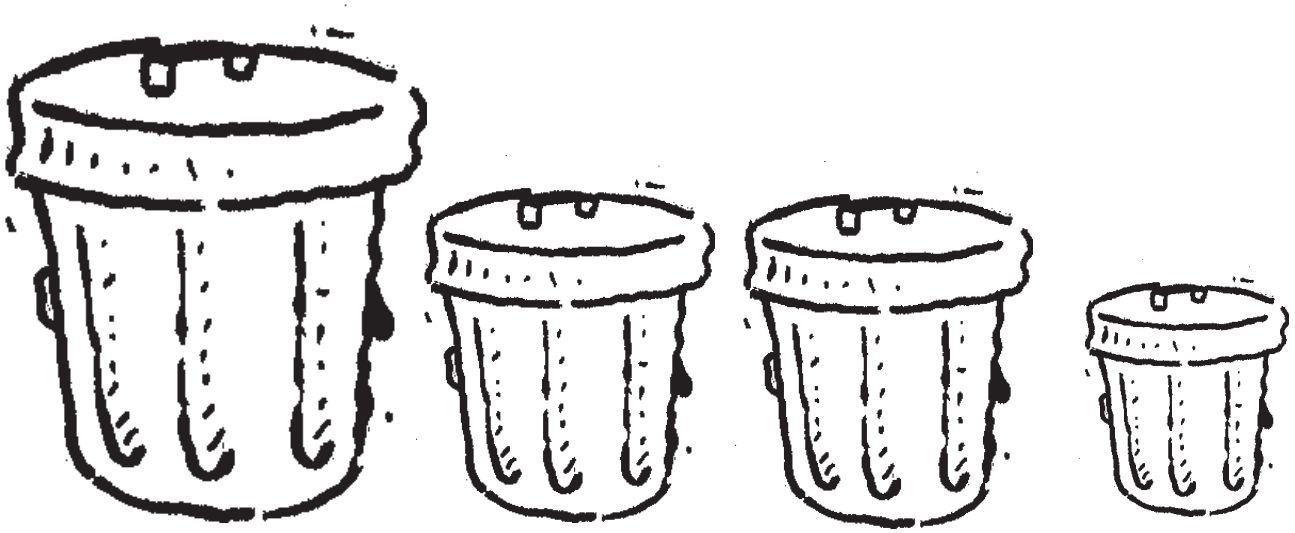
Here's what we still throw away (by weight) *after* recycling:



What's in McD's trash?

Here's what becomes waste at a typical McDonald's fast food restaurant:

Food	34%
Cardboard (much of which gets recycled, fortunately)	34%
Paper (napkins, sandwich wraps)	11%
Foam cups and other plastics	7%
Other restaurant stuff	8%
Stuff customers leave (like dirty diapers)	6%



American 4.4 lbs | Japanese 2.5 lbs. | German 2.5 lbs. | Norwegian 1.7 lbs.

Plastics 1-2-3

Plastics are more than 10% of our garbage. There are lots of different kinds of plastics. Some, like milk jugs and pop bottles, can be recycled easily in most neighborhoods. Others are much more difficult, and some can't really be recycled at all yet.

Many plastics now have a code that tells how easy it is to recycle. Look for 1s and 2s! When choosing between brands of yogurt or other dairy products, for instance, pick one in a recyclable container – and then be sure to recycle it.

Running out of room

One reason garbage is a problem is that some places just don't have anywhere to put it – their dumps are all full, and nobody wants a new one near their home. Especially in New England states like Maine, New Hampshire and New York, the dumps are about to overflow. A few times in the past, trucks and barges carrying garbage have travelled around for a long time looking for a place that will take it.

National Voluntary Plastic Container Coding System

Ease of Recycling	Letters	Code	Plastic Type	Example
★	PETE (or PET)	1 PETE	Polyethylene terephthalate	Plastic pop bottles, some dairy containers
★	HDPE	2 HDPE	High density polyethylene	Milk jugs, plastic grocery bags
	V	3 V	Vinyl/Polyethylene	Shampoo bottles
	LDPE	4 LDPE	Low density polyethylene	Cosmetics packaging
	PP	5 PP	Polypropylene	Syrup containers
	PS	6 PS	Polystyrene	Foam cups for hot drinks
	Other	7 Other		

What U can do

3 smart R's and a dumb D

The 3 R's of garbage are Reduce, Reuse, and Recycle. They overlap a bit.

Reducing is not making waste in the first place. For instance, if your family buys one big bag of nuts from the bulk bins at the grocery store, instead of buying several smaller packs of pre-packaged nuts, you've *reduced* the amount of nut packaging you'll have to throw away. Manufacturing companies can do a lot to reduce waste by how they package their products, but for your family, reducing means changing how, when, and where you buy things.

Reusing is a great way to reduce waste. Reusing can mean repairing something so it will last longer, and using it again for its original purpose – such as sewing up a torn shirt instead of throwing it away and buying a new one. Reusing can also mean keeping something that's left over and using it for another purpose – such as using an empty peanut butter jar as a drinking glass or as a container for homemade jelly, candy, pencils, nuts and bolts, seashells, sewing supplies, or things like that.

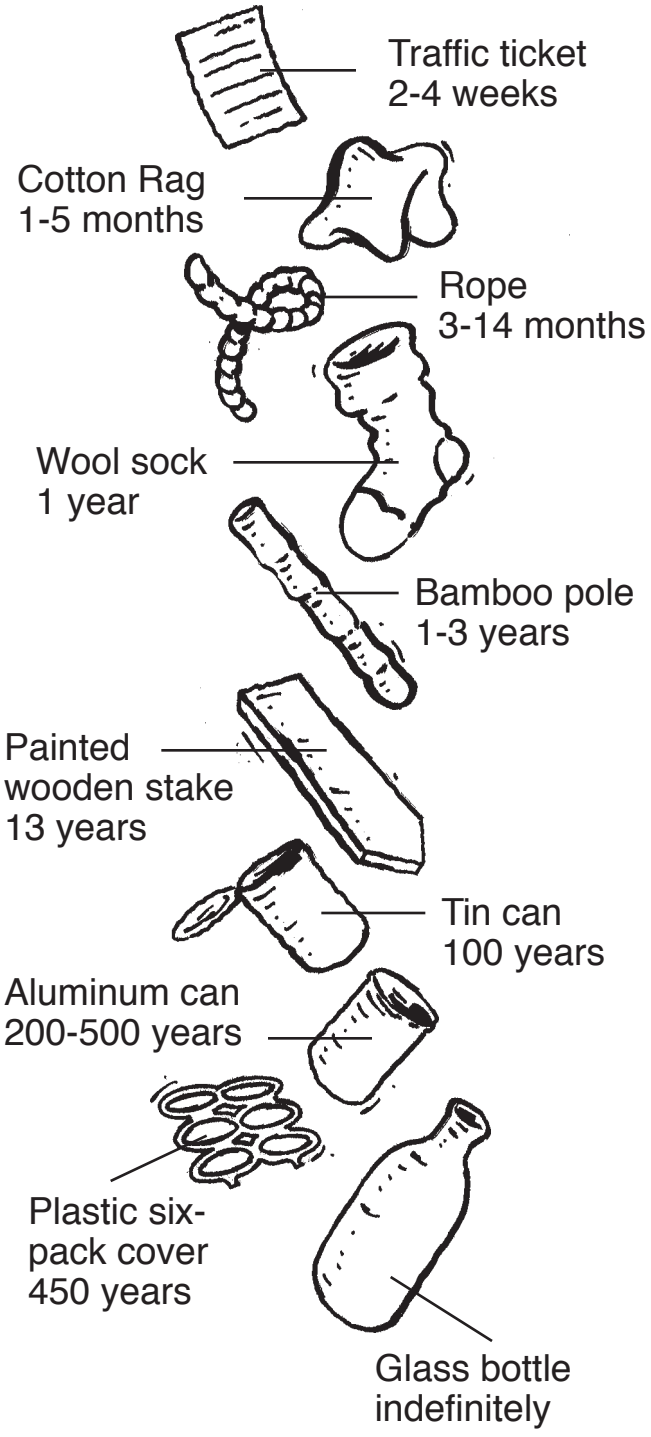
Recycling is turning a material into something that can be used again — whether by turning it into the same thing again, such as recycled aluminum cans, or into something altogether different – such as recycling plastic pop bottles into fuzzy, warm ski jackets. **Composting**, which is turning food and yard wastes into rich, fertile garden dirt, is a form of recycling.

The dumb D

The last way to handle waste is, of course, to **Dispose** or **Dump** it. That should always be the last choice. But there are things — non-rechargeable batteries, household chemicals, and some kinds of plastics, for instance — we just haven't figured out how to reuse or recycle yet.

Some disposal methods may be better than others. Burning, also known as incineration, can at least use the garbage to produce heat or energy (although it usually produces air pollution too). Then the leftover ash takes up less space. Landfilling is just putting the garbage on the land (or into a hole). Unfortunately, even things that are normally biodegradable — which means they can rot — just sit there for years and years in a landfill.

Enduring litter



Go, recycling!

While each of us creates 4.4 pounds of garbage each day, today we manage to recycle more than a pound. That means America's overall recycling rate is about 30%.

People in some states, such as Florida, Maine, Washington, Oregon, Michigan, Pennsylvania and New York do better than that. In fact, some communities make recycling mandatory — if families don't put out their recycling bin at the curb, the garbage collector won't take their garbage.

But people in other states, including Montana, Alaska, Wyoming, don't even recycle 10% of their garbage. That's partly because these big states have a lot of space for dumps and relatively low populations so that it's not very efficient to collect materials to recycle.

The things that are easiest to recycle (and most likely to be recycled):

- Aluminum cans
- Cardboard boxes
- Office and school paper
- Newspapers
- Glass jars and bottles
- Plastic soda pop botttles
- Leaves, grass and other yard waste

Other things that can be recycled pretty easily include:

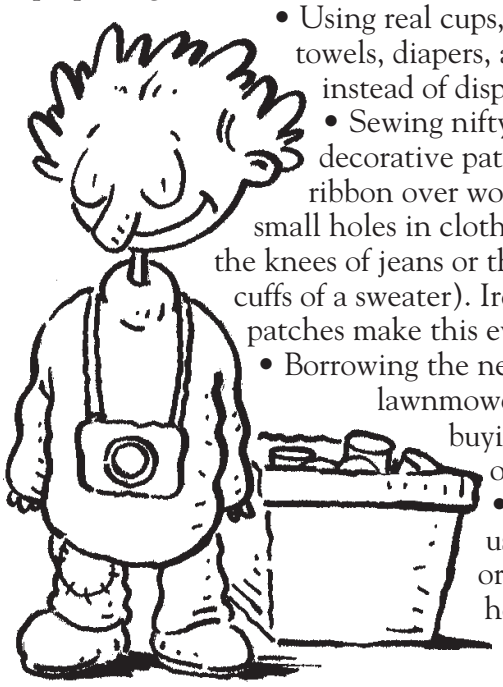
- Motor oil from the car (which is the single largest source of oil pollution in our lakes, streams and drinking water — mostly dumped by people who change their own oil)
- Clothing
- Food (in animal feed or compost)
- Paint

Weird recy cling!

Some people (mostly businesses) recycle things as strange as fabric scraps, old wool sweaters, tennis shoes, bicycle parts, computer parts, and broken bagels!

What else is smart recycling (or reuse or reduction)?

- Wearing an older brother or sister's sweater when it no longer fits them
- Giving things you don't need to Goodwill or another charity to resell
- Taking your own grocery bags to the store
- Buying apples or other fruit loose instead of prepackaged.
- Using real cups, cameras, towels, diapers, and napkins instead of disposable ones
- Sewing nifty, decorative patches or ribbon over worn spots or small holes in clothing (like on the knees of jeans or the frayed cuffs of a sweater). Iron-on patches make this even easier.
- Borrowing the neighbor's lawnmower instead of buying your own
- Buying a used car — or a "used" house!



Amazing recycling facts

Thank goodness everyone recycles as much as they already do!

- More than 60% of the aluminum pop cans made in the U.S. get recycled — some 43 billion cans.
- More than 30% of our glass bottles and about 35% of plastic PET bottles are recycled, for a total of about 9 billion bottles.
- If someone stacked up the steel cans that are recycled each year, it would stretch to the moon and back more than three times.
- The amount of steel recycled from old appliances each year would build 88 professional baseball stadiums.
- The number of cars recycled each year (by recovering their metals) would form a traffic jam that went all the way around the earth almost twice.

Look for the logo

Look for this logo on paper products and packaging to feel the best about the things your family buys. It means the product or packaging can be recycled.

But it won't matter how much people recycle — if nobody will buy things that have already been recycled. So it's also a good idea to see if the things you buy have "recycled content" as well. Usually, the package will say something like, "Contains recycled materials," or, better yet, "Made with 20% recycled content."

Pre-consumer vs. post-consumer waste

Sometimes recycling information is divided into two kinds: pre-consumer and post-consumer.

Pre-consumer means the material was recycled before it ever got to a store for someone to buy. Pre-consumer recycled materials include the "scraps" that are left after the factory shapes an aluminum can, cuts out a cardboard box, makes a drink bottle, or prints a newspaper.

Think of it like this: If you bake sugar cookies, you roll out the dough, then cut out cookies. When you smash up the leftover scraps and roll them out again, that's the same as pre-consumer recycling.

Post-consumer recycling means the materials actually got used by a consumer – somebody drank soda pop out of it, read words off it, or shipped a product in it. Post-consumer recycling would be like trying to make a new sugar cookie after you'd already baked and eaten it. That's why post-consumer recycling is a little harder than pre-consumer recycling. But it can be done!

Fun stuff for kids to do with "garbage"

Here are a bin-full of garbage and recycling activities kids can do with their families or by themselves:

Make sock puppets

Do you get holes in your socks? In the old days, when people got a hole, they just stitched up or "darned" their socks so they could keep wearing them. Today, we usually throw them away – even the good one without the hole. Next time you get a hole in one sock, use *both* socks to make sock puppets. Cut out eyes, noses, ears, horns or other features from felt, yarn, construction paper, fabric scraps, or even other holey socks. You might find the hole is a good place to glue on an eyeball, tongue, ear, hair, or tail for your puppet. Have a show with your puppets. Do they live at the garbage dump? In your recycling bins?

Make a Bag Buddy

Find a big, stretchy sock (like one of your dad's athletic socks). Using permanent marker, felt, or fabric scraps, decorate it and sew on a small loop to hang it inside a kitchen cabinet or over the knob of a door. When you get plastic grocery sacks, stuff them into the sock until it's full. You'll probably find it can hold quite a lot. Then take the sock with you and return them to the grocery store next time you shop — either by reusing them yourself or dumping them into the store's grocery bag recycling bin.

Quilt — sorta

People who make quilts use up scraps of fabric by stitching them together into a whole blanket. Many families have important quilts made by a grandmother or aunt, sometimes out of bits of the family's old, worn-out clothes. If an adult in your family knows how to quilt, ask for a lesson and start your own! Even if you're too young to quilt, you can make a coupon-keeper or photo wallet for your mom or dad by taking a scrap of fabric about the size of a half-sheet of paper, folding it in half, and stitching up the two short sides with yarn to

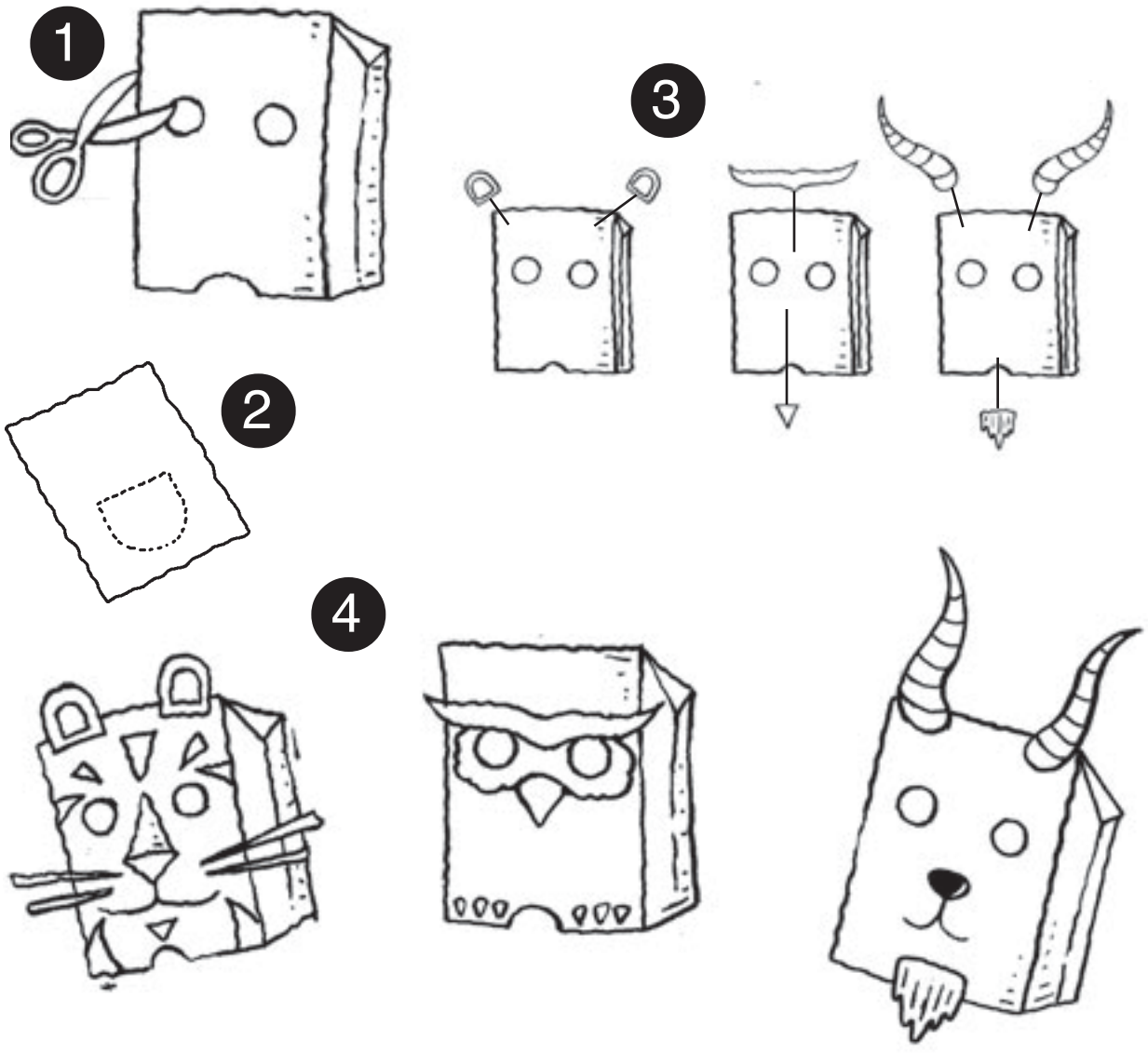
create a pouch that can hold coupons or your school photos. Or, glue scraps of fabric onto a cardboard box, then use your decorated box as a gift box or to store keepsakes, trading cards, or (with a slit cut in the lid) as a piggy bank.

Bag it!

When the grocery clerk asks, "Paper or plastic?" say "Neither – we've got our own." When your family shops for groceries, you can take charge of bringing bags from home. Reuse paper or plastic bags you got from the store last time, or buy inexpensive cloth or net bags to use again and again. You might even get paid! Many grocery stores now give a few cents back for each bag customers bring in to reuse. Ask your parents if you can "earn" that refund for taking care of the bags. Figure out how many bags your family saves in a whole year to find out how much you can earn in refunds!

Make a paper sack mask

1. Open a big or medium-sized paper grocery sack and cut out holes for your eyes.
2. Trace the heel of your shoe on another piece of paper. Cut out two of these shapes to glue to your mask as ears.
3. Cut out other features such as goat horns, a bird beak, cat whiskers, a lion's mane, a tongue, or a unicorn horn and glue them to your mask.
4. Color your mask, pull it over your head so you can look out the eye holes, and put on a show!



Be a garbage detective

What's in your family's rubbish, really? The best way to start reducing your trash is to figure out what's in it. You don't have to don rubber gloves and get yucky! Just use the chart below (copy it or draw your own). Stick it on the wall above every garbage can in your house. Put a pen or pencil nearby. Then ask your family to do this for a week: Every time someone throws something into the bin, put a mark on the chart that shows what kind of garbage it is. After a week, count up the totals. Now that you know what's there — how much of it can you reuse or recycle? Could any of it be prevented by changing how you buy things at the store?

Waste Check Sheet

		Mon	Tues	Wed	Thur	Fri	Sat	Sun	Total
Glass	Jars & bottles								
	Other								
Metal	Aluminum cans								
	Steel cans								
	Other metal								
Plastic	Bottles								
	Bags								
	Other								
Paper	Newspapers								
	Envelopes								
	Other								
	Junk mail								
Cardboard									
Food waste									
Fabric									
Other									

Set up an easy home recycling center

Recycling is easy, and if you make it convenient, it takes less than two minutes a day. Here's how:

1. Find a convenient place in your home. It doesn't take a lot of space — usually, a spot about 3 or 4 feet square. Try a storage closet, the utility room, a corner of the kitchen, under the sink, or in a garage, carport, or shed.
2. Identify your local recycling program. (More than half of all Americans have access to curbside recycling programs for at least some materials.) If you don't have curbside service, locate the nearest recycling center by calling (800) CLEANUP, look in the Yellow Pages under "recycling centers and services," or call your garbage company, the local library, or your state's departments of ecology or natural resources.
3. If your garbage hauler or recycling program doesn't provide them, find sturdy containers: plastic buckets, small plastic trash cans, or sturdy cardboard boxes. Get one each for newspaper, mixed paper, cans, glass, and plastic.
4. Label each container. Kids can have fun drawing colorful labels to decorate with crayons, stickers, etc. They might even decorate the bins as "monsters" with big hungry mouths to put the recyclables into!
5. Find out exactly what the recycler or recycling center will take. For instance, find out:
   - If aluminum cans should be crushed or not.
   - If you can include aluminum foil with the cans.
   - If steel or "tin" cans can be recycled too.
   - If containers must be rinsed or run through the dishwasher (usually) and whether labels must be removed (usually not for glass, but often for cans)
   - If glass must be sorted by color
   - If plastic containers must be rinsed or crushed
   - If container lids must be removed, or if they can be recycled along with the containers
   - If mixed waste paper is accepted, and if so, if it should be separated from newspaper
   - If cardboard is accepted
   - If yard wastes are collected
   - If they pay for any recyclable materials (such as aluminum or other metals)
6. Fill your containers following your local recycling guidelines. You might set aside a few minutes after dinner each evening, for instance — when you would otherwise be taking out the garbage!
7. Keep an eye on the containers and put them out or take them to the recycling center before they overflow.

It's that easy!

What else kids and families can do

When you start thinking about it, there are tons of ways each family can reduce, reuse or recycle — and every one helps. Here are some more ideas:

- Build and use a backyard compost pile.
- Build and use a worm compost bin. It makes great fertilizer and it's fun to watch the worms gradually turn food scraps into worm dirt ("castings").
- Store Christmas ornaments in sturdy cardboard boxes, such as computer boxes, or used gift boxes, instead of buying plastic tubs.
- Keep foam and bubble-wrap packaging to use again at birthdays or next Christmas.
- Reuse foam "peanuts" in beanbags or drop them off at a local mailing store (such as Mail Boxes Etc. or Pony Express) for reuse.
- Use the back of old school and office papers to draw or write on, or even use the kids' pages as fun gift wrap for relatives.
- Make gift tags from old Christmas cards.
- Unwrap gifts carefully and use the gift wrap more than once (or buy pretty pieces of fabric to use over and over).
- Once you've used both sides of office paper or reused gift wrap as much as possible, use it again to make paper maché models or masks.
- Take reusable bottles or thermos containers to school or work instead of disposable ones, and take food in reusable containers (like Tupperware) instead of disposable baggies or wraps.
- Wash empty food jars and lids, decorate them, and use them to store candies, sewing supplies, craft supplies, jewelry, or all the little things that clutter up drawers and work benches. One or two jars decorated with paint or fabric scraps can make a neat gift by themselves.
- Get your family, school, or youth group involved in local activities for the annual America Recycles Day in November.

Glossary of new terms

Biodegradable: Able to be broken down by bacteria, sunlight, and other natural forces into simple elements like carbon dioxide or water

Compost: To rot, or the rich dirt that's left over after organic materials (like leaves) decompose or rot

Dump: an open, unclean place where garbage is just piled on the ground. Dumps are now illegal. Instead, we "dump" garbage in sanitary landfills.

Incineration: Disposing of garbage by burning it in a closed space, and usually catching the energy that results.

Landfill: A place garbage is disposed by placing it on the land (in a hole or by building a pile)

Litter: Garbage discarded carelessly where it shouldn't be: waste out of place.

Organic: Living or once-living matter from animals or plants, such as bones, leaves, and wood.

Pre-consumer recycled content: Material recycled somewhere in the factory, before it ever got to a store for someone to buy. Recycled paper often contains pre-consumer recycled content.

Post-consumer recycled content: Material that actually got used by somebody, then recycled. Aluminum pop cans are usually made from post-consumer recycled materials.

Reduce (waste): Making less waste by buying carefully, using less wasteful habits, or reusing things

Reuse: Using a thing again for the same purpose or another purpose. Sometimes reuse requires cleaning, fixing, or changing the original thing, or finding a new way to use it.

Recycle: Collecting and reprocessing a material for reuse, either as the same product or as part of a different product

Source separation: Separating different materials (such as paper and aluminum) so they can be more easily reused or recycled.

Solid waste: Regular garbage from homes, schools, businesses, and factories. Solid waste can contain liquids.

Sources and resources

Washington State Department of Ecology "A-Way With Waste" curriculum for schools, third edition (1990); P.O. Box 47600, Olympia, WA 98504-7600, (360) 407-6900

Pierce County Solid Waste Division, Tacoma, Washington; (253) 798-4050. Special thanks to Nancy Morrison and Erin O'Hagan!

California Integrated Waste Management Board, 1001 I Street, P.O. Box 4025, Sacramento CA 95812-4025, (916) 341-6764

The Alliance of Foam Packaging Recyclers at (410) 451-8340 can help you find a local facility that will take foam packaging (type 6 plastic, also known as expanded polystyrene or EPS).

The Glass Packaging Institute, the Can Manufacturers Institute, and the Steel Recycling Institute sites on the World Wide Web.

Sites on the World Wide Web:

www.AmericaRecyclesDay.org Info about this annual observance and local activities

www.earthdaybags.org This organization coordinates kids who decorate used grocery sacks for reuse!

www.recycle-steel.org/index2.html Roscoe's Recycling Room has fun facts and activities about steel and car recycling

www.cancentral.com/canc/abc.htm Resources for teachers about aluminum beverage cans

www.wastewatch.org.uk Recycling tips for home and school (from Britain, but just as wise in the U.S.)

www.epa.gov/epaoswer/non-hw/muncpl/factbook Every bit of info you could ever want about U.S. garbage in the Municipal Solid Waste Factbook

www.epa.gov/kids Games about our environment from the U.S. Environmental Protection Agency

www.ciwmb.ca.gov/kidstuff/ A waste quiz plus classroom and teaching materials from the California Integrated Waste Management Board