Green University, LLC

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A to Z Recycling Guide to almost Anything and Everything

Including consumer tips to conserve resources, save money, and buy sustainable, recycled, or easily recyclable products

Do you have a recycling tip not included in this guide?
Please email your suggestions to thomasjelpel@gmail.com

Take a good look around at the products on the shelves the next time you walk into a Walmart, Kmart, Target, or other discount store. Every item you see is destined for either disposal or recycling. Most of it will end up in a landfill or an incinerator.

It is counterintuitive to imagine throwing products in the garbage when we are first shopping for them. We don't buy new stuff with the intention of throwing it away. But that's what happens after an item breaks, looks worn, or no longer seems useful or interesting to us. Some products last only hours or days. Other products last months or years. Some items are donated to thrift stores, prolonging their useful life and constructively delaying the inevitable. In the end, however, every product ends up either in the dump or the recycling center. Most of it goes to the dump.

In addition to the products on the shelves, take a look at the shelves themselves, and the checkout stands, the light fixtures, the ceiling tiles, and the building itself. Although longer lasting, these items are also destined for disposal as individual items are upgraded over time, or the entire building is razed to replace it with something more elaborate.

Now drive around town and consider that essentially every store, office building, house, car, road, and sign ultimately faces a similar fate. True, there are some well-built historic buildings of brick and stone that have been around for centuries and may last for centuries more with proper care and maintenance. But the stark reality is that most of our buildings are slapped together and begin falling apart almost the moment we are done building them. Through repairs and remodels we begin to replace the parts of our houses and stores piece by piece, room by room, upgrading kitchens, bathrooms, carpets, and more. In the end, the entire house is likely to be razed to replace it with something newer and nicer. If these materials are not recycled, then they will be disposed of in the dump or incinerator.

Even our food products face a similar fate. We recycle food scraps back to the soil through composting, or we dispose of the nutrients in landfills and incinerators. We recycle our sewage sludge back onto farm fields, or we bury it in landfills.

There are limits to the resources of our planet, and it is essential that we learn to close the loop to recycle everything back into new products, so that worn out electronics can become new again, old couches can become new furniture, torn clothes can become new clothes, and last week's leftovers can become next year's tomatoes.

The most important step in the recycling process is to stop and think before making a purchase: If you understand that every product is destined for the dump or the recycling center, then consider that future before you buy. Is the purchase really necessary? How long will the item be useful before it is disposed of? Can it be recycled easily? Will it be fully recycled, or will it be downcycled into something else? These simple questions can help guide your shopping choices to solve most recycling challenges upfront.

Unfortunately, few people are prescient enough to see that far into the future while making a purchase. We seldom consider how to recycle a product until that final moment when we are ready to dispose of it. This alphabetical recycling guide is intended to help the novice recycler get started with the basics of cans, paper, newspaper, and plastics, while providing the determined veteran recycler tips to deal with such things as shoes, crayons, couches, and dog poop. If you have additional suggestions, please email your tips to me at the email above.Thank you!

How to use the Directory

Scroll down through the alphabetical listings to find the items you need to recycle, or use the search function to jump directly to the key words of your choice.

A

AEROSOL CANS: Spray paint, cooking spray, whip cream, hair spray, deodorizers and other aerosols.

Environmental Concerns: Many aerosol cans contain highly flammable propellants or other hazardous fluids, which pose a potential recycling hazard. Unless recycled, aerosol cans may be considered hazardous waste, requiring costly disposal methods.

Recycle: Aerosol cans can be recycled with other tin cans. Some recycling programs accept "empty" aerosol cans, while others only accept them if punctured and flattened. For bulk quantities, Aerosolve (www.Aerosolve.com) sells equipment that attaches to a 55 gallon steel drum to safely puncture aerosol cans and extract the remaining fluids and propellants. For do-it-yourselfers, most aerosol cans may be safely punctured at home. Hold down the spray button until no more spray comes out. Then, wear safety goggles, go outside and puncture the bottom of the can with a can opener (such as the type found on a pocket knife), while pointing the bottom of the can away from you. Do NOT attempt to puncture aerosol cans that are marked "Hazardous."

See also: TIN CANS, PAINT (Spray Paint)

ALUMINUM CANS:

Environmental Concerns: Aluminum production is highly energy intensive. Manufacturing aluminum cans from recycled aluminum uses about 95% less energy compared to working with raw materials.

Recycle: Most curbside recycling programs accept aluminum cans. Otherwise, you can take them to the nearest recycling center. Many local charities collect aluminum cans to raise money. The Ronald McDonald House collect pull tabs from aluminum and trade them for cash (www.rmhc.org).

ALUMINUM, SCRAP: Lawn chairs, storm doors, television antennas, aluminum pots and pans, aluminum ladders, license plates, and other scrap aluminum.

Recycle: Scrap aluminum is accepted at most recycling centers and many curbside recycling programs. Many aluminum products, such as lawn chairs and TV antennas, include some iron content, such as rivets, screws, or brackets. Recycling centers pay less for "irony aluminum," but it is still recyclable. Check www.metalprices.com for current scrap metal prices.

APPLIANCES: Refrigerators, stoves, dishwashers, microwaves, toasters, food processors, blenders, washing machines, dryers, and other white goods.

Environmental Concerns: Refrigerators and freezers contain ozone-damaging Freon that must not be released into the atmosphere. Some communities provide that service after the appliances are dropped off. Other communities require appliance owners to hire a refrigerator repairman to capture the Freon before brining it in for recycling.

Donate: Donate working toasters, blenders, food processors, microwaves, etc. to your local thrift store or Habitat for Humanity.

Recycle: Any appliances that are more than 50% metal are considered recyclable. Some communities accept small household appliances for recycling through curbside collection or drop-

off locations. Rural areas usually have a special area for appliance recycling at the local landfill or waste transfer station.

Conservation Tips: Make simple appliance repairs for free if you have access to old appliances at your local landfill or waste transfer station. Find replacement parts such as heating elements for the oven or cook top of an electric stove or a seal for a refrigerator door. Bring the old part along to look for a suitable match.

Repair a broken guard on a refrigerator shelf door by replacing it with an adjustable metal curtain rod. Insert the ends into the holes of the original guard, and anchor it in place with expanding foam sealant.

ANTIFREEZE: Automotive and RV antifreeze.

Environmental Concerns: Waste antifreeze can contain enough heavy metals such as lead, cadmium, and chromium to qualify as hazardous waste. Do not dispose of antifreeze down storm drains, into surface waters, sewers, or septics. Waste antifreeze causes serious water quality problems and may harm people, pets, or wildlife if disposed of improperly. Ethylene glycol is the primary ingredient in antifreeze, which is produced from natural gas, a nonrenewable resource. At present, only about 12% of all used antifreeze is properly recycled.

Conservation Tip: Pets can die from drinking leaking antifreeze if a hose bursts in a car. Look for pet-friendly, less toxic antifreeze when purchasing new antifreeze.

Recycle: Ask at your local oil and lube shop or service garage if they accept antifreeze for recycling or disposal. Some businesses have on-site recycling machines to filter out contaminants and reuse the antifreeze. Community governments often accept antifreeze at hazardous waste collection sites.

ANTIPERSPIRANT AND DEODORANT STICKS:

Recycle: Depending on the type of plastic, some antiperspirant sticks are recyclable. However, the dial at the bottom may be made from a different plastic that is not recyclable. Look for a recycling symbol on the bottom.

See also: PLASTICS

ASEPTIC DRINK CARTONS:

Recycle: Aseptic juice drink cartons are made of paper lined with foil. They are convenient to use, but problematic for recycling. Aseptic drink cartons are accepted in recycling bins through some curbside recycling programs. If your community doesn't take drink cartons, then buy drinks in different packaging, or mail clean, flattened packets to: BRING Recycling, Reuse Warehouse & Business Office, 86641 Franklin Boulevard, Eugene, OR 97405; (541) 746-3023. Optionally, Coca-Cola maintains a list of aseptic recyclers, call 1-800-888-6488 for information.

See also: JUICE POUCHES

ASPHALT SHINGLES:

Background: Asphalt shingles are made from the same materials used in hot-mix asphalt for road construction, including fiberglass or cellulose backing, asphalt cement, ceramic-coated natural rock aggregate, plus limestone, dolomite and silica mineral filler or stabilizer. About 11 million tons of asphalt shingles are landfilled every year.

Conservation Tip: Since asphalt shingles are relatively short-lived (20 to 40 years), it is sensible to replace it with metal or tile roofing wherever possible for greater longevity. Also consider patching old asphalt roofs as long as possible to delay re-roofing.

Recycle: After removing nails and other foreign debris, asphalt shingles can be recycled for up to 5% of the materials in hot-mix asphalt or cold patch, however there are very few places that accept shingles for recycling. Contact your state highway department to inquire.

B

BACKPACKS:

Donate: Good backpacks can be donated to the American Birding Association for scientists to use while tracking neotropical birds (www.americanbirding.org). Otherwise, donate used backpacks to your local thrift store or to charity.

BATTERIES, AUTOMOTIVE: Lead-acid car, truck, and lawnmower batteries.

Where to Recycle: Bring your old battery in for recycling when buying a new battery. You may save a few dollars off the price of the new one. Most auto parts stores and some metals recycling centers also accept old batteries for recycling.

BATTERIES, CONSUMER ELECTRONICS AND TOOLS: Recycle rechargeable Nickel Cadmium (NiCad), Nickel Metal Hydride (NIMH), Lithium Ion (Li-ion) and Small Sealed Lead Acid (Pb) batteries from consumer electronics, cordless power tools, cell phones, cordless phones, laptop computers, camcorders digital cameras, and remote control toys.

Where to Recycle: Specialized batteries from consumer electronics and tools can be recycled at many stores, including Radio Shack, Office Depot, Best Buy, Home Depot, Whole Foods Market, and Walgreens. Rechargeable batteries from Apple products can be recycled at Apple stores. Call before you go to confirm that the recycling program is available. Some community hazardous waste programs also accept batteries for recycling.

If there are no local places to recycle household batteries, check www.Earth911.org, www.BatteryRecycling.com, www.RBRC.org, or www.BatteriesPlus.com for other local options or for information on recycling batteries by mail. There may be a small fee, in addition to the postage, for recycling batteries by mail.

See also: ELECTRONICS

BATTERIES, HOUSEHOLD: AAA, AA, C, D, 9-Volt Single-Use Alkaline or Rechargeable Nickel-Cadmium (NiCad), Nickel-Metal Hydride (Nimh), Lithium Ion (Li-ion), or Small Sealed Lead Acid (Pb) Batteries.

Environmental Concerns: Many household batteries contain caustic and corrosive chemicals and hazardous substances such as mercury, nickel, and cadmium, which may leak into the groundwater when landfilled. It is illegal to dispose of batteries in the trash in some cities, such as San Francisco.

Conservation Tips: It takes far more energy to manufacture a battery than the amount of energy a battery can store. Use electric cords or rechargeable batteries to conserve energy, resources, and money. Also consider battery-size when purchasing battery-powered devices; it is easier to maintain an interchangeable supply of rechargeable batteries (such as AA), rather than managing many different battery sizes for different devices. Among rechargeable batteries, nickel-cadmium (NiCad) batteries contain toxic cadmium. Purchase nickel-metal hydrides (NIMH) instead.

Where to Recycle Batteries: Household batteries can be recycled at many stores, including Radio Shack, Office Depot, Best Buy, Home Depot, Whole Foods Market, and Walgreens, although some businesses may only accept only rechargeable batteries, rather than single-use alkaline batteries. Call before you go to confirm that the recycling program is available. Some

community hazardous waste programs also accept household batteries for recycling.

If there are no local places to recycle household batteries, check www.Earth911.org, www.BatteryRecycling.com, www.RBRC.org, or www.BatteriesPlus.com for other local options or for information on recycling batteries by mail. There may be a small fee, in addition to the postage, to recycle batteries by mail.

BLANKETS AND PILLOWS: Blankets, sheets, pillows, pillowcases, wool blankets, cotton blankets.

Donate: Donate quality, clean blankets, sheets, and pillows to your local thrift store. Your local animal shelter may also be in need of blankets for pet bedding.

Compost: Blankets made from 100% natural materials, such as wool or cotton are biodegradable and can be composted, or use strips between garden rows to keep down weeds and reduce evaporation.

BOOKS: Hardback, paperback, spiral bound notebooks, and plastic comb bound books.

Donate/Trade: Donate or trade used books back to a secondhand bookstore or donate them to your local library or thrift store.

Recycle: Old or out-of-date books can be recycled. Hard covers are too rigid to recycle; tear out the pages for recycling, or use them as fuel in the woodstove. In many areas, paperbacks can be tossed in with other paper. Spiral and plastic comb bindings should also be removed before recycling book pages as paper.

C

CAMPING PADS: Closed-cell foam camping pads

Home Uses: Cut out 6 x 8" sections of old foam pads and use duct tape to make kneepads.

CARDBOARD: Corrugated cardboard, paperboard, egg cartons, pizza boxes, cardboard cartons with plastic spouts and caps, cardboard cans with metal bottoms (such as frozen juice concentrates).

Environmental Concerns: Every year, Americans throw away enough wood and paper, including cardboard, to heat five million homes for 200 years. The largest source of waste paper collected for recycling is corrugated boxes. Recycling one ton of cardboard saves more than nine cubic yards of landfill space.

Recycle: Cardboard is accepted for recycling in most communities, either at private recycling companies, or in public recycling bins. Virtually all cardboard or paperboard waste is recyclable. Tape or staples on a box are okay, but be sure to remove any bubblepack, packing peanuts, or other non-paper materials from the box.

Cartons with Plastic Spouts: Remove and discard the plastic cap. The spout can be easily torn out of most cartons, and the cartons recycled as cardboard. Some recycling centers will accept the cartons with the plastic spouts, since the plastic will be filtered out during the recycling process, but be sure to ask first. For foil-lined cartons, see ASEPTIC DRINK CARTONS.

Pizza Boxes: Cheese, grease, and other food residue can ruin a batch of paper fiber if it begins to decompose before being processed into new cardboard. Tear off the contaminated part of the box (it can be composted), and recycle the rest.

Cardboard Cans with Metal Bottoms: Cardboard cans with metal bottoms, such as juice concentrates, hot chocolate mixes or cleaners such as Ajax and Bon Ami, can be recycled as cardboard and tin, if the cardboard is carefully sliced away from the metal. Alternatively, the cardboard can be burned off in a home fireplace or wood stove. Then the metal bottom can be recycled with either tin cans or scrap metal.

CARPET, PADS, AND RUGS:

Overview: Carpets are composite products made with face fibers bonded to backing materials, usually with an adhesive. Common face fibers include nylon, polypropylene ("Olefin"), polyester ("PET"), and wool. Most carpets are short-lived, with a lifespan of five to ten years.

Environmental Concerns: Americans discard about 4.7 billion pounds of carpet every year, accounting for roughly 1 percent of all municipal solid waste by weight. Less than 4 percent of that waste is presently re-used or recycled into materials to produce new carpet, padding, backing, or plastics. The carpet industry signed a Memorandum of Understanding with the United States Environmental Protection Agency in 2002 to increase carpet reuse and recycling.

Conservation Tip: Carpets are short-lived and time passes quickly. Understand that when you install new carpet you will have to uninstall it and dispose of it a few years down the road. Try better cleaning methods to get more life out of existing carpets, or use mats or throw rugs where the carpet is worn out. When it is time to dispose of the old carpet, consider installing quality wood or tile flooring to replace it. Avoid wall-to-wall carpeting when building new houses, and use only throw rugs as needed on wooden or tile floors.

Padding: Carpet padding (usually foam) is the most recyclable part of the carpet. Ask your local carpet dealer if they accept used padding for recycling. Optionally, it may not be necessary to replace the padding when replacing the carpet. Assess the quality of the padding before purchasing new padding.

Carpet: Carpet facing is made out of several different fibers, which greatly complicates processing, so very few places currently accept carpet for recycling. Ask your local carpet dealer if they accept carpet for recycling, or look for potential recycling locations at www.CarpetRecovery.org. Some carpet makers have recycling programs, including Shaw (www.shawfloors.com), Milliken (www.millikencarpet.com), and Flor (www.flor.com).

Alternative Uses for Carpet: Old carpet works well as landscaping cloth. The bottom of the carpet usually has a woven, “natural” fiber look. Place the carpet bottom-side up and cut holes through the carpet to plant shrubs and trees. Cover the carpet with bark, stones, or gravel.

In need of free insulation for a workshop or garage? Consider collecting old, clean carpets and padding to fill the wall cavities. Building codes may not allow this use of carpet in some locations.

Rugs (cotton or wool): Cotton and wool fibers are biodegradable and can be used as organic mulch above or below ground, or added to the compost pile. Ask if your local recycling center accepts cotton or wool rugs for recycling. Some do, but most don’t.

CARS, JET SKIS, BOATS, TRAILERS, RVS, MOTORCYCLES, AND HEAVY EQUIPMENT:

Conservation Tip: Perform regular maintenance on your vehicles to extend their use. Save money by buying and restoring older vehicles (if they are fuel efficient) rather than buying expensive new vehicles that depreciate immediately when purchased.

Recycle: Clean out old vehicles and haul to a junkyard. Junkyards sell used parts to repair vehicles, or they crush whole cars for recycling as scrap metal. Some junkyards pick up old vehicles at no cost. Or go to www.junkmycar.com to find a business that will pick up and remove

vehicles for free.

CDS, DVDs, GAME DISKS, AND JEWEL CASES:

Conservation Tips: DVDs hold six times as much data as CDs; use them for data storage to conserve disks. Use rewritable DVDs and CDs where possible to extend the useful life of the disks. Protect CDs and DVDs from heat and direct sunlight, which can melt or warp the disks. Consider using a 'Thumb Drive' or an external hard drive in order to avoid using CDs altogether.

Purchase secondhand disks whenever possible. Reuse jewel cases from lost or damaged CDs to replace broken cases. Swap the paper inserts from the old cases to the new ones. Send scratched CDs, DVDs, and Nintendo or Playstation video game disks to Auraltech (www.auraltech.com) for refinishing to make them work like new.

Trade/Donate: Trade quality used CDs for other music at www.zunafish.com or donate to a thrift store. Local music stores may also accept CDs for trade.

Create: Place CDs or DVDs in boiling water to soften them, then cut with scissors and mold into novel shapes. Do this only in a well-ventilated area to avoid possible fumes, and avoid leaving the disks in the water too long.

Recycle: Go to www.greendisk.com for instructions to mail old disks and jewel cases in for recycling.

CELL PHONES: Cell phones, pagers, and PDAs.

Environmental Concerns: There are more than two billion wireless phones in use, with an average lifespan of eighteen months. Wireless phones and other electronics require rare metals, such as coltan, cobalt, and tantalum. Mining these materials in the Democratic Republic of Congo is a brutal business, with miners facing collapsed tunnels, murder, rape, torture, intimidation, mutilation, arbitrary arrests, and the destruction or theft of private property. Warring factions steal ore and buy more weapons to perpetuate war. Illegal mining in one national park destroyed mountain gorilla habitat leading to the loss of half the gorilla population.

It is estimated that there are now 500 million old cell phones in drawers and boxes in American homes and business, which contain more than 17 million pounds of copper, 6 million ounces of silver, 600,000 ounces of gold, and 250,000 ounces of palladium. It is now illegal in California to dispose of wireless phones in the trash.

Sell: Get cash for old cell phones at www.CellForCash.com.

Donate/Recycle: Bring old cell phones, working or not, to collection boxes at Staples, Verizon, and other electronics and wireless stores or go to www.Call2Recycle.org to find a local drop-off site. Collected cell phones are mostly passed along to charities, sorted, sometimes repaired, and passed along to people in need, or sold to raise funds. Optionally, wireless phones can be donated to charities via mail. The Wireless Foundation (www.calltoprotect.org or www.DonateAPhone.com) refurbishes old phones to give to domestic-violence survivors, or go to www.CollectiveGood.com to choose a charity to donate to. For information on other cell-phone charities, go to www.recyclewirelessphones.com or www.grcrecycling.com.

CLOTHING:

Conservation Tip: Buy clothes secondhand from thrift stores to conserve money and resources. Try and go an entire year without buying any new clothes.

Donate: Donate clean and quality used clothing to local thrift stores.

Formal Wear: Donate quality formal dresses and accessories to organizations who provide them to high school students for prom or as bridesmaid dresses for those who cannot afford them. Try www.glassslipperproject.org, www.operationfairydust.org, or www.catherinescloset.org.

Wedding Dresses: Donate wedding dresses to "Brides Against Breast Cancer" (http://bridesagainstbreastcancer.org/). New brides can get a great discount on a wedding dress, with proceeds used to grant wishes to women with terminal breast cancer. Search the web for marketplaces to buy and sell secondhand wedding dresses and accessories.

Business Suits: Donate high quality business clothing, including coats, shoes, handbags, and briefcases, to http://www.dressforsuccess.org to be distributed to women who need outfits for job interviews and work.

Fleece: Patagonia's Common Threads Garment Recycling Program accepts used Patagonia fleece, Polartec fleece from other manufacturers, Patagonia Capilene underwear, and Patagonia organic cotton t-shirts for recycling. Wash the clothes and take them to any Patagonia store.

Recycle: Some communities have programs to recycle clothing into seat stuffing, upholstery, or insulation. Animal shelters sometimes use clothing for pet bedding. Clothing is also useful as rags for painting and cleaning work.

Many secondhand stores, such as Goodwill and the Salvation Army, send worn out clothes to "rag sorters" that specialize in recycling all sizes and types of fabric. Cotton t-shirts are turned into wiping clothes used in a variety of industries. Other textiles are shredded into fibers and used to make products such as blankets, archival-quality paper, and sound-deadening materials for the automotive industry. Inquire at your local secondhand store before dropping off any clothes that might not be resalable.

Compost: All clothing can be used whole or shredded as mulch around trees, especially when hidden under wood or bark chips, however, only natural fibers, such as cotton or wool, will biodegrade into the soil. Natural fiber clothing can also be added to the compost pile.

See also: SHOES

CLOTHES HANGERS: Wire and plastic clothes hangers.

Wire Hangers: Donate wire hangers to thrift stores, dry cleaners, or Laundromats, or remove any attached cardboard or paper and recycle the wire hanger with other scrap metal.

Plastic Hangers: Donate good plastic hangers to thrift stores, dry cleaners, or Laundromats. Most recycling centers do not accept plastic hangers because the volume doesn't justify the effort. However, some larger cities, including Los Angeles, have programs for recycling them.

COMPUTERS: Personal computers, monitors, printers, keyboards, scanners, and other computer hardware (see also Electronics).

Conservation Tip: Think before you buy. Computers, printers, and other electronic hardware are energy- and resource-intensive to produce. When you buy new equipment you assume responsibility for its ultimate and proper disposal. Buying the newest model computer is seldom necessary for a particular task. Consider carefully the purpose of the equipment you are purchasing, and buy secondhand or refurbished whenever possible to conserve money and resources. Try www.craigslist.org or www.ebay.com to buy or sell secondhand computer equipment.

Donate: Donate quality used computers and hardware to local nonprofit organizations or schools or find an organization in need via www.ShareTechnology.org, www.cristina.org, or

www.Earth911.org. The organization www.nextsteprecycling.com repairs computers and donates them to nonprofit organizations, under-funded schools, and needy families.

Recycle: Buy a new or refurbished Apple computer, and ask for a shipping label to send your old computer (any brand) back for free recycling. Enclose as much computer hardware as you can in the box. Many other computer manufacturers offer similar programs. Even if you don't buy a new computer, you can often pay a small fee to have old equipment recycled.

In past "recycling" programs, computers were often shipped overseas to developing nations, where the most valuable components were scavenged and the rest was torched, releasing clouds of toxic smoke into the atmosphere. Media attention has led to better recycling practices. Go to www.e-stewards.org to find electronic-waste recyclers who pledge to follow sensible practices.

Security Note: Files that have been "deleted" from a hard drive can still be hacked until they are fully overwritten by new files. Hard drives with sensitive information should be removed, smashed, and recycled as scrap metal.

See also: ELECTRONICS

CORKS:

Reuse or Recycle: Make your own wine and reuse the original corks. Natural corks can be composted or recycled to make flooring and wall tiles. Mail them to Wine Cork Recycling, Yemm & Hart Ltd., 610 South Chamber Drive, Fredericktown MO 63645. Plastic corks are not presently recyclable.

COSMETICS: Makeup, eye shadow, blushes, powders, lipstick, nail polish, etc.

Environmental Concerns: Makeup contains many chemicals that are potentially harmful when discarded. Some manufacturers are developing more benign products.

Buy Recycle-Friendly Brands: Several companies offer products with recycle-friendly, refillable, or biodegradable packaging:

M.A.C.: Return six used items to any M.A.C. retailer and receive a free lipstick in exchange. The returned items will be recycled.

SpaRitual: SpaRitual nail polishes come in re-usable, recyclable glass. Please clean out old makeup and recycle with other glass.

Josie Maran Cosmetics: Josie Moran manufactures biodegradable plastic compacts made with a corn-based resin. Remove the mirror and add the case to your compost heap.

PlantLove: Cargo's PlantLove brand lipsticks come in a biodegradable case made from corn. The empty container can be added to the compost bin. In addition, the box it comes in contains wildflower seeds. Plant the box and it will come up flowers.

Stila: Conserve resources with reusable compact cases for eyeshadows, blushes, and powders. Buy refills as needed. Stila makeup sells cheek and eye color refills.

COUCHES: Couches and Hide-a-Beds.

Donate: Donate quality couches, hide-a-beds, and other furtnture to nonprofit groups such as Goodwill International, the Salvation Army, or Vietnam Veterans of America.

Recycle: Consider dismantling old couches to recycle metal parts as scrap metal or wood for firewood. Foam couch cushions can be cut apart into custom-sized sponges, useful for grouting

work, grungy garage cleaning jobs, even as dishwashing and bath sponges. Bury a couch sponge in the soil beneath potted plants to retain water longer.

See also: FURNITURE

CRAYONS:

Recycle: Send used crayons to the National Crayon Recycle Program (www.crazycrayons.com) to be melted down and made into new ones. The wrappers may be left on.

Do-It-Yourself: Melt crayon scraps together in a paper cup in the microwave for fifteen seconds at a time to make a multihued crayon.

CROCS: (See shoes)

D

DIAPERS: Disposable diapers, cloth diapers, diaper alternatives

Background: Most disposable diapers consist of three layers, including: 1) an impervious outer layer of polyethylene, composite, or rarely biodegradable film, 2) an absorbent, middle layer of cellulose pulp and super absorbent polymer beads, and 3) a nonwoven inner liner that transfers urine and moisture away from the skin into the absorbent middle layer. Even "biodegradable" diapers typically contain nonbiodegradable components.

Environmental Concerns: Manufacturing a single disposable diaper requires about 2/3 of a cup of petroleum, adding up to 3 billion gallons of oil per year—along with 250,000 trees—consumed to produce 16 billion disposable diapers every year in the U.S. Leachate from soiled diapers in landfills has the potential to contaminate groundwater with viruses and other contaminants.

Conservation Tip: A baby can go through $3,000 worth of disposable diapers before being toilet trained. Cloth diapers save money. They are more expensive upfront, but cost only about $300 over the same time period. New brands like Fuzzi Bunz, bumGenius, Kissaluvs and Happy Heinys are made to be washed at home, with convenient velcro, buttons, and snaps, plus elastic around the openings to hold tight around flailing legs. New cloth diapers have water-resistant outer covers made of merino wool, nylon or polyurethane laminate, which replaces old-fashioned rubber panties. New hybrid Gdiapers have a reusable outer cloth with a disposable liner that can be flushed down the toilet.

Better yet, get the book *Diaper Free!* and learn how to toilet train children at younger ages, as people did before diapers became commercially available.

Compost: Soiled disposable diapers, including the cellulose pulp and super absorbent polymers that make up the core, can be great soil additives, especially to facilitate water retention in arid western soils, however, there is no friendly way to remove the nonbiodegradable outer layers, which can take 200 to 500 years to break down. Composting human feces may be illegal in many cities or states. Read the Humanure Handbook for advice on composting human waste.

DIGITAL CAMERAS:

Donate: As with all electronics, consider donating older, working digital cameras to a friend, school, or nonprofit organization. Operation Home Front distributes cameras to military family support groups, enabling families to trade images and stay in contact. Be sure to erase all images from the data card before donating.

Recycle: Many manufacturers accept old products back for recycling, either for free, or for a small fee. For example, you can pay a few dollars for a UPS shipping label at the Canon website, then print the label and ship back Canon-brand digital cameras, camcorders, compact photo

printers, film scanners, video equipment and binoculars. Check the web for current program details.

See also: COMPUTERS, ELECTRONICS

DOG POOP: Dog crap, dog poop baggies.

Conservation Tip: Purchase 100% biodegradable, compostable dog poop pick-up bags from www.Reusablebags.com to bring along while walking the family pooch. The bags are made from cornstarch and vegetable oil and printed with soy inks. Dispose of the bag and contents in the compost pile at home. Bags break down in about thirty days.

At home, hose fresh dog crap directly into the lawn with the hose, or rake up old doo-doo and add it to the compost bin with leaves or lawn clippings. For additional advice about recycling dog poop, be sure to read the *Humanure Handbook*.

See also: KITTY LITTER, KITCHEN WASTE

DRY WALL: Gypsum board, wallboard, plasterboard, gypboard, Sheetrock®, and Gyproc®.

Background: Drywall is the primary interior wall covering used in the United States. It is manufactured from gypsum (calcium sulfate dihydrate or $CaSO_4 \cdot 2H_2O$), a natural mineral mined from ancient, dried seabeds. Gypsum is sandwiched between two layers of paper backing to make it rigid for drywall. Fifteen million tons of drywall are produced in the U.S. every year, and about 12% of the material is wasted during installation. Additional drywall enters the waste stream from demolition and renovation projects.

Environmental Concerns: Sulfur content in the gypsum can produce toxic sulfur dioxide gas when incinerated or hydrogen sulfide gas when buried in a landfill, especially in moist, low pH, anaerobic conditions. Drywall disposal is banned at some incinerators and landfills.

Donate: Donate leftover drywall (usually half sheets and larger) to secondhand building centers, such as The Restore, operated by Habitat for Humanity.

Recycle: Drywall can be recycled to manufacture new drywall after most of the paper is removed, however, there is not yet a system for collecting or processing it. Drywall scraps may also be used as a source of gypsum at cement plants, as an additive in stuccowork, and to settle dirt and clay particles from turbid water. Gypsum is used to mark lines on athletic fields.

Agricultural Uses: Drywall scraps from new construction (i.e.: unpainted drywall) can be downcycled for use as a soil amendment for farm fields, mushroom cultivation, forestry and mine reclamation, nurseries, city parks, sod farms, golf courses and as an additive for compost. Gypsum improves water penetration and workability of alkaline soils, softens soils with high clay content, helps neutralize soil acidity, and provides calcium and sulfur nutrients for plants. Drywall also contains some boron, added as fire retardant, which is a plant nutrient beneficial in volcanic soils where boron is naturally deficient. However, excessive boron can be toxic to plants. Other unknown additives may be a concern in excess.

Home Uses: Scraps of gypsum can be pulverized and used to absorb grease spills in the garage, or mixed with sawdust to make an absorbent animal bedding for the barn. Pulverize or soak drywall scraps in water to break them down for use as an additive to the compost pile

DVDS, CDS, AND JEWEL CASES:

See CDs, DVDs, AND JEWEL CASES.

E

ELECTRONICS: Consumer electronics, including televisions, VCRs, DVD players, radios, cell

phones, digital cameras, mp3 players, laptops, pdas, gps devices, gaming consoles, camcorders, video games, satellite radios, external drives, lcd monitors, calculators, movies, desktops, camera lenses, streaming media, blu-ray players, home audio, and projectors.

Environmental Concerns: Electronic waste contains heavy metals that can leach into the groundwater from landfills. The EPA estimates that 2.6 million tons of electronic waste was landfilled in 2007.

Conservation Tip: When buying new electronics, buy from companies that offer take-back programs for end-of-life (EOL) items, such as LG Electronics, Sony, and Toshiba. Retailers such as Best Buy, sometimes accept your old electronics for recycling when you purchase a replacement product.

Donate: Donate quality working electronics to your local Salvation Army, Goodwill, or other thrift store.

Sell: Go to www.Gazelle.com to get an instant price quote on the value of your secondhand electronics. Gazelle accepts working and nonworking electronics and recycles anything that cannot be re-used. Gazelle will send a prepaid box to send in your electronics. They will inspect the item when it arrives, and make sure the condition matches what you reported on the website, then send you payment. Gazelle accepts cell phones, digital cameras, mp3 players, laptops, pdas, gps devices, gaming consoles, camcorders, video games, satellite radios, external drives, lcd monitors, calculators, movies, desktops, camera lenses, streaming media, blu-ray players, home audio, and projectors. Gazelle is continuing to expand the number of products they accept for recycling.

Recycle: It is believed that more then 99.1 million older televisions are sitting unused in people's houses, awaiting recycling. Recycling televisions, VCRs, DVD players and radios is not as easy as recycling a computer, but many electronics recyclers accept all of the above. Go to www.eiae.org or www.earth911.org to find an electronics recycler near you.

See also: COMPUTERS, PRINTERS, TELEVISIONS, CELL PHONES, iPODS

ELECTRIC WIRING: Extension cords, electrical cords, jumper cables, home wiring, telephone cords, appliance cords.

Environmental Concerns: Any time an electrical cord is disposed of in a landfill, it makes copper scarcer and more expensive, raising the price of new products that contain copper. It also encourages destructive mining processes to extract new copper from the earth.

Recycle: Electrical wires from any source can be recycled at most general recycling centers, and at a significant profit for relatively little wiring. Clip off the plug and anything else attached to the wires prior to recycling.

EYEGLASSES: Prescription glasses, reading glasses, sun glasses.

Donate: Over four million pairs of glasses are discarded every year in the United States, while more than a billion other people around the world need glasses and cannot afford them. Donate your secondhand glasses, including those in need of repair, to organizations that repair them and pass them along to those in need. Lions Clubs International collects all types of eyeglasses and sunglasses. Businesses that collect glasses in partnership with Lions Club or on their own include: LensCrafters, Pearle Vision, BJ's Optical, and Target Optical or try

www.givethegiftofsight.org or www.neweyesfortheneedy.com .

F

FILM CANISTERS:

Reuse: Film canisters are great for storing little things around the house, such as thumb tacks, as well as for storing things on the go, such as a stack of quarters in a travel bag. Film canisters also make a nice waterproof container for wooden matches. Glue a piece of sandpaper to the lid for a strike surface.

Recycle: Film canisters are nearly obsolete in the age of digital photography, but some still exist. The black containers are made of HDPE #2 plastic, which is accepted at most recycling centers. The grey lids are LDPE #4 plastic, which are accepted at some recycling centers. Many photo labs also accept film canisters for recycling.

See also: PLASTIC

FIRE EXTINGUISHERS:

Carbon Dioxide Extinguisher: These fire extinguishers are refillable. Look up fire-equipment companies in the phone book to get yours recharged.

Dry-Chemical Extinguisher: Release the remaining pressure, carefully remove the head from the container for disposal, and recycle the canister with other scrap metal. Alternatively, contact fire-equipment companies in your area and ask them to recycle the unit for you.

FOLDERS: Pendaflex folders, paper folders.

Pendaflex Folders: Cut off the metal rods and recycle them as scrap metal, then recycle the folder in the paper bin.

FURNITURE: Couches, sofas, chairs, coffee tables, bookshelves, desks, dressers, cabinets, beds, etc.

Conservation Tip: Would you buy a product only to throw it away? Most furniture is not very recyclable, so the dump is the ultimate destination when you purchase something new. Eke out another year or two out of your existing furniture if you can, or have it reupholstered to look like new. Also consider buying secondhand furniture instead of new.

Exchange: Give your old furniture new life with another owner by selling it through www.craigslist.org or www.ebay.com, or give it away through www.freecycle.org.

Donate: Donate quality furniture to nonprofit groups such as Goodwill International, the Salvation Army, or Vietnam Veterans of America. Optionally, Excess Access can help match your furniture with nonprofit organizations that need it. Habitat for Humanity also accepts furniture donations in some communities.

Recycle: Consider dismantling old furniture to recycle metal parts as scrap metal or wood for firewood. Foam couch cushions can be cut apart into custom-sized sponges, useful for grouting work, grungy garage cleaning jobs, and even for washing dishes and bathing.

See also: COUCHES, LAWN CHAIRS

G

GLASS: Bottles and jars.

Environmental Concerns: Recycling one ton of glass conserves about 1,300 pounds of sand, 410 pounds of soda ash, 380 pounds of limestone, and 150 pounds of feldspar, plus 25 to 32% of the energy required to make glass from new materials. Glass can be recycled indefinitely, and most new bottles contain at least 25% recycled content.

Recycle: Bottles and jars can be recycled wherever glass is accepted in curbside recycling programs, drop-off bins, or recycling centers. Most recycling programs recycle glass. Lightly clean all jars before recycling, but there is no need to make them squeaky clean. Broken glass is okay, just be careful while handling it. Do NOT include drinking glasses, Pyrex glass, windows, mirrors, or ceramics, which melt at different temperatures and may ruin a batch of glass.

Most programs require glass to be separated by color to avoid contaminating the next batch of glass from the factory. Glass is often down-cycled into other uses in remote areas where shipping costs prohibit shipping it back to a glass manufacturer. Ground-up glass is used as a substitute for sand in the manufacture of cement, concrete and cinderblocks, fiberglass insulation, and even for such things as sand traps on golf courses.

Metal Jar Lids: Recycle metal lids with tin cans or scrap metal. Discard plastic lids.

See also: WINDOWS AND WINDSHIELDS, MIRRORS, TIN CANS, SCRAP METAL,

GLASSES:

See EYE GLASSES

GLOVES AND MITTENS: Rubber gloves, kitchen or dishwashing gloves, latex gloves, work gloves, leather gloves, neophrene ski gloves, wool and cotton gloves, and mittens.

Commercial Quantities: Several business, such as Libra Industries (www.librami.com) collect used gloves from industries, sort out the usable ones, wash them, and pair them with mates for sale as reconditioned gloves. Seapark, another glove recycler, reports, *"Any type of gloves can be cleaned. Leather, Cotton, Dyneema, Kevlar, Rubber, Plastic, Vinyl, there is no glove Seapark has not seen."*

Cotton or Wool Gloves and Mittens: Natural fibers are biodegradable. Add them to the compost pile, or use them directly as mulch.

Latex Medical Gloves: EcoGlove Ltd. sells glove recycling equipment to hospitals and other major users of latex gloves to sterilize, test, and reuse latex gloves.

Leather Gloves: Water ruins leather gloves. Prolong the life of leather gloves by brushing them clean, or use leather soap, or Murphy's oil soap, and sponge to wash them without soaking them. Try oiling dried-out gloves to bring some life back into them. Leather will slowly decompose in a compost pile.

Rubber Gloves (Kitchen or Dishwashing gloves): Old rubber gloves can be downcycled into many other useful products:
-Cut the fingers to make small rubberbands, or the wrist to make large rubberbands.
-Make sleeves from the fingers and slide them over broom or mop handles for a better grip.
-Cut circles from the palms to use as nonslip pads under planters and vases.
-Cut patches from old gloves and adhere with superglue to repair rain coats and rubber boots.

Ski Gloves and Mittens: Donate to organizations that serve the homeless.

GLUE: Elmer's Glue and glue sticks.

Recycle: Glue containers can be rinsed and recycled with other related plastics. Look for the

symbol on the bottom indicating what type of plastic the container is made from. Some schools recycle empty containers of Elmer's glue and glue sticks. Students and teachers rinse out the bottles and send them to Wal-Mart for recycling. Learn more at www.elmersgluecrew.com.

See also: PLASTIC

GREETING CARDS:

Donate: Donate holiday cards to St. Jude's Ranch for Children (www.stjudesranch.org). Kids cut off the front covers, glue them onto new cards and sell the result.

Recycle: Used greeting cards can be recycled with white paper.

H

HAZARDOUS WASTE: Miscellaneous household chemicals, including spot remover, lighter fluid, paint stripper, furniture polish, nail polish and nail polish remover, scouring powders, oven cleaner, toilet bowl cleaner, super glue and other adhesives, and mothballs.

Conservation Tip: Household chemicals are easy to acquire without thinking, but problematic to dispose of any surplus. Seek organic alternatives before buying household chemicals in the first place, or buy in small quantities, so there is none left over after the intended application.

Use It Up: Household toxic chemicals can seriously pollute surface or groundwater if spilled on the ground or disposed of in a landfill. The best way to dispose of these products is simply to use them up for the intended application, or find someone else who can. Otherwise, bring leftover household chemicals to your local community hazardous waste collection program.

See also: PESTICIDES, and PAINTS, STAINS, AND SOLVENTS

HEARING AIDS:

Donate: Used hearing aids of any make or model can be donated to those in need through Lions Clubs (www.donateglasses.net/hearingaids.html) or the Starkey Hearing Foundation (www.sotheworldmayhear.org).

HOSES: Garden hoses, soaker hoses.

Repair: Buy the highest quality hoses available when buying new, then use repair kits as necessary to keep them functional.

Downcycle: Use older hoses as permanent drip lines. Run old hoses along a line of trees or shrubs with a cap on the end. Poke holes in the hoses at each point water is needed along the way. Many serviceable hoses are thrown in dumpsters every year. Salvage a few and use them to drip water all the trees and shrubs on your place.

I

iPods / MP3 Players:

Recycle: Recycle it for free at any Apple retail store, where they offer environmentally friendly disposal and a 10% discount on the purchase of a new iPod.

See also: COMPUTERS, ELECTRONICS

J

JUICE POUCHES: Capri Sun, Kool-Aid, Honest Kids, and other juice bags.

Recycle: Billions of juice pouches are disposed of in the trash every year. Juice pouches are typically made of a combination of a plastic polymer and aluminum, and there are few recycling programs for them. However, TerraCycle donates 2 cents to the charity of your choice for each Honest Kids, Capri Sun, and Kool-Aid Drink pouch and 1 cent for any other brand you collect and send in. Terracycle provides free shipping, too. The pouches are recycled into colorful purses, totes, and pencil cases that are sold at Target and Walgreens stores throughout the country. Go to www.terracycle.net/brigades to get started recycling juice pouches at home and at school.

See also: ASEPTIC PACKAGES

JUNK MAIL: Unsolicited junk mail, catalogs, credit card offers and more.

Environmental Concern: Americans receive 4 million tons of junk mail every year, consuming 100 million trees, 28 billion gallons of water at a cost of $870 million. Half of it isn't even opened. Postal service rates that allow discounted postage for bulk mail need to be eliminated to reduce this waste. A large portion of the junk mail never even reaches the intended destination, since the postal service disposes of bulk mail that is incorrectly addressed or addressed to individuals who no longer live there. Catalogs are often mailed to customers for years after they have left.

Conservation Tip: Go to www.catalogchoice.org to choose which catalogs you want and which ones you don't want. Also write to the Direct Marketing Association, Mail Preference Service, PO Box 9008, Farmingdale, NY 11735-9008, and ask them to place you on their "Do not call" list and remove your name from all mailing lists.

Recycle: Most communities now accept junk mail for recycling through curbside programs, drop-off bins, or recycling centers. Remove unusual objects first, such as bubble pack, sample pens, or fake plastic credit cards (try tearing it, many are made of heavy paper). Concerned about identity theft? Tear out or shred credit card offers and other potentially sensitive junk mail.

See also: PAPER, MAGAZINES AND CATALOGS

K

KEYS:

Recycle: Keys are typically made of brass, iron, or sometimes aluminum. It is helpful to have separate bins for each type of metal, but for simplicity, just toss the keys in with other miscellaneous scrap metal. A metal popcorn tin or paint can is great for collecting miscellaneous scraps of metal. You can recycle the can with the contents.

KITCHEN WASTE: Fruit rinds, veggie scraps, stale bread, coffee grounds, tea bags, bones, egg shells, leftovers, moldy food, grease.

Compost: Turn all food scraps into rich compost for your garden, shrubbery, or houseplants by starting a compost bin or worm bin. In an apartment or house with a small yard, skip the bones and meat scraps and only compost vegetable matter. Go to www.NYCCompost.org for step-by-step instructions to set up your own compost pile or worm bin. If you have room for a larger compost pile, then you can compost just about anything: vegetable scraps, meat scraps, bones, paper towels, lawn clippings, leaves, dog crap, kitty litter, even cotton and woolen clothing. If composting potentially smelly meat and bones, make sure you have a surplus of leaves or lawn clippings to cover it up and keep the critters out.

Search the web for "lasagna gardening" to turn compost directly into gardens, without a separate compost bin. Or go to www.instructables.com for build-it-yourself indoor composting worm bins.

KITTY LITTER:

Compost: Kitty litter is made from several different materials, including absorbent clay, alfalfa pellets, and sawdust. All kitty litter can be added to the backyard compost pile, although it is sensible to buy kitty litter without strong perfumes or chemicals if you plan to compost it. For additional advice, read the *Humanure Handbook*.

See also: DOG POOP, KITCHEN WASTE

L

LAWN CHAIRS AND LAWN FURNITURE: Aluminum, metal, or plastic lawn chairs, tables, umbrellas, and shades.

Conservation Tip: Lawn furniture often has an extremely short life before breaking down from use or severe weather. Conserve resources by avoiding unnecessary purchases, or buying durable or recycle-friendly lawn furniture. Think before you purchase, and recycling will be easier to deal with when the time comes.

Donate: Give quality lawn furniture away to local thrift stores or give away through your local FreeCycle listing.

Recycle: Aluminum lawn chairs are accepted as scrap aluminum at most recycling centers. Cut out the plastic webbing first. Other furniture that is mostly iron can be recycled as scrap metal. Plastic furniture is usually not recyclable. Wooden furniture, such as picnic tables, may be disassembled to reuse or burn the lumber.

See also: FURNITURE.

LEATHER: Leather coats, bags, furniture, and scraps.

Background: Most commercial leather is tanned with chromium sulfate and other salts of chromium, due to properties that allow leather to be supple and pliable. Chrome tanning also improves the ability of leather to take up dyestuffs.

Environmental Concerns: While the trivalent chrome (Cr III) used in tanning is considered safe, it can oxidize into carcinogenic hexavalent chromium (Cr VI) if exposed to excessive temperatures or pH during the tanning process or possibly through incineration of leather waste. As an element, chromium cannot be destroyed through composting, gasification, or incineration.

Conservation Tip: If you need leather for sewing projects, such as making moccasins, gloves, or bags, shop your local thrift store for leather products that can be torn apart and reused. Consider making a business out of making and selling recycled leather goods. Also, consider tanning your own leather by all natural methods. Go to www.braintanbuckskin.com for tanning instructions.

Donate: Donate quality secondhand leather products to your local thrift stores for resale.

Recycle: Several companies recycle post-industrial leather scraps. For example, Lotus sends scrap leather from upholstering car seats to a company that manufactures gloves. Other companies make leather floor tiles from post-industrial scraps. There are fewer options for recycling secondhand leather products, but scrap book companies sometimes sell used leather as scrapbook pages.

Compost: It is possible to compost just about anything organic, although chrome-tanned leather may take a long time to break down, and the chromium used in the leather will become part of the compost. Small amounts of chromium salts are natural in the environment, and essential in the diet to facilitate the metabolism of fats and sugars, but avoid composting large quantities of leather in any one location.

LIGHTS: Christmas lights, light fixtures, light bulbs, fluorescent tubes, CFLs, high- and low-pressure mercury vapor lamps, sodium-vapor lamps, and high intensity discharge (HID) lamps, halogen bulbs, and LEDs.

Conservation Tip: Although more expensive upfront, compact Fluorescent Lamps are about 70% more energy efficient than incandescent light bulbs, and can last several times as long. Save money and energy by switching to CFLs now, and watch for the rise of much more efficient LED light bulbs in the near future.

Incandescent Light Bulbs: Incandescent lights contain lead and are considered hazardous waste, although seldom regulated, except in larger institutions. Aside from creative crafts, there are no good recycling methods available to consumers.

Compact Fluorescent Lamps (CFLs) and Fluorescent Tubes: Fluorescent light bulbs contain mercury, enough in one bulb to contaminate 6,000 gallons of water beyond safe levels for drinking. In several states it is illegal to dispose of fluorescent lights in the trash. IKEA, Ace Hardware, Home Depot, and several other hardware stores accept fluorescent lights for recycling, although you may have to ask a clerk, since the recycling bins may be out of sight and not advertised. Or, go to www.lightbulbrecycling.com to buy a packaging system and shipping label to send old CFLs and tubes in for recycling. For a list of additional companies that recycle fluorescent bulbs, go to: www.lamprecycle.org.

High- And Low-Pressure Mercury Vapor Lamps, Sodium-Vapor Lamps, And High Intensity Discharge (HID) Lamps: These lights also contain mercury and should be handled like fluorescent lights.

Christmas Lights: Ship old Christmas lights to HolidayLEDs.com, Attention: Recycling Program, 120 W. Michigan Avenue, Suite 1403, Jackson MI 49201, and receive a coupon for 10 percent off new LED Christmas lights, which use 80 percent less energy and last 10 years or more.

M

MAGAZINES AND CATALOGS:

Conservation Tips: Save money and resources by reading magazines online, or pick up freebies donated by other people at your local library. Go to www.cataloguechoice.org to choose which catalogs you want and which ones you don't want.

Recycle: Most communities now accept magazines and catalogs for recycling through curbside programs, drop-off bins, or recycling centers.

See also: PAPER, JUNK MAIL

MATTRESSES AND BOX SPRINGS:

Environmental Concern: More than 63,000 mattresses are disposed of every year in American landfills. In addition to wasting resources, discarded mattresses take up considerable space in landfills.

Conservation Tips: Place a sheet of plywood between the mattress and box springs if your bed has too much sag. If you have an extra room in the house, consider lining it with secondhand mattresses for a kids play and wrestling room.

Recycle: There are currently few recycling programs for mattresses, but a few larger cities do collect them. Go to www.earth911.org to find out if yours does. Go to www.conigliaro.com for information on recycling truckload quantities of mattresses. Memory foam mattresses purchased

from eMattress can be returned to eMattress for dismantling and recycling.

See also: FURNITURE, COUCHES

MERCURY:

See THERMOMETERS AND THERMOSTATS

MIRRORS:

Donate: Donate quality used mirrors to your local thrift store.

Create: Recycle broken mirrors into exciting new mirror mosaics by gluing pieces in an attractive arrangement on a backing board, such as plywood. Use tile grout to fill in between the pieces. Mosaic mirrors can also be created using stained glass tools and skills.

Recycle: Unfortunately, mirrors cannot be recycled with glass jars and bottles because the chemical coating and melting temperatures are different, which can ruin the new batch of glass. Mirrors could potentially be down-cycled as a sand substitute for other uses, but the limited supply doesn't warrant collecting them.

Dispose: For the safety of garbage collectors, place mirror shards in a paper bag before discarding.

MOTOR OIL:

Environmental Concerns: Improperly disposed oil can find its way into water supplies, contaminate soil, and become a hazard to human health. Any oil that is not recycled must be replaced with new oil, often from foreign powers.

Recycle: Many service stations and quick lubes accept used oil and used oil filters. Many communities also have programs for accepting used motor oil, or go to www.Earth911.org to find a nearby collection center. Used motor oil is primarily rerefined as base stock for new motor oil. Rerefining saves 50 to 85 percent of the energy otherwise used to refine crude oil and is considered equal in quality. Used motor oil is also used as fuel in some power plants and cement kilns, which are designed to burn the oil with minimum pollution. Specially designed heaters for small businesses also burn motor oil, which is often used to heat the service stations and lube shops where the oil is collected.

MOVING BOXES:

Return/Exchange: U-Haul and other moving companies offer drop-off locations at stores allowing customers to pick up or drop off reusable moving boxes. U-Haul also offers an on-line message board where you can trade, buy, or sell reusable boxes and other moving supplies. Optionally, place an ad with Freecycle or Craigslist to find free boxes or to provide yours to someone who needs them. Every box that is reused conserves resources that would be used to make a new one.

See also: CARDBOARD, PHONE BOOKS

P

PACKING MATERIALS: Styrofoam peanuts, bubble pack, Styrofoam packing blocks, biodegradable packing peanuts, Fill-Air packing pillows.

Packing materials are best re-used, rather than recycled.

Styrofoam Packing Peanuts: Many packaging stores, such as UPS or Mail Boxes Etc., accept

clean packing peanuts for re-use. Go to www.loosefillpackaging.com to find a business that accepts peanuts near you. Need free peanuts? Register your business on the website.

Biodegradable Packing Peanuts: Biodegradable packing peanuts are made of corn starch and easily dissolve in water. The peanuts can be washed down the drain. Biodegradable packing peanuts are also great toy "building blocks." Moisten the end of one peanut and stick it to another to start building masks, skeletons, igloos, or anything you can imagine.

Styrofoam Packing Blocks: Extruded Polystyrene (EPS) foam blocks, made of the same stuff as coffee cups, are accepted for recycling in some communities and often at companies that manufacture EPS foam products. Go to www.epspackaging.org/info.html to find a drop-off location, or mail them in according to the instructions on the site. Alternatively, packaging businesses may find it worthwhile to purchase a hot wire cutter to cut block foam into packing peanuts.

Packing Pillows: "Fill-Air" brand packing pillows can be punctured, flattened, and mailed to Ameri-Pak, Sealed Air Recycle Center, 477 South Woods Drive, Fountain Inn, SC 29644 for recycling into new products such as trash bags and automotive parts.

Bubble Pack: Inquire with local mail-order businesses to see if they collect bubble pack for shipping orders out.

PAINTS, STAINS, AND SOLVENTS: Household latex, acrylic, alkyd, and urethane-based paints and stains, mineral spirits, paint thinner, turpentine, and lacquer thinner.

Environmental Concerns: Buying a gallon of paint seems like a trivial act with minimal environmental consequences, but collectively, Americans buy more than 650 million gallons of paint every year, or 2.4 gallons for every man, woman, and child. Nearly every paint job results in partly-used cans of paint, approximately 69 million gallons per year, which are typically put away and forgotten, but eventually discarded. When disposed of improperly, paint residue can contaminate rivers, lakes, or groundwater.

Conservation Tip: Purchase paints secondhand for rock-bottom prices at building supply thrift stores, such as Habitat for Humanity's Restore. Learn to mix your own colors, such as by blending several cans of white and off-white to come up with enough paint to do your entire job. Do not mix oil-based paints with water-based paints. See the book *Living Homes: Integrated Design and Construction* by Thomas J. Elpel for additional tips.

Alternative Uses for Paint: Leftover water-based latex or acrylic paints can be blended into cement stucco work as an additive to strengthen the mortar.

Recycle Leftover Paint: Recycle leftover paints and stains by donating them to organizations such as Habitat for Humanity. Optionally, many communities accept old paints and stains and other household hazardous waste, either all year long, or on special days. Latex paints are delivered to companies that process the old paint into new paint. Oil-based, or alkyd, paint is often blended with fuel and burned at a power plant to generate electricity. Go to www.earth911.org to see if a collection program exists in your area.

Recycle Paint Cans: See below.

PAINT CANS: Metal or plastic paint and stain cans, buckets, and pails, spray paint cans, and plastic jugs.

Metal Paint Cans: Metal paint cans can be cleaned and recycled with regular tin cans. Use up any remaining paint on scrap wood, or anything destined for the garbage, then dry and crush the metals cans for recycling.

Plastic Paint Cans: Plastic paint cans marked HDPE-2 on the bottom can be rinsed (water-based paints only) and included with other #2 plastics for recycling.

Five-Gallon Buckets: Five-gallon buckets can be re-used for many storage purposes. Plastic buckets can be recycled with other plastics. Metal buckets are especially handy for recycling miscellaneous small scrap metal, such as nails, hinges, and other junked hardware. Recycle the bucket and its contents for scrap metal when full and start a new one.

Spray Paint Cans: Spray paint cans can be recycled with other tin cans. Some recycling programs accept "empty" cans, while others only accept them if punctured and flattened. For bulk quantities, Aerosolve (www.Aerosolve.com) sells equipment that attaches to a 55 gallon steel drum to safely puncture spray paint and other aerosol cans to extract the remaining fluids and propellants. For do-it-yourselfers, most spray paint cans can be safely punctured at home. Hold down the spray button until no more spray comes out. Then, wear safety goggles, go outside and puncture the bottom of the can with a can opener (such as the type found on a pocket knife), while pointing the bottom of the can away from you. Do NOT attempt to puncture aerosol cans that are marked "Hazardous." Spray paint cans contain a glass marble that can be retrieved and wiped clean.

See also: AEROSOL CANS, TIN CANS

PAPER: Newspaper, magazines, catalogs, white paper, office paper, junk mail, envelopes, paper bags, etc.

Conservation Tip: Americans use an astonishing amount of paper in many different forms. A single printing of the Sunday edition of the New York Times consumes 75,000 trees. Conserve money and resources by reading news online, and minimize other uses of paper wherever possible.

Recycle: Virtually any kind of paper is recyclable, from cash register receipts to junk mail, catalogs, and newspapers, even envelopes with plastic windows. Check with your local curbside recycling program or recycling center for the degree of separation required. Some recycling services accept all types of paper mixed together, while other places require the paper to be separated by type.

Alternative Uses: Waste paper can be recycled into a low-cost structural insulation material called papercrete by beating it up with water in an oversize blender, then adding small quantities of cement and sand.

Note: Tyvek envelopes are made out of plastic, not paper. Do not recycle them with paper products.

See also: CARDBOARD, TYVEK

PENS, PENCILS, AND MARKERS

Donate: There is no system to recycle pens, pencils, and markers, but usable ones can be donated to schools that need supplies. Go to www.iloveschools.com to see the wish lists of teachers from around the United States.

Conservation Tip: To conserve resources, try using refillable pens. To reduce waste, try using biodegradable pens made from corn, such as those sold at www.grassrootsstore.com. Terracycle also manufactures biodegradable pens, as well as pencils made from newspapers; available at OfficeMax stores.

PESTICIDES: Herbicides, insecticides, fungicides, biocides.

Conservation Tip: It is easy to acquire pesticides, but problematic to dispose of any surplus chemicals. Seek organic alternatives before buying pesticides in the first place, or buy in small quantities, so there is none left over after the initial application.

Use It Up: Pesticides can seriously pollute surface or groundwater spilled on the ground or disposed of in a landfill. The best way to dispose of pesticides is simply to use them up for the intended application, or find someone else who can. Otherwise, bring your leftover pesticides to your local community hazardous waste collection program.

PHONE BOOKS: Phone directories.

Recycle: Many municipal and other recycling programs accept phone books for recycling. Go to www.yellowpages.com/recycle to find a local place to recycle yours, or call 1-877-88RECYCLE (1-877-887-3292) or 1-800-953-4400.

PICKLE BRINE: Leftover pickle juice.

Reuse: Don't dump the pickle brine down the drain when the pickles are gone! Instead, re-use the brine to pickle other vegetables, such as cauliflower, or thinly sliced carrots or cucumbers, or try pickling hard-boiled eggs, after removing the eggshells. Pickle brine also makes a good marinade for homemade jerky. Soak raw jerky strips for a couple hours or overnight in pickle brine, then dry it in the sun or a dehydrator. Keep in mind that leftover pickle brine has lost a lot of its original pickling power and drawn water and nutrients into it from the first pickling. The useful life of leftover pickle brine is limited. Keep it refrigerated and use at your own risk.

PLASTICS:

Background: Plastics consist of carbon and hydrogen atoms bound together in long chains called polymers. Most plastics are made from oil and natural gas, which are first formed into granules or powder, then melted and made into products. Thermoplastics soften when heated then harden again when cooled. Thermosetting plastics, such as a melamine tabletop, cure hard and cannot be resoftened.

Environmental Concerns: Plastic trash has become such a menace on the planet that a mass of plastic flotsam the size of Texas has accumulated in the middle of the Pacific Ocean. Plastic trash is everywhere, from coast to coast, and around the world, where it is inundating many developing countries. We need to switch to biodegradable plastics and outlaw the use of other plastics in applications suitable for biodegradable plastics.

Plastic Recycling Basics: Look on the bottom of any plastic bottle or container for a recycling symbol with a number or letters in it. Most community recycling programs collect plastic bottles made from PETE (#1) and HDPE (#2) plastics, which together represent almost 96 percent of all plastic bottles produced in the United States.

When in doubt, leave it out. In addition to bottles, a growing number of communities are collecting

and recycling plastic containers, such as tubs, trays and lids. But keep in mind that mixing different types of plastic can lower the quality of the recycled material. So unless your community specifically asks for plastics other than bottles, please put only bottles into the recycling bin.

Do not recycle the following items, unless your recycling program specifically asks for them: automotive, pesticide, and solvent bottles; lids or spray pumps; toys, trays, plastic bags, or film.

Plastic Recycling Details: The Society of the Plastics Industry developed plastic identification codes to identify common plastic polymers for recycling. These codes are imprinted as numbers or letters within a recycling symbol, usually on the bottom of plastic containers and many other plastic products:

#1 PETE or PET (polyethylene terephthalate): Number 1 plastics include soft drink, water and beer bottles; mouthwash bottles; peanut butter containers; salad dressing and vegetable oil containers. PETE is widely accepted through recycling programs, and remanufactured into new products such as: Polar fleece, carpet, furniture, paneling, and straps.

#2 HDPE (High-density polyethylene): Number 2 plastics include milk jugs, juice bottles; bleach, detergent and household cleaner bottles; shampoo bottles; some trash and shopping bags; motor oil bottles; cereal box liners, and some butter and yogurt tubs. Clear and colored HDPE plastics are accepted through most recycling programs, however, oil bottles and bags are not usually allowed. HDPE plastics are recycled into new products such as laundry detergent bottles, oil bottles, pens, recycling containers, drainage pipe, plastic lumber, benches, picnic tables, dog houses, buckets, crates, and automobile parts.

#3 VINYL or PVC (Polyvinyl chloride): Number 3 plastics include plastic pipes, plastic food wrap, window cleaner and detergent bottles, shampoo bottles, cooking oil bottles, clear food packaging, electrical wire coatings, medical equipment, siding, and windows. PVC is rarely accepted in recycling programs, but can be remanufactured to make plastic lumber, siding, pipes, mudflaps, roadway gutters, flooring, cables, speed bumps, and mats. Never burn PVC, because it will outgas toxins.

4 LDPE (low density polyethylene): Number 4 plastics include squeezable bottles; bread bags, frozen food bags, dry cleaning and shopping bags; clothing, furniture, and carpet. Few community programs accept LDPE, but shopping bags can be returned to most large grocery stores for recycling. LDPE plastics are commonly recycled into trash can liners and cans, compost bins, shipping envelopes, paneling, lumber, landscaping ties, and floor tiles.

#5 Plastics PP (polypropylene): Number 5 plastics are found in many yogurt containers, syrup bottles, ketchup bottles, caps, straws, potato chip bags, candy wrappers, medicine bottles, plastic ropes, baling twine, broom fibers, and carpet. PP is the lightest of the major plastics and thus favored for packaging to reduce shipping costs, however there are relatively few recycling programs that accept it yet. PP recycling is slowly growing through curbside recycling programs, or mail your #5 plastics to: Preserve Gimme 5, 823 NYS Rte 13, Cortland, NY 13045 (www.preserveproducts.com). PP is remanufactured into signal lights, battery cables, brooms, brushes, auto battery cases, ice scrapers, landscape borders, bicycle racks, rakes, bins, pallets, and trays. Note that incinerating polypropelene releases toxic nickel fumes, which can cause nose and lung cancer.

6 PS (polystyrene): No. 6 plastics include rigid and foam products such as disposable plates and cups, meat trays, egg cartons, carry-out containers, aspirin bottles, and CD jewel cases. PS recycling is growing, and now accepted through many curbside programs. Polystyrene is remanufactured into insulation, light switch plates, egg cartons, vents, rulers, foam packing, and carry-out containers. See also PACKING MATERIALS and STYROFOAM CUPS AND CLAMSHELLS.

#7 OTHER: No. 7 plastics include a wide variety of plastic resins, such as polycarbonate, plant-based, and compostable plastics that don't fit the other categories. Common products include three- and five-gallon water bottles, 'bullet-proof' materials, sunglasses, DVDs, iPod and computer cases, signs and displays, some food containers, and nylon. No. 7 plastics are rarely accepted through recycling programs, but can be remanufactured into products such as plastic lumber. Any plastics marked "compostable" can be tossed into the compost bin. Biodegradable or compostable plastics should be assigned a code of their own.

PLASTIC BAGS: Grocery bags, bread bags, garbage bags, zipper bags, dry-cleaning bags, and shrink wrap.

Background: Most grocery bags are made of HDPE #2 plastic, while bread bags, sandwich bags, shrink wrap, and other "non-crinkly" bags are made of LDPE #4 plastic. Both types of plastic can be fully recycled to manufacture new bags, but seldom are. Note that "cling wrap," used to cover food in the fridge, is another type of plastic, and not recyclable.

Conservation Tip: Bring a canvas tote bag, or tell the clerk you do not need a bag, if you can possibly get your load out the door without it. Avoid buying garbage bags. It is senseless to manufacture a new product for the purpose of throwing it in the trash. Use grocery bags or dog food bags and trash bags, or no bag at all.

Recycle: Some community recycling programs and many grocery store chains accept plastic bags for recycling. For example, Safeway accepts grocery and dry-cleaning bags and for remanufacturing into lumber. Go to www.plasticbagrecycling.org to find other stores that accept grocery bags for recycling.

Downcycle: Clean produce bags, bread bags, and newspaper bags can be used as poop bags for picking up messes while walking the family pooch.

PLASTIC BOTTLE CAPS:

Dispose: Plastic bottle caps are typically made of polypropylene (#5) or other plastics that are different from the bottles they come on. Leaving them on the bottle can degrade the quality of the plastic and complicate remanufacturing.

POTS AND PANS:

Donate: Donate quality pots and pans to your local thrift store for resale.

Recycle: Pots and pans can be recycled as scrap metal or scrap aluminum. Plastic handles can be left in place.

See also: SCRAP METAL, SCRAP ALUMINUM

PRESCRIPTION DRUGS: Pharmaceuticals

Return: Legal issues greatly restrict trafficking of leftover prescription drugs, but most states allow the return of drugs in single use or sealed packaging from state programs, nursing homes and other medical facilities. The medicines are then redistributed for use by needy residents who cannot afford to purchase their prescribed drugs.

Donate: The Starfish Project (www.thestarfishproject.org) accepts unused TB medications medicines, antifungals, and antivirals and gives them to clinics in Nigeria. Obtain a prepaid FedEx label from the website. Some states have laws that allow reuse of drugs from nursing homes and hospitals. Keep in mind that it is otherwise usually illegal to share prescription drugs with other people.

Dispose: Do Not dispose of pharmaceuticals down the sink or toilet drain, since the drugs can contaminate ground or surface water. It is better to dispose of them in the trash.

PRINTERS: Computer printers, photocopiers, and fax machines.

Conservation Tip: Buy 100% post-consumer recycled paper for printing. Recycle it again whenever possible, by running used, "one-sided" paper back through to print on the other side.

Recycle: Most printer cartridges are easily recycled, refilled or re-built. Hewlitt Packard and many other computer manufacturers offer take-back programs, accepting printers and computer hardware for recycling.

See also: COMPUTERS

PRINTER INK CARTRIDGES: Inkjet and toner cartridges, laser toner cartridges, and laser printer drums.

Conservation Tip: Inkjet printers are often cheap or free up front; manufacturers rake in the dollars on the replacement ink cartridges. Laser printers can be more economical over time.

Refill: Refill inkjet cartridges through services such as www.Printpal.com or www.CarrotInk.com as well as Walgreens stores. There are also an increasing number of small business cartridge refill operations in malls and storefronts.

Recycle: Seventy percent of printer ink cartridges are thrown into landfills, where it will take 450 years for them to decompose. Ink cartridges don't break, they just run out of ink. Take them to Staples and get $3 off your next cartridge purchase, or mail Hewlett Packard-brand cartridges back to Hewlett Packard. FedEx Kinkos, OfficeMax, and Office Depot also accept used inkjet or laser toner cartridges for recycling.

PROPANE CYLINDERS: Propane and MAPP Gas Canisters for camp stoves and soldering.

Safety Hazard: Single-use propane cylinders are unfortunately not refillable, and pose a significant hazard for recycling or disposal. "Empty" cylinders may be pressurized with small amounts of leftover gas, which can explode when punctured by recycling equipment, trash compactors, or bulldozers at a landfill. Used propane canisters are considered household hazardous waste, and are banned from many landfills.

Recycle: Propane cylinders can be recycled as scrap metal if they are properly depressurized. Look for scrap metal dealers in the yellow pages and call ahead to confirm that they accept propane cylinders for metals recovery. Many national park campgrounds also accept propane cylinders for recycling. Recyclers use special equipment to depressurize and capture remaining gasses.

Coleman includes a Green Key® tool with new propane canisters to facilitate recycling. First, make sure the canister is completely empty by attaching it to an appliance. Turn the appliance on and ignite the gas. Let it burn until the flame dies and the appliance is cool. Then remove the canister, and plug in the Green Key® to depressurize the canister. Check with local steel recyclers to see if they accept propane canisters with the Green Key®, or drop-off the empty cylinder at a collection bin in a national park or community recycling service.

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RECORDS, VINYL:

Sell or Donate: Examine your record collection for potentially valuable albums. Search online if for the appraisal value if you think you have a good one. Otherwise, sell old records through

www.Gemm.com, www.craigslist.org, www.ebay.com, sell them to a vinyl store, or donate them to a local thrift store.

Create: Search online for instructions to reshape records into artistic bowls and other crafts.

Recycle: Records are made from polyvinyl chloride (PVC), which is rarely accepted in recycling programs. However, the cardboard album covers can be recycled with other cardboard.

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SCRAP METAL: Bicycle frames, swing sets, shovels, bent nails, golf clubs, bed frames, enamel pots and pans, etc.

Conservation Tip: Little bits of metal add up over time. Just removing straps from corsets in World War I saved enough metal to build two warships. Keep a metal bucket (such as a large popcorn tin or metal five-gallon paint can) available for collecting miscellaneous scrap metal, including bent nails, paper clips, broken staplers, and other small metal objects. When full, deliver the can and contents to your local scrap metal recycler and start a new can.

Recycle: If it is metal, it is recyclable. Iron-based metals are recyclable as scrap metal. Contact your local recycling center for guidelines.

See also: APPLIANCES, STAINLESS STEEL, PAINT CANS

SHOES: Tennis shoes, athletic shoes, crocs.

Donate: Good quality shoes can be donated to local thrift stores, or donated by mail to programs to help people in need. Soles4Shoes distributes quality used shoes worldwide, including to survivors of disasters such as the Asian Tsunami and Hurricane Katrina. One World Running distributes athletic shoes to athletes in Latin America, Haiti, and Africa.

Recycle: Nike's "Reuse-A-Shoe" program collects secondhand shoes and grinds them up to make three different products. Shoes can be dropped off in limited quantities to any Nike store. Go to www.nikereuseashoe.com for additional details. Rubber soles are ground up and used to make synthetic soccer, football, and baseball fields. Foam from the mid-sole is used for synthetic basketball courts, tennis courts, and playground surface tiles. Fabric from the upper shoe is converted to padding used under hardwood basketball floors. It takes approximately 75,000 pairs of shoes to make one outdoor playing field. Nike's goal is to recycle two million pairs of shoes each year.

Since the program began in 1993, Nike has helped donate more than 170 sport surfaces to communities around the world. In addition, Nike works with local partners such as schools, colleges, and other institutions to collect shoes for sports projects in their communities.

Crocs: Mail old Crocs to: Crocs 1510 Nelson Road, Longmont, CO 80501 and clearly mark "RECYCLE" on the outside of the package. The old Crocs are shredded and used to make padding for playgrounds. Crocs can also be mailed to: Crocs Recycling West, 3375 Enterprise Ave., Bloomington, Calif. 92316.

SHOWER CURTAINS AND LINERS:

Reuse: Most shower curtains are made of polyvinyl chloride (PVC). There are few, if any recycling programs to accept them, but they make great drop cloths for painting or other messy projects. Shower curtains are similarly useful as a drop cloth for automotive work or to protect the garage floor from oil drips beneath the car. Shower curtains can also be used as shelf liners in bathroom or kitchen cabinets. Use shower curtains as a weed barrier in landscaping (cover with woodchips or gravel), or as irrigation damming material on the farm.

SILICA GEL (DESSICANT):

Background: Silica gel packs are used as a desiccant to keep products dry. These are the little packets labeled "Do Not Eat," found in everything from containers of vitamins to electronics, to new shoes. Silica gel is also used inside the aluminum spacer in double pane windows to absorb any moisture caught between the panes of glass.

Reuse: Silica gel packets can be reused in a variety of ways, especially helpful to keep valuables dry in a humid environment. Enclose a silica gel pack in a plastic bag with precious photos or important papers to help keep them dry. Similarly, silica gel packs can be stored in an airtight container with garden seeds to help keep the seeds viable and free of mold. Store silica gel packs with your precious silver, either in a box, or in a drawer, to help prevent tarnishing.

Drying Flowers: If you have a large supply of silica gel packs, you can use them to desiccate flowers, while preserving their color and texture. Pour a layer of silica in the bottom of a plastic container, place a flower in the silica, and carefully pour more silica around the flower until it is completely covered. Allow sufficient time for the silica to absorb all the moisture from the flower before pouring it off.

Reviving Gel Packs: Gel packs lose their effectiveness as the silica absorbs moisture from the air, but can be easily reactivated by drying them in a warm oven (up to 200ºF) for fifteen minutes.

SIX-PACK RINGS:

Environmental Concerns: Six pack rings are silent killers of marine animals and other wildlife that become entangled in them. If you cannot recycle them, be sure to cut the rings open before disposing in the trash.

Recycle: Six-pack rings can be recycled to make plastic lumber and plastic shipping pallets. See if your local school participates in the Ring Leader Recycling Program, or go to their website at www.ringleader.com to learn how to start a program in your community.

SMOKE DETECTORS:

Recycle: Smoke detectors contain radioactive Americium 241 and last only about ten years. Some cities have programs to collect old smoke detectors. If yours doesn't, then ship it back to the manufacturer. Federal regulations require all smoke detectors to contain the mail-back address. Call the manufacturer or go to www.firstalert.com prior to mailing for fees, instructions, and brands accepted for disposal. Mark all packages "For Disposal Only". Ship smoke detectors by surface mail, not by air.

SPONGES: Sea sponges, natural sponges, synthetic sponges.

Compost: Sponges cannot be recycled, but sea sponges and natural sponges made from vegetable cellulose are biodegradable. Add them to the compost pile to decompose. Synthetic sponges should be discarded.

SPORTS EQUIPMENT: Basketballs, footballs, soccer balls, volleyballs, golf balls, clubs, rackets, hoops, climbing gear, hiking gear, skiing equipment, snorkeling and scuba diving, and other sports equipment.

Conservation Tip: Looking for sports gear? Secondhand sports gear is widely available at thrift stores, and for a fraction of the price of new equipment. Kids often grow out of sports equipment while it is still nearly new. Save money and resources by shopping thrift stores first.

Sell, Trade, or Donate: Sell or trade quality sports equipment on eBay, Craigslist, local classifieds, or www.playitagainsports.com. Or donate sports equipment to your local thrift store, or send it to www.sportsgift.org to be distributed to needy kids worldwide.

Recycle: Any metal parts, such as golf clubs and basketball hoops, can be recycled as scrap metal. Other items are more challenging to recycle. Go to www.SkiChair.com or www.recycledskis.com to donate nice-looking skis, water skis, surfboards and skateboards to be manufactured into Adirondack-style chairs, or to get ideas to make your own furniture.

Basketballs and soccer balls can be converted into bowls by cutting a circle out of one side. Add a handle to make a bag.

See also: SCRAP METAL, SHOES, TENNIS BALLS

STAINLESS STEEL: Kitchen sinks, pots and pans.

Recycle: Stainless steel contains at least 10% chromium and should ideally be separated out from other scrap metal for recycling.

STYROFOAM CUPS AND CLAM SHELLS: Disposable coffee cups and foam take-out food boxes.

Background: Styrofoam cups and foam clam shells are made from #6 polystyrene plastic pellets, expanded with pentane gas. The plastic is photodegradable (it breaks down in sunshine), but not biodegradable. A Styrofoam cup in a landfill will still be there centuries from now. Styrofoam litter can become a hazard to wildlife, such as sea turtles, that mistake it as food.

Conservation Tip: It seems like a shame to waste extra food that could be brought home after a restaurant meal. But it is also a shame to use a plastic take-home clamshell for a few bites of food, when the box will last indefinitely in a landfill. Most restaurants serve excessive portions anyway. Conserve resources and dollars by ordering soup or an appetizer, then help everyone else in the family finish their leftovers. Or, consider bringing your own reusable take-home bag, or ask your favorite restaurants to switch to biodegradable plastics. Bring your own coffee cup to work, instead of using disposable cups.

Recycle: Waste polystyrene can be washed, dried, melted, and turned into pellets and remanufactured into new products. Unfortunately, there are very few recycling programs that accept Styrofoam cups or take-out containers.

Do-It-Yourself: Scraps of Styrofoam can be dissolved in a small amount of gasoline to make a home-made "epoxy," which is often used in developing countries for various projects such as boat repairs. The epoxy hardens as the gasoline evaporates out of it.

See also: PLASTIC, TAKEOUT-FOOD CONTAINERS

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TAKEOUT-FOOD CONTAINERS: Biodegradable plastic and cardboard take-out containers.

Recycle, Compost, or Trash: Cardboard takeout containers, such as Chinese-food boxes or pizza boxes, may become too contaminated with food and grease to be recyclable. A rotting box can ruin a whole batch of cardboard. Clean thoroughly and cut out grease stains before recycling, or save for starting a fire in the wood stove. Biodegradable plastics can be composted.

See also: STYROFOAM CUPS AND CLAMSHELLS, PLASTIC, CARDBOARD, KITCHEN WASTE

TELEVISIONS: Televisions and computer monitors.

Environmental Concerns: Pre-digital televisions contained up to eight pounds of lead to shield viewers from radiation while the TV is in use. Due to the lead and other toxins which can leach into groundwater, the EPA classified televisions and computer monitors as hazardous waste in 1997, banning them from landfills. However, few people know about or comply with the regulation.

Conservation Tip: Do you really need the latest, greatest, biggest television screen? Other people upgrade to 60-inch screens without first considering what to do with their already very large 48-inch widescreen television. Save big bucks by shopping the classified ads or Craigslist for secondhand models that are a few years old. Go to www.ElectronicsRecycling.com to buy or sell used electronics or pieces of electronics.

Donate: Donate quality televisions to your local Salvation Army, Goodwill, or other thrift store.

Recycle: Recycling televisions is not as easy as recycling a computer, but many electronics recyclers accept all of the above. Go to www.eiae.org or www.earth911.org to find an electronics recycler near you. When buying new electronics, buy from companies that offer take-back programs for end-of-life (EOL) items, such as LG Electronics, Sony (http://green.sel.sony.com), and Toshiba. Retailers like Best Buy sometimes accept old electronics for recycling when you purchase a replacement product. Best Buy also hosts occasional recycling events at store parking lots, or may accept your old television for a small fee. Some cities and states are also organizing 'E-Waste' events where you can return televisions and other electronic gadgets for little or no fee.

See also: ELECTRONICS, COMPUTERS

TENNIS BALLS:

Refurbish: Hundreds of millions of tennis balls are manufactured every year and most ultimately end up in landfills. Rebounces.com accepts decent used tennis balls, which are repressurized and resold. The company only accepts quantities of 250 or more, so you may need to establish a tennis ball collection system at the local courts to get enough to send them in.

Downcycle: Tennis balls can also be donated to animal shelters for pet toys. Retirement homes use them as caps for walker legs.

See also: SPORTS EQUIPMENT

TENTS AND TARPS:

Conservation Tip: Every new product we buy ultimately ends up in the compost, the recycling bin, or the trash, and some products sooner than others. Tents and tarps often have a dismally short lifespan. A new tent, although it may seem to last for years in the closet, may be toast after just one month of cumulative use. Typically, the zippers go bad, letting in bugs, or the fiberglass poles shatter, making it impossible to set up. Conserve resources by purchasing higher quality tents or tarps to begin with, or making do with what you have a little longer. As long as there are no mosquitoes or biting flies, then you probably don't need to zip the door closed at all. Patch tents and tarps with duct tape to get the longest use out of them. There are also many reasonable substitutes for tarps, such as shower curtains, or old plastic sheeting.

Downcycle: There are few choices for recycling tents and tarps, but you can often downcycle them into other uses. Cut the bottom out of an old tent, saving the sewn edge, and you will have a beautiful new tarp, with plenty of loops around the perimeter for tie-downs. Consider using the tent poles as support stakes for potted plants or in the garden. Recycle any metal parts. Consider burying other tent and tarp scraps wherever weed suppression is needed, hiding the material under wood chips or gravel.

THERMOMETERS AND THERMOSTATS: Mercury thermometers, thermostats, mercury

switches, and other devices containing liquid mercury.

Environmental Concerns: One broken thermometer contains enough liquid mercury to cause neurological damage in people, especially children or to contaminate all the fish in a twenty-acre lake. Disposing of thermometers in the trash can lead to groundwater contamination in landfills or mercury vapor discharged from incinerators, which ends up back in the food chain. In case of spills, follow the clean-up guidelines at http://www.epa.gov/mercury/spills/. Several states have banned the sale of mercury thermometers and are urging consumers to use alternatives such as digital electronic thermometers.

Recycle: Some state and community governments collect mercury and other hazardous wastes. Contact your state or local government for additional information. Some private-contract recycling services, such as Complete Recycling Solutions (CRS) of Massachusetts also accept hazardous waste along with other recyclables.

The Thermostat Recycling Corporation accepts thermostats with mercury switches from Heating, Ventilation and Air-Conditioning (HVAC) suppliers and contractors nationwide. Ask your local HVAC contractors if they can recycle your old thermostat.

TIN CANS: Soup cans, coffee cans, paint cans, aerosol cans, plus Ajax, Bon Ami, and other cardboard cans with tin tops and bottoms.

Background: Tin cans are mostly steel, with a thin layer of tin added to inhibit rusting. Americans use more than 100 million tin and steel cans every day, enough to make a steel pipe running from New York to Los Angeles and back. Recycling tin cans saves 74% of the energy it takes to produce them from raw materials. Recycling one ton of steel saves 2,500 pounds of iron, 1,400 pounds of coal, and 120 pounds of limestone.

Recycle: Most curbside recycling programs and recycling centers accept tin cans for recycling. In some places it is okay to mix tin cans with aluminum cans, since the tin is separated out by magnets, but other recycling programs may require you to separate tin and aluminum. The cans should be rinsed, but there is no need to remove the labels, which are burned off when the metal is melted. Flattening steel cans conserves space in your home recycling bin and conserves the fuel required to transport them for processing, but flattening may not be required by local programs. To flatten a tin can, lay it on its side on a concrete surface and smash the cylinder by foot. The can does not have to be perfectly flat.

Cardboard and Tin Cans: The tin tops and bottoms of Ajax, Bon Ami, and other cardboard containers can be recycled by cutting away the cardboard. Optionally, if you have a wood-burning stove at home, empty the containers completely, and burn off the cardboard, then retrieve the tin parts for recycling when the stove is cool.

See also: AEROSOL CANS, PAINT (Spray Paint)

TINFOIL: Aluminum foil.

Recycle: Tinfoil is made of aluminum, not foil. Rinse it clean and fold or flatten it for recycling. Not all recycling programs accept tinfoil for recycling, and those that do may ask you to separate it from aluminum cans.

TIRES: Car tires, truck tires, tractor tires.

Background: The first tires were made of natural rubber from rubber trees, but they did not hold up to heat and cold. Chemists improved tires by adding materials such as synthetic rubber, resins, oils, polyester and nylon fibers, petroleum waxes, silica, zinc and titanium dioxide pigments, carbon black, inert materials and steel wire. However, natural rubber remains crucial to the manufacture of quality tires. A typical passenger tire weighs about 25 pounds, consisting of

approximately 28 percent carbon black, 27 percent synthetic rubber, 16 percent polyester, nylon, and rayon fibers, 15 percent steel, and 14 percent natural rubber. With proper maintenance, some tires can last up to 80,000 miles, depending on driving conditions and tire care. Run-flat designs can be driven on even when punctured.

Conservation Tips: Keep tires properly inflated to improve fuel economy and make them last longer. Purchase quality used tires from a tire dealer when appropriate for your vehicles and driving conditions. Use public transportation where available to reduce individual driving.

Environmental Concerns: There are at least 300 million discarded tires stored in piles in the United States, serving as breeding grounds for mosquitoes and rats. When ignited by wildfires or arson, the resulting fires produce toxic smoke and ash, and are difficult to extinguish. Although tire piles are not themselves considered hazardous waste, the burned residue may require hazardous waste handling.

Recycled Tire Projects: Tires have been recycled into many innovative new uses by homeowners and entrepreneurs. Whole tires can be brick layered, with dirt packed into each layer, to make landscaping walls, retaining walls, and even house walls, known as earthships. The walls are best covered with wire mesh and stuccoed to hide the tires. Tires can also be filled with dirt and stair-stepped up a slope to make suitable stairs. It may also be possible to make a tire igloo. Most tire dealers will eagerly give tires away if you need them for projects.

Large tractor tires are often used to hold hay to feed livestock, or as sandboxes for children, while smaller tires make good tire swings when hung from a tree by a rope.

Tires without steel reinforcing wires (less common in modern tires) can be cut to make new products such as tire sandals, tire horse swings, and door mats.

Commercial Recycling: Tires are often shredded for other uses, such as playground surfaces, running tracks, horse arenas, soaker hoses, wire insulation, and as an additive in road construction.

Many tires are shredded and burned in power plants, cement kilns and industrial boilers as a low-cost alternative to oil or coal. The ash and smoke from controlled burns can contain fewer heavy-metals than some types of coal, but still remains an environmental concern. Approximately 40 percent of all scrap tires in the U.S. are consumed as fuel.

Where to Recycle: Most tire dealers will keep your old tires when you buy new ones, although some may charge a small recycling or disposal fee. Ask the dealer ahead of time if they recycle or dispose of old tires.

TISSUE BOXES: Kleenex brand and other facial tissue boxes.

Recycle: The plastic part is filtered out during the recycling process, so you can usually recycle tissue boxes with other cardboard.

See also: CARDBOARD

TOILETS: Porcelain toilets.

Recycle: Many cities accept toilets for recycling. Porcelain is a type of clay, which can be ground into powder to make new porcelain products. More often, toilets are crushed for use as gravel in concrete or highway construction. Flintknappers (people who make arrowheads) use toilet lids and tanks as practice material, which they refer to as “Johnstone.”

TOOTHBRUSHES:

Environmental Concerns: Discarding one toothbrush may not seem like wanton waste, but collectively, Americans discard 50 million pounds of toothbrushes every year!

Conservation Tips: Most toothbrushes are not recyclable, but Terradent toothbrushes from Eco-Dent and Radius Source's toothbrushes have replaceable heads to minimize waste. Toothbrush Express offers a toothbrush recycling program; sign up to receive new toothbrushes at predefined intervals. For a few dollars extra, the company will include pre-paid postage to return your old ones for recycling.

The Preserve® Toothbrush (www.preserveproducts.com) is made from recycled yogurt containers (#5 propylene plastic). When it is time to replace your Preserve Toothbrush, send it back to the company in a prepaid envelope to be downcycled into lumber for picnic tables and decking.

Radius offers toothbrushes made from natural cellulose derived from sustainable yield forests. Their battery-powered Intelligent Toothbrush uses replaceable heads to reduce environmental impact. The company accept the handle for recycling when the battery is worn out.

Innovate: Toothbrush handles can be molded into bracelets or other new shapes after soaking in boiling water. Use your imagination and create!

See also: BATTERIES

TOOTHPASTE TUBES: Aluminum and plastic toothpaste tubes and plastic toothpaste dispensers.

Recycle: Plastic toothpaste tubes are not usually recyclable, but upright toothpaste dispensers are typically made of recyclable plastics. Remove any sticky labels, and rinse with water before adding to the plastics recycling bin.

Tom's of Maine brand toothpaste is in recyclable aluminum tubes. Remove the plastic cap and the plastic threaded covering on the neck of the tube, then recycle the tube with aluminum cans or scrap aluminum. Empty the tube as much as practical. It doesn't have to be perfectly clean.

TYVEK: Tyvek envelopes, CD sleeves, banners and signs, weather-resistant maps and guides, moisture and rip-resistant books, wrist bands, coveralls, kites, and house wrap.

Background: Tyvek is a special plastic manufactured by DuPont from thread-like fibers of 100 percent high-density polyethylene (HDPE, like other #2 plastics) that are randomly distributed and nondirectional. The fibers are flash spun, then laid as a web on a moving bed before being bonded together by heat and pressure.

Reduce or Reuse: Choose paper envelopes whenever possible to facilitate eventual recycling, or reuse Tyvek envelopes as many times as practical.

Recycle: Tyvek envelopes look like paper, but is made from HDPE plastic. Unfortunately, Tyvek is not recyclable with other #2 plastics. However, Dupont has a take-back program to accept Tyvek envelopes and other Tyvek products for recycling. For twenty-five or fewer envelopes, stuff them in an inside-out Tyvek envelope and mail to: Tyvek® Recycle, 2400 Elliham Avenue #A, Richmond, VA 23237. For larger quantities, call 1-866-33-Tyvek and ask for a Tyvek recycling pouch.

U

UMBRELLAS:

Recycle: Strip off the fabric and plastic handle, and recycle the metal frame as scrap metal.

See also: SCRAP METAL

UTENSILS: Silverware, metal flatware, plastic knives, forks, and spoons.

Metal Utensils: Donate to a local thrift store, or recycle as scrap metal.

Plastic Utensils: Switch to biodegradable plastic ware made from cornstarch. Toss them in the compost bin after use.

See also: SCRAP METAL

V

VIDEO TAPES: VHS video tapes, 8 mm tapes, floppy disks, Zip disks, DVDs, CDs, plastic jewel cases.

Recycle: Send video tapes, diskettes, CDs, DVDs, plastic cases, and audio cassettes to Alternative Community Training in Columbia, Missouri, where disabled employees erase and repackage media for resale under the GreenDisk label. Go to www.ACTRecycling.org to download a donor form, or go directly to www.GreenDisk.com to purchase a recycling label. You will need to pay Media Mail postage to ship your goods in for recycling. GreenDisk also recycles computers, cell phones, and pagers. GreenDisk erases and re-uses media whenever possible, then sorts, shreds, or crushes other media and sells it on the regrind plastics commodity market. Reclaimed polycarbonate is often recycled into automotive parts, appliance components, and as a compounding base to make other plastics.

W

WATER FILTERS:

Recycle: The Brita water filter is recyclable. See www.preserveproducts.com for details.

WHEELCHAIRS:

Donate: LifeNets provides a matchmaking service, linking wheelchair donors with those who need them in the U.S., and by shipping wheelchairs to people in need worldwide. Go to www.lifenets.org/wheelchair to donate or request a wheelchair.

Recycle: Recycle broken wheelchairs as scrap metal. Remove as many nonmetal components as possible before recycling.

See also: SCRAP METAL

WINDOWS AND WINDSHIELDS: Plate glass, safety glass.

Donate: Donate quality used windows to building supply thrift stores, such as The Restore, operated by Habitat for Humanity. Consider purchasing secondhand windows for your next construction or remodeling project.

Do-It-Yourself Tip: Double pane windows frequently lose their seal over time, allowing a fog of moisture and minerals to accumulated between the panes. Rather than replacing fogged windows, disassemble the windows, clean the glass, and reassemble the windows with new spacers and desiccant, which may be purchased at local glass shops. For greater energy efficiency, consider adding an additional pane, forming two air spaces between three panes of glass.

Downcycle: Windows and windshields can be downcycled to make greenhouses or cold frames

to extend the growing season and put food on the table. Additional used or wrong-sized new windows can often be obtained cheaply or for free from local glass shops. Ask and you may receive.

Recycle: Windows and windshields cannot be recycled with glass jars and bottles because the composition and melting temperatures are different, which can ruin the new batch of glass. Plate glass contains boron, while safety glass contains plastic. Windows and windshields can be melted down and recycled, but few recyclers accept these materials because the supply isn't worth bothering with. Some window shops and windshield replacement companies may accept old glass for recycling. Call your local glass shops and ask. Due to the lack of recycling infrastructure for windows and windshields, those that are recycled are primarily down-cycled as a sand substitute for other uses.

See also: GLASS, MIRRORS

WRAPPING PAPER: Christmas and birthday wrapping paper

Conservation Tip: It is mildly absurd to buy a product that is meant to be ripped apart and thrown in the trash. Open presents carefully to salvage the wrapping paper for re-use, or try wrapping paper alternatives, such as the Sunday comics, a colorful bag that can be re-used many times, or a pretty bow, without wrapping paper at all.

Recycle: Wrapping papers is accepted along with mixed paper in most recycling programs. However, the paper is often thin and lacks good fibers, plus it may contain glitter, gold and silver shapes, plastic, and lots of tape, which makes recycling difficult.

See also: PAPER

Y

YOGURT CUPS: Yogurt tubs and containers.

Recycle: Yogurt containers made from #2 plastics are widely accepted at recycling centers and community recycling programs, wherever plastic is accepted. However, many yogurt containers are made of #5 plastic, which is less commonly accepted.

Terracycle provides free shipping boxes and postage to collect yogurt containers for recycling. The company pays 2¢ for each 6 ounce yogurt cup and 5¢ for each 32 ounce yogurt cup, payable to the charity of your choice. The yogurt cups are downcycled to nurseries, who use them instead of black plastic pots to grow new seedlings. Go to http://www.terracycle.net to sign up you school, office, or home.

See also: PLASTIC