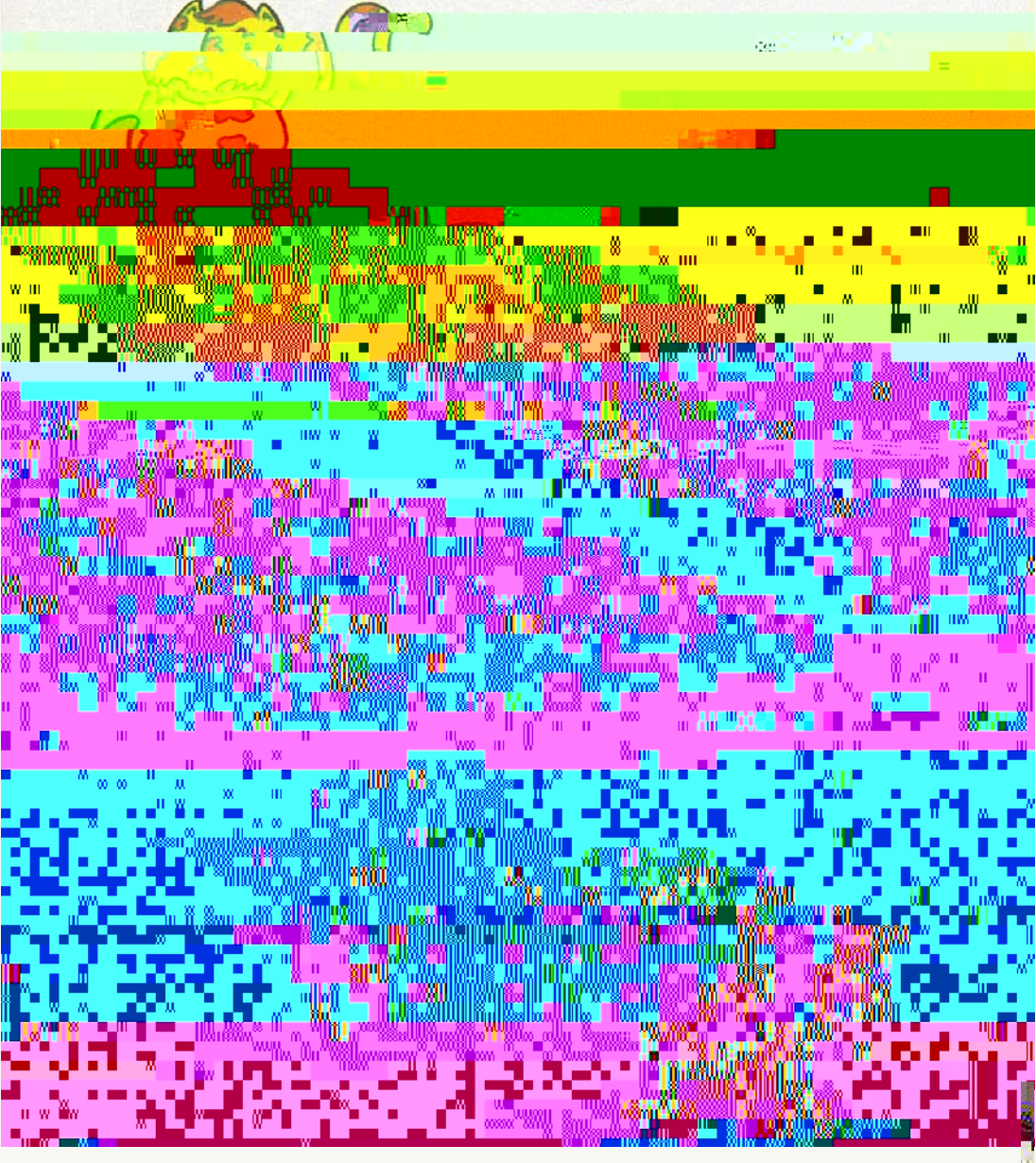
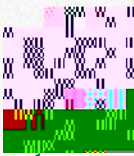


United States
Environmental Protection
Agency

EPA 530-K-96-003
September 1996

Solid Waste and Emergency Response (5305W)

The Consumer's Handbook for Reducing Solid Waste





This booklet describes how people can help solve a growing problem...garbage! Individual consumers can help alleviate America's

Reducing

SOLID WASTE

10

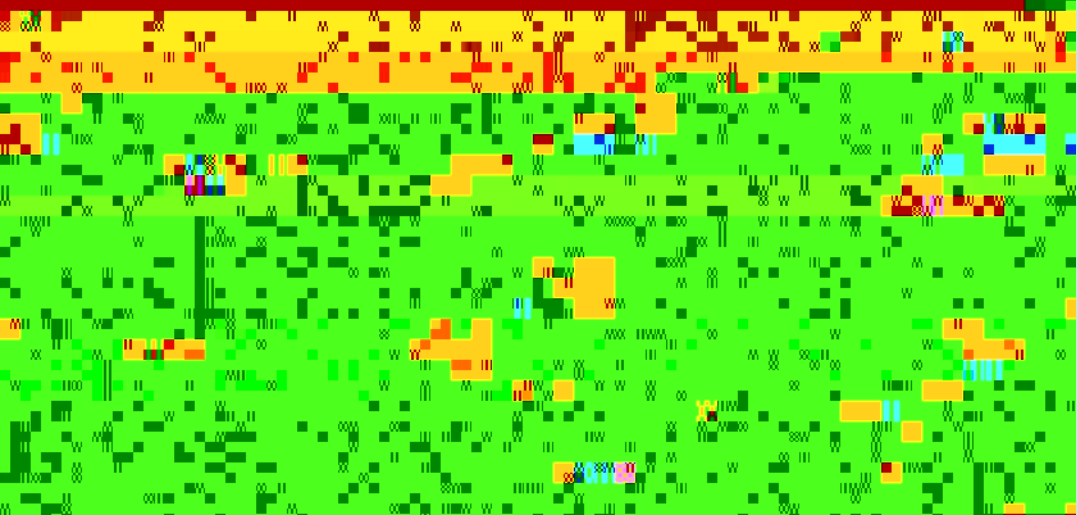
WASTE MANAGEMENT

July 2001

through a combination of federal, state, and local government and nonfederal agencies, individuals, communities, and businesses. The program focuses on reducing the amount of waste (paper, certain disposables, and other materials) that is sent to landfills and better managing their remaining volumes through a combination of recycling, reuse, and other waste management practices.

Programs that reduce the overall amount of waste and improve labor

and environmental performance. The program is designed to help businesses and communities reduce the amount of waste they generate and improve the way they manage their waste. The program is designed to help businesses and communities reduce the amount of waste they generate and improve the way they manage their waste.



General Overview of What's in America's Trash

Metals



Source reduction is a basic solution to the garbage glut: less waste means less of a waste problem. Because source reduction actually prevents the generation of waste in the first place, it comes before

other management options that deal with trash after it is already generated. After source reduction, recycling (and composting) are the preferred waste management options because they reduce



amount. of waste going to landfills and conserve resources.



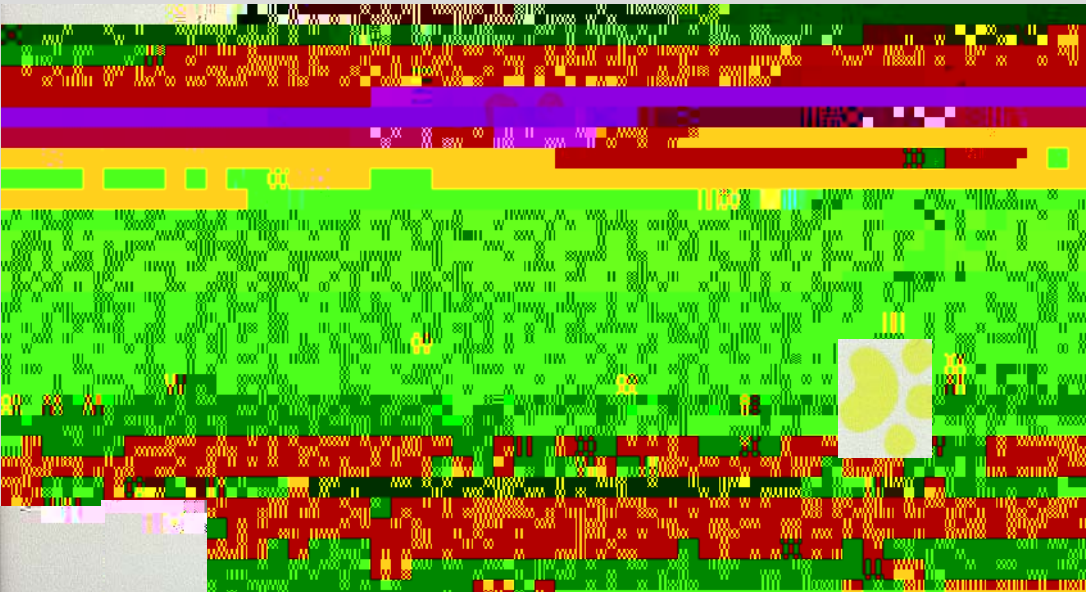
Putting source reduction into practice is likely to require some change in our daily routines. Changing habits does not mean a return to a more difficult lifestyle, however. In fact, just the opposite may happen. If we don't reduce waste, the economic and social costs of waste disposal will continue to increase, and communities-large and small, urban and suburban-will face increasingly harder decisions about managing their trash.

All parts of society need to work together to change current patterns of waste generation and disposal. The federal government develops and provides information and looks for incentives to create less waste. It also helps communities plan and carry out source reduction measures. State, local, and tribal governments can create the most appropriate source reduction measures for their areas. For example,

some communities already are using fee systems that require households and businesses to pay for trash disposal based on the amount they toss out.

Large consumers-manufacturers, retailers, restaurants, hotels, schools, and governments-can prevent waste in a variety of ways, including using products that create less trash. Manufacturers also can design products that use fewer hazardous components, require less packaging, are recyclable, use recycled materials, and result in less waste when they are no longer useful.

Individuals can evaluate their



of yourself. Discuss your ideas with neighbors, businesses, and other members of your community. It's important to remember that all actions will have some effect on the environment. If reusable products

need to be washed, for example, there may be an increase in water use. Individual consumers, however, can substantially reduce solid waste by following these basic principles:



REDUCE the amount of trash discarded.

REFUSE containers and products.

RECYCLE use recycled materials, and compost.

RESPOND to the solid waste dilemma by reconsidering

unnecessary packaging.

- 2. Adopt practices that reduce waste toxicity.**

REUSE

- 4. Maintain and repair durable**

- 6. Borrow, rent, or share items used infrequently.**

- 7. Sell or donate goods instead of throwing them out.**

RECYCLE

- 8. Choose recyclable products and containers and recycle them.**

- 9. Select products made from recycled materials.**

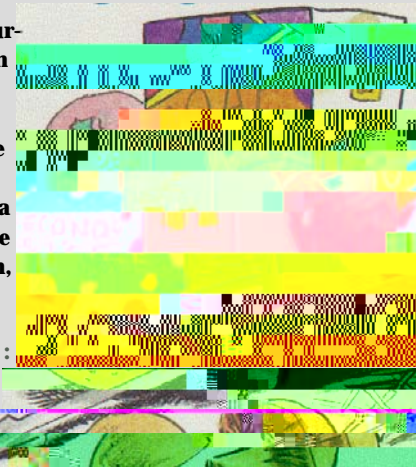
- 10. Compost yard trimmings and some food scraps.**

RESPOND

- 11. Educate others on source reduction and recycling practices. Make your preferences known to manufacturers, merchants, and community leaders.**

- 12. Be creative-find new ways to reduce waste quantity and toxicity.**

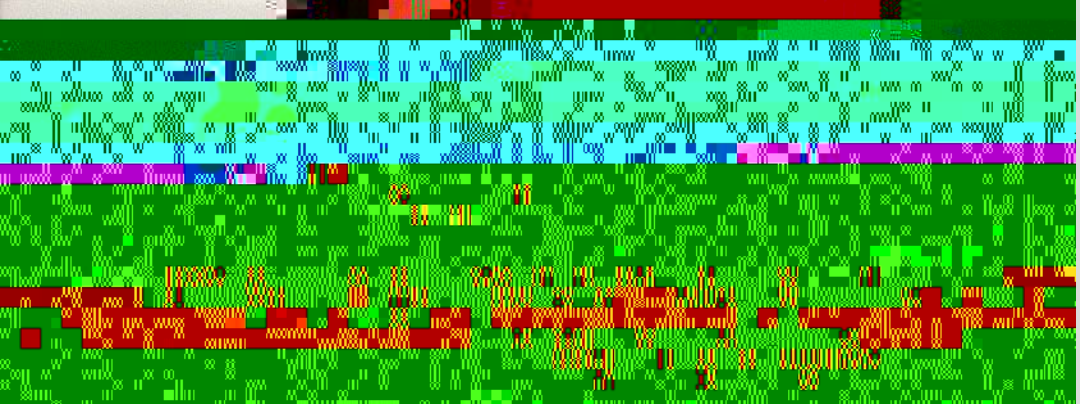
Packaging serves many purposes. Its primary purpose is to protect and contain a product. It also can prevent tampering, provide information, and preserve hygienic integrity and freshness. Some packaging, however, is designed largely to enhance a product's attractiveness or prominence on the store shelf. Since packaging materials account for a large volume of the trash we generate, they provide a good opportunity for reducing waste. In addition, keep in mind that as the amount of product in a container increases, the packaging waste per serving or use usually decreases.



- When choosing between two similar products select the one with the least unnecessary packaging.
- Remember that wrenches, screwdrivers, nails, and other hardware are often available in loose bins. At the grocery, consider whether it is necessary to purchase items such as tomatoes, garlic, and mushrooms in prepackaged containers when they can be bought unpackaged.

When appropriate, use products you already have on hand to do household chores (see Appendix A). Using these products can save on the packaging associated with additional products.

- Recognize and support store managers when they stock products with no packaging or reduced packaging. Let clerks know when it's not necessary to double wrap a purchase.
- Consider large or economy size items for household products that are used frequently, such as laundry soap, shampoo, baking soda, pet foods, and cat litter. These sizes usually have less packaging per unit of product. For food items, choose the largest size that can be used before spoiling.
- Consider whether concentrated products are appropriate for your needs. They often require less packaging and less energy to transport to the store, saving money as well as natural resources.
- Whenever possible, select grocery, hardware, and household items that are available in bulk. Bulk merchandise also may be shared with friends or neighbors.
- It is important to choose food servings that are appropriate to your needs. One alternative to single food servings is to choose the next largest serving and store any leftovers in a reusable container.



In addition to reducing the amount of materials in the solid waste stream, reducing waste toxicity is another important component of source reduction. Some jobs around the home may require the use of products containing hazardous components. Nevertheless, toxicity reduction can be achieved by following some simple guidelines.

• Take **accomplish the task at hand. Examples include choosing reduced mercury batteries, or planting marigolds in the garden to ward off certain pests rather than using pesticides. In some cases you may be using less toxic chemicals to do a job and in others you may use some physical method, such as sandpaper, scouring pads, or just a little more elbow grease, to achieve the same results.**

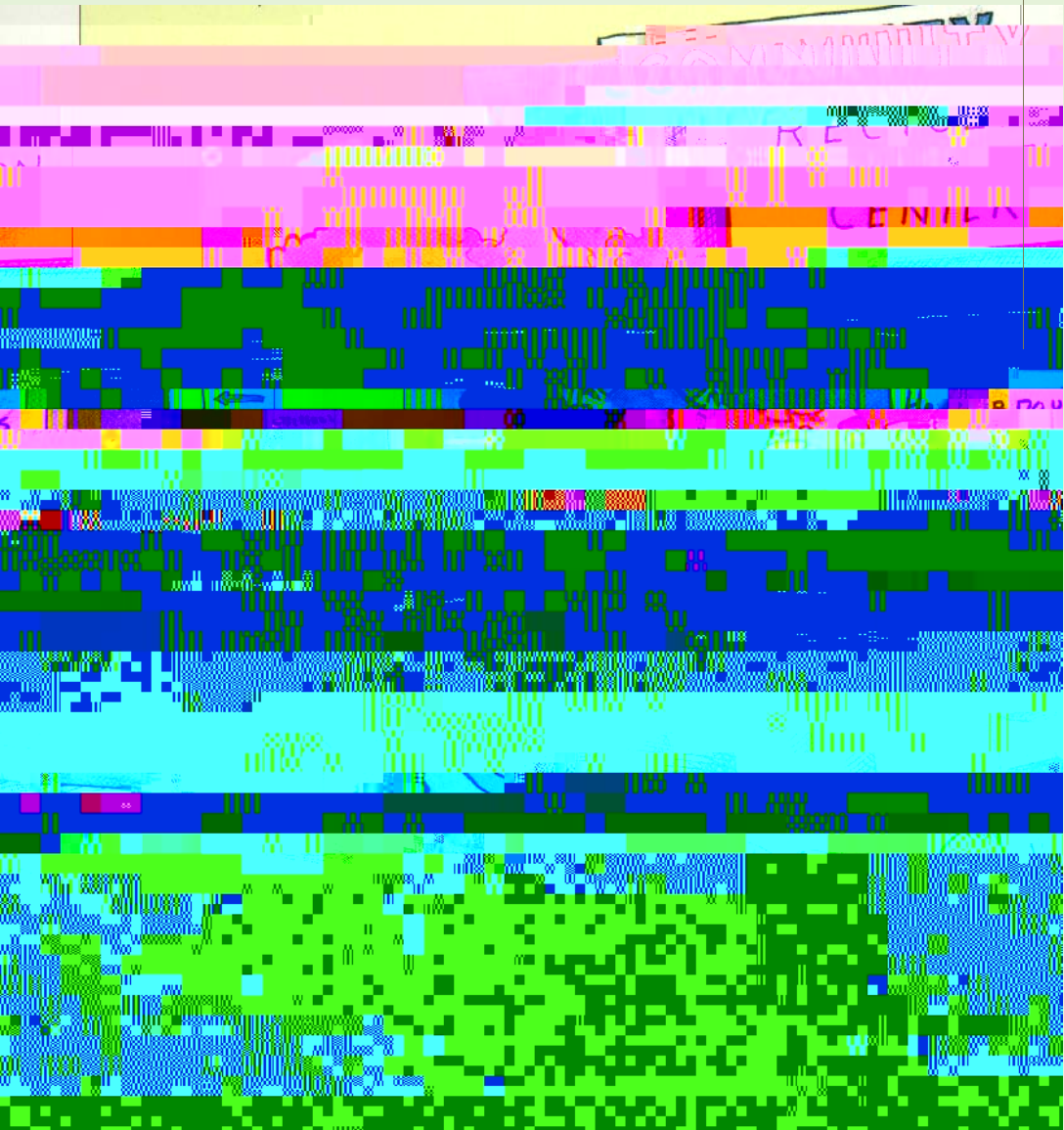
Learn about alternatives to household items containing hazardous substances. In some cases, products that you have around the house can be used to do the same job as products with hazardous components. (See Appendix A or check with local libraries or bookstores for guidebooks on nonhazardous household practices.)

If you do need to use products with hazardous components, use only the amounts needed. Leftover materials can be shared with neighbors or donated to a business, charity, or government agency, or, in the case of used motor oil, recycled at a participating service station. Never put leftover products with hazardous components in food or beverage containers.


For products containing hazardous components, read and follow all directions on product labels. Make sure the containers are always labelled properly and stored safely away from children and pets. When you are finished with containers that are partially full, follow local community policy on household hazardous waste disposal (see box on “Household Hazardous Waste Collection” on the next page). If at any time you have questions about potentially hazardous ingredients in products and their impacts on human health, do not hesitate to call your local poison control center.

Household Hazardous Waste Collection


For leftover products containing hazardous components, check with the local environmental agency or Chamber of Commerce to see if there are any designated days in your area for collection of waste materials such as leftover paints, pesticides, solvents, and batteries. On such days, qualified professionals collect household hazardous wastes at a central location



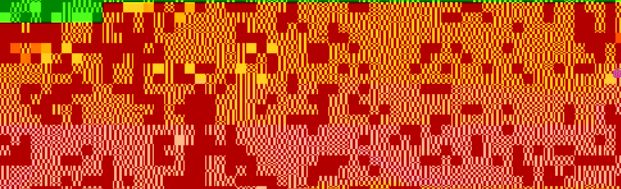
Consider reusable products.




Many products are designed to be used more than once. Reusable products and containers often result in less waste. This helps reduce the cost of managing solid waste and often conserves materials and resources. (Remember, reusable containers for food must be carefully cleaned to ensure proper hygiene.)



A sturdy mug or cup can be washed and used time and again. Many people bring their own mugs to work, meetings, and conferences.



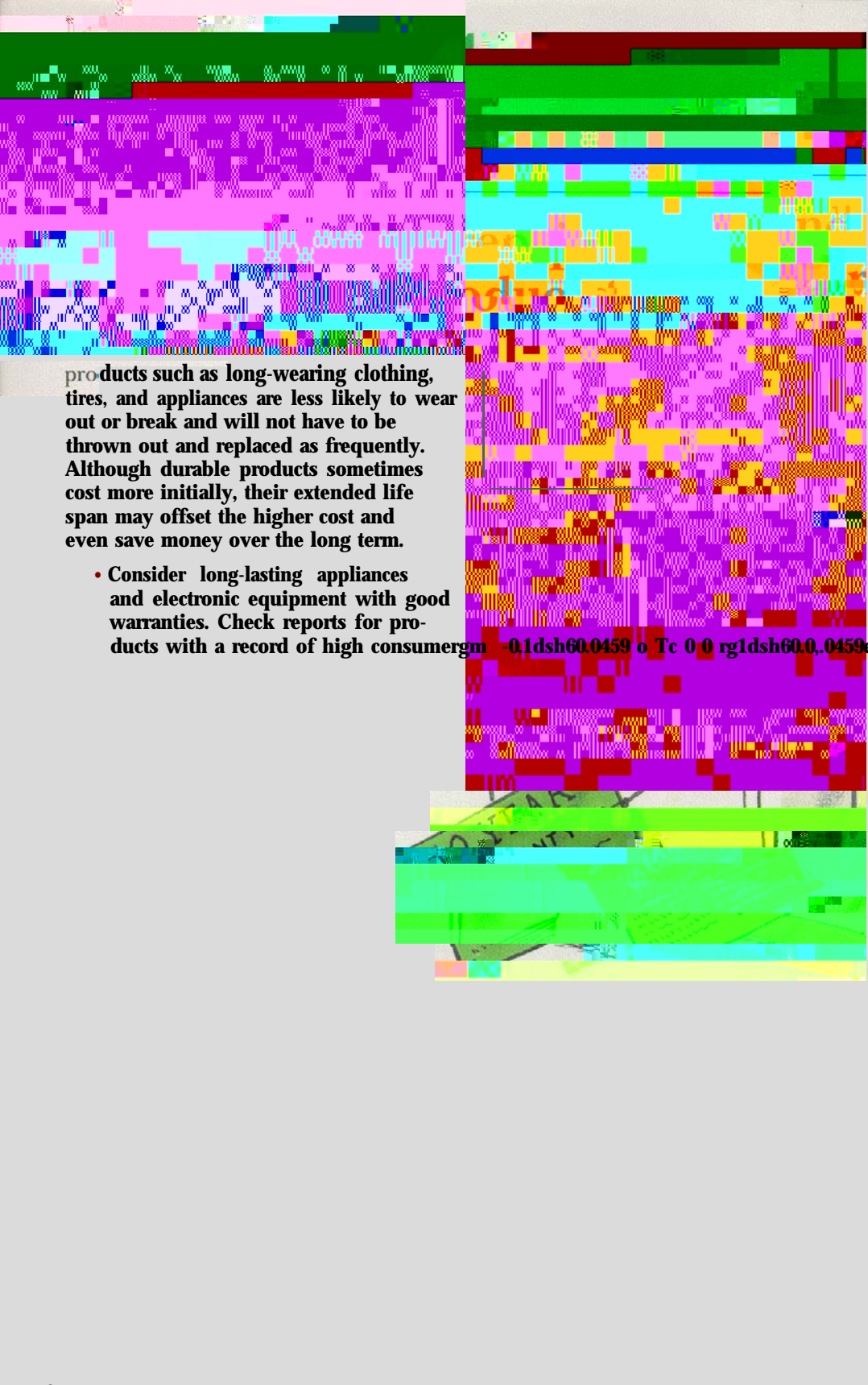
Sturdy and washable utensils and tableware can be used at home and for picnics, outdoor parties, and potlucks.



At work, see if “recharged” cartridges for laser printers, copiers, and fax machines are available. They not only reduce waste, but also typically save money.

Cloth napkins, sponges, or dishcloths can be used around the house. These can be washed over and over again.

- Look for items that are available in refillable containers. For example, some bottles and jugs for beverages and detergents are made to be refilled and reused, either by the consumer or the manufacturer.
- When possible, use rechargeable batteries to help reduce garbage and to keep toxic metals found in some batteries out of the waste stream. Another alternative is to look for batteries with reduced toxic metals.
- When using single-use items, remember to take only what is needed. For example, take



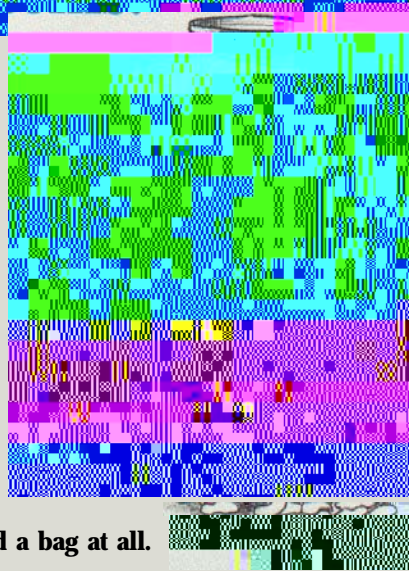
products such as long-wearing clothing, tires, and appliances are less likely to wear out or break and will not have to be thrown out and replaced as frequently. Although durable products sometimes cost more initially, their extended life span may offset the higher cost and even save money over the long term.

- **Consider long-lasting appliances and electronic equipment with good warranties. Check reports for products with a record of high consumer**

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Many everyday items can have more than one use. Before discarding bags, containers, and other items, consider if it is hygienic and practical to reuse them. Reusing products extends their lives, keeping them out of the solid waste stream longer. Adopt the ideas that work for you, add some of your own, and then challenge others in your school, office, and community to try these ideas and to come up with others.

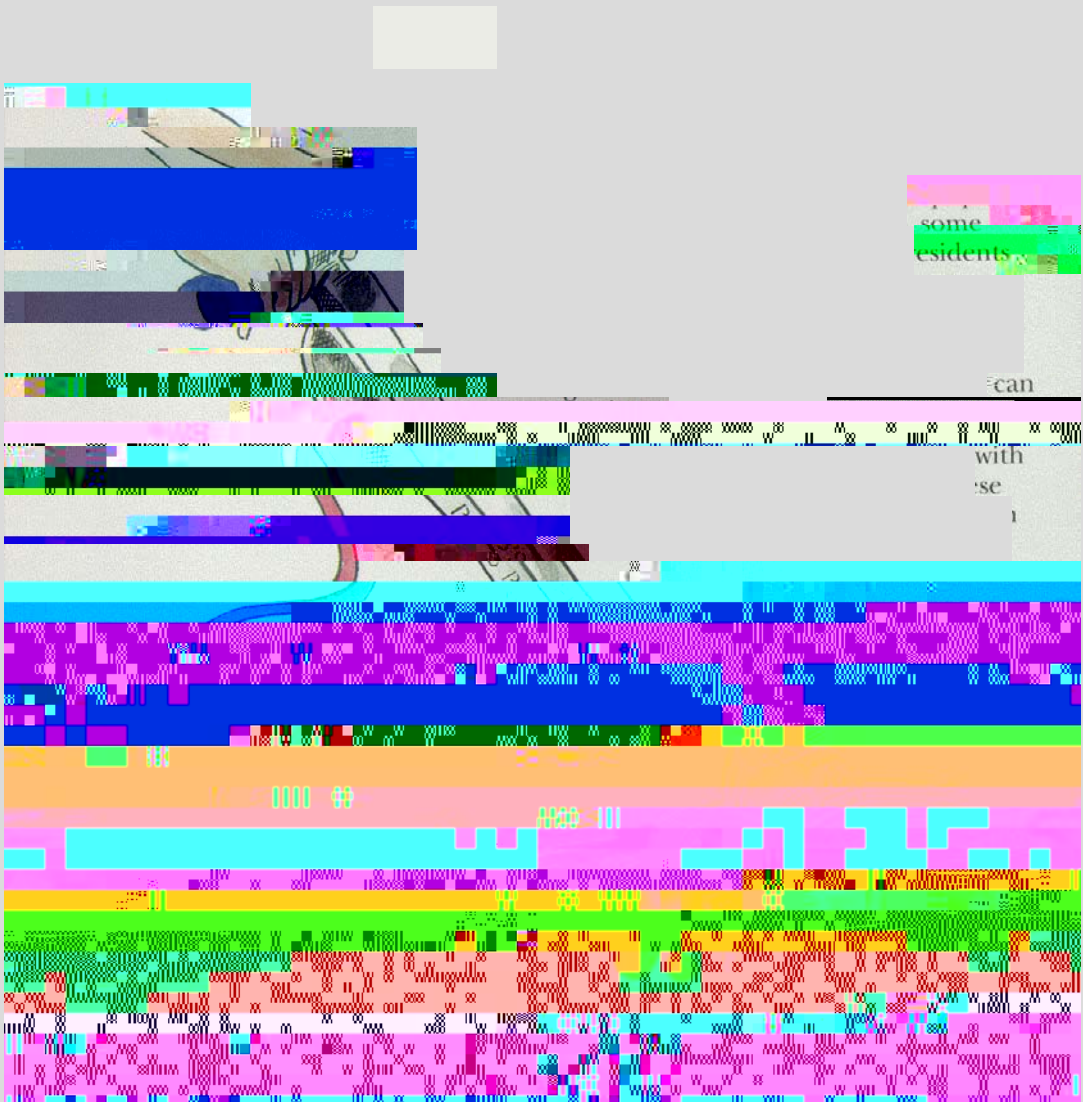
- Reuse paper and plastic bags and twist ties. If it's practical, keep a supply of bags on hand to use on the next shopping trip, or take a string, mesh, or canvas tote bag to the store. When a reusable bag is not on hand and only one or two items are being purchased, consider whether you need a bag at all.
- Reuse scrap paper and envelopes. Use both sides of a piece of paper for writing notes before recycling it. Save and reuse gift boxes, ribbons, and larger pieces of wrapping and tissue paper. Save packaging, colored paper, egg cartons, and other items for reuse or for arts and crafts projects at day-care facilities, schools, youth facilities, and senior citizen centers. Find other uses or homes for old draperies, bedding, clothing, towels, and cotton diapers. Then cut up what's left for use as patchwork, rags, doll clothes, rag rugs, or other projects.
- Reuse newspaper boxes packaging packages. Brown paper bags are excellent for wrapping parcels,



and osimilarbags, contaideas (and and ree Adoes. Bls,apersd rags, contaaper.) Tj -0.25 0 -10.

Borrow, rent, or share items used infrequently.

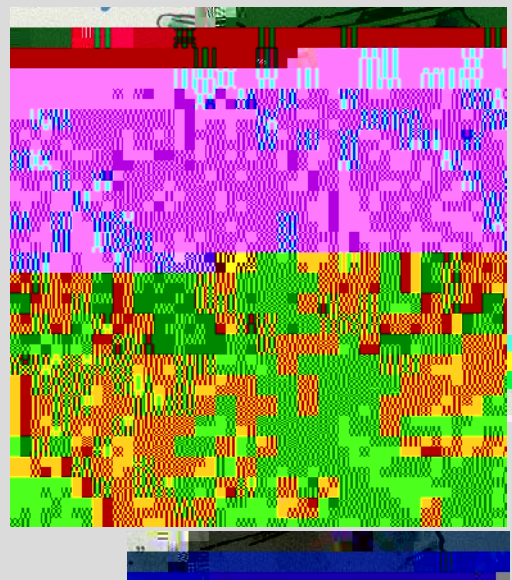
Seldom-used items, like certain power tools and party goods, often collect dust,



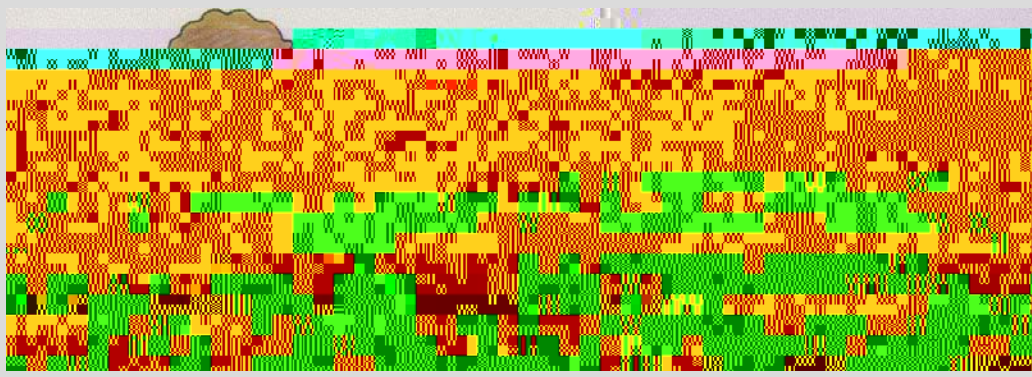


Sell or donate goods instead of throwing them out.

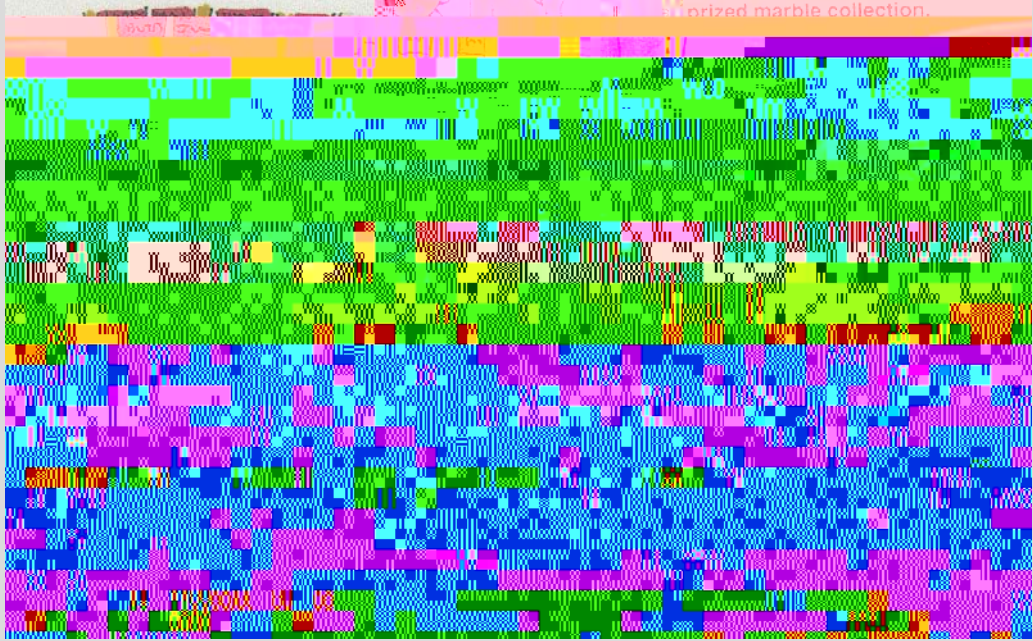
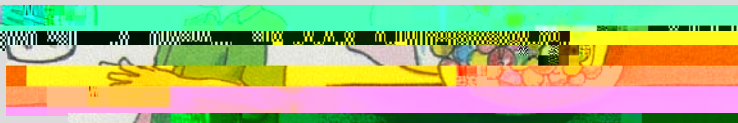
- **Donate or resell items to thrift stores or other organizations in need. Donors sometimes receive tax deductions or even cash. These organizations typically take everything from clothes and textiles to appliances and furniture. All should be clean and of respectable quality.**
- **Sell secondhand items at fairs, bazaars, swap meets, and garage sales.**
- **Give hand-me-down clothes to family members, neighboring families, or the needy. Consider acquiring used clothing at thrift or consignment shops. The condition of used clothing in these stores is screened: clothes are typically laundered and cannot have tears or stains.**
- Consider conducting a food or clothing drive to help others. Where appropriate, encourage area merchants to donate damaged goods or food items that are still edible to food banks, shelters, and other groups that care







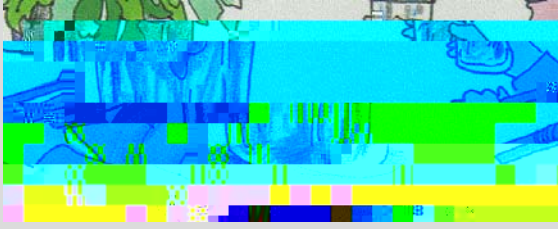
butter jar begins on the super,market shelf, filled with your favorite brand. When emptied and cleaned out, you and your family can use it in many practical ways.




9. When you collect too many peanut butter jars, be sure to recycle the extras. They may be used to manufacture new peanut butter jars or other containers.




10. Then use it to show off the beautiful flowers you picked for the dinner table when the fishing is done.

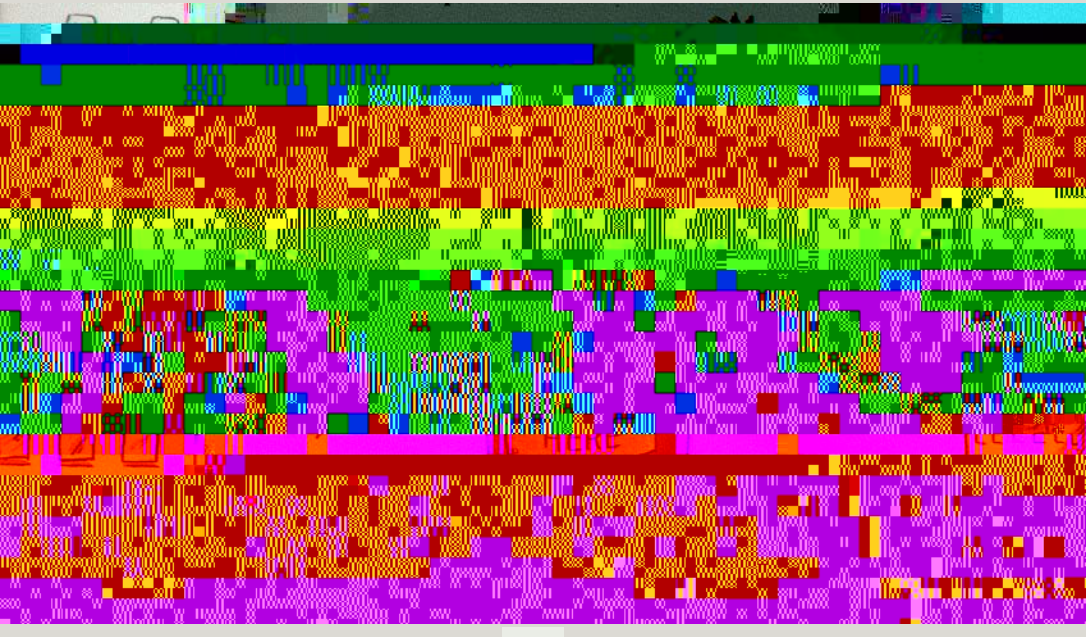




It can be used to
store leftovers...



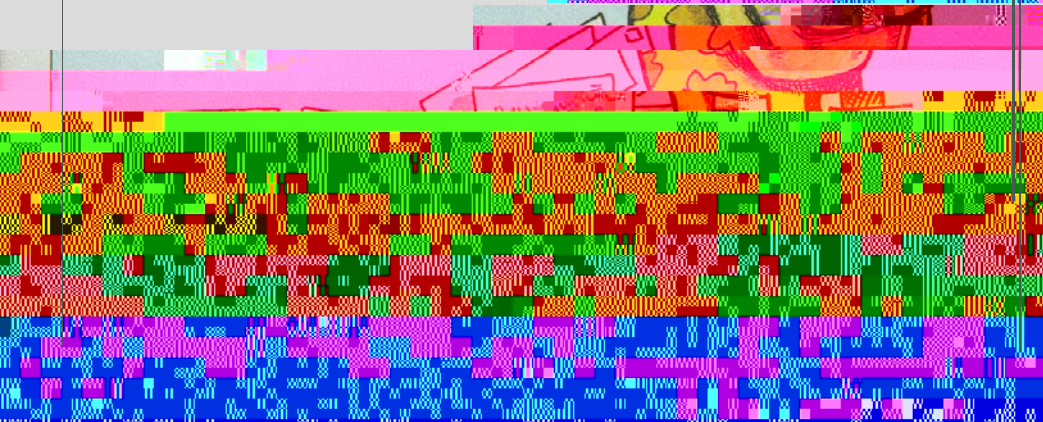
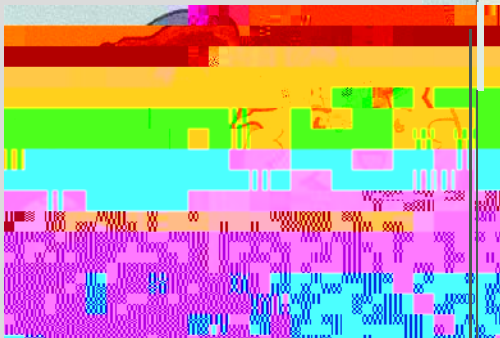
Participating in a local or regional recycling program is only part of the recycling process. For recycling to succeed, recyclable materials must be processed into new products, and those products must be purchased and used,

- **Look for items in packages and containers made of recycled materials. Many bottles, cans, paper wrappings, bags, cereal boxes, and other cartons and packages are made from recycled materials.**
 - **Use products with recycled content whenever you can. For instance, many paper, glass, metal, and plastic products contain recovered materials. Some examples are stationery; wrapping paper, computer paper, and many containers. Many of these items are available in grocery, drug, and other retail stores. Mail-order catalogues, stationers, and print shops also may stock these and other recycled items.**
 - **When checking products for recycled content, look for a statement that recycled materials were used and, if possible, choose the item with the largest percentage of recycled content, if known. You can also call directory assistance at 1-800-555-1212 to obtain manufacturers' 800 numbers to find out how much recycled material their products contain.**
 - **Encourage state and local government agencies, local businesses, and others to purchase recycled products such as paper, re-refined oil, and retread tires**
- 

Each year, millions of Americans make one or more purchases through the mail. When people make these mail-order purchases, their names often are added to a list and marketed to other companies that do business through the mail. While many people enjoy the catalogues they receive as a result of these lists, those who would like to receive less national advertising mail can ask companies not to rent or share their names with other mailers. People who choose not to shop at home can also write to:

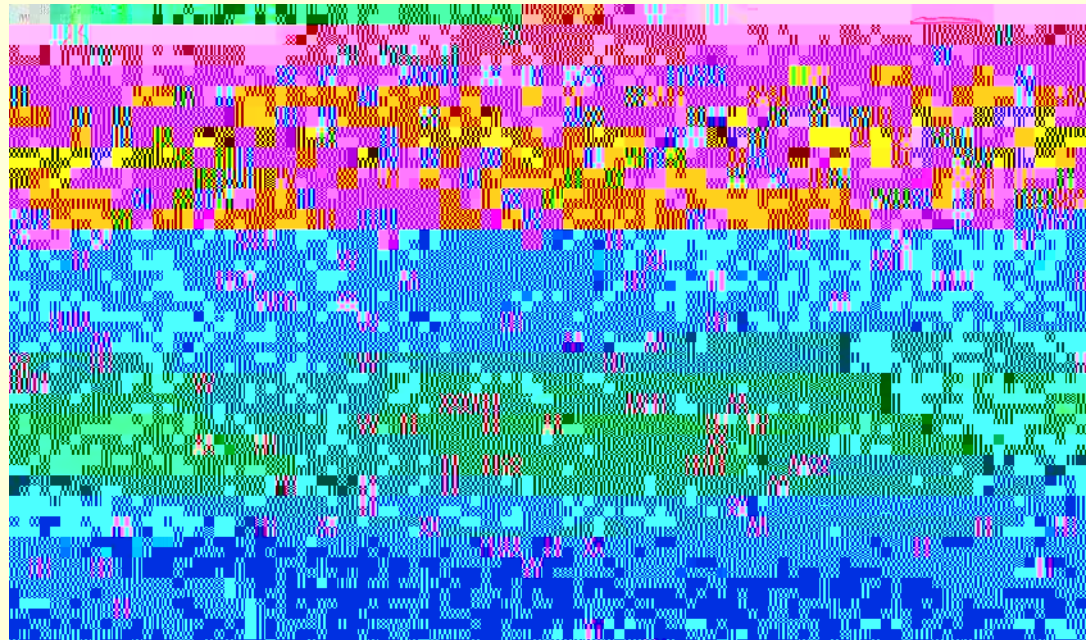
Mail Preference Service

Direct Marketing Association 10thernto2 BT 0.895216 rg2.08 42 508.0



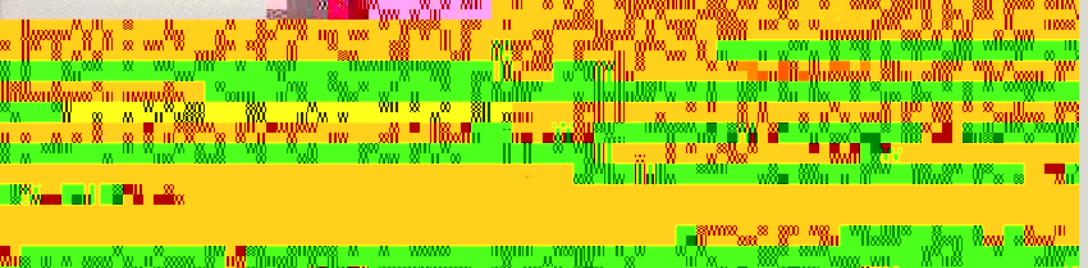


Backyard composting of certain food scraps and yard trimmings can significantly reduce the amount of waste that needs to be managed by the local government or put in a landfill. When properly composted, these wastes can be





Composting Is Easy!


A compost pile can be set up in a corner of the yard with few supplies.



Educate others on source reduction and recycling practices. Make your preferences known to manufacturers, merchants, and community leaders.



Share information about source reduction, recycling, and composting with others. Spread the word to family, friends, neighbors, local businesses, and decision-makers. Encourage them to learn more about solid waste issues and to work toward implementing and promoting source reduction, recycling, and composting. All have the power to influence others and help create the type of world in which we want to live.

- 
- Consider writing to companies to encourage them to reduce unnecessary packaging and the use of hazardous components in products. In addition, let companies know when they've made positive changes. Many companies offer toll-free 800 numbers you can call with these comments.
 - Encourage source reduction, recycling, and composting programs for yard trimmings in the community.
 - Where appropriate, encourage the use of reusable, recycled, and recyclable materials in the workplace.
 - Encourage the use of efficient, long-lasting equipment.
- Urge schools to provide environmental education and to teach about source reduction, recycling, and composting.
 - Support an environmentally sound waste program in your community that starts with source reduction. Your community also needs access to adequate and safe solid waste facilities such as recycling and composting center combustors, and landfills.

There are many ways to reduce the amount and the toxicity of solid waste. By thinking creatively, many new uses for common items and new possibilities for source reduction and recycling can be discovered. Here are just a few ideas, Now, try some of your own!

Turn a giant cardboard box into a child's playhouse.

Transform a plastic ice cream tub into a flower pot.

- **Give pet hamsters or gerbils paper towel and toilet paper cardboard tubes with which to play. Use an egg carton to plant seedlings.**

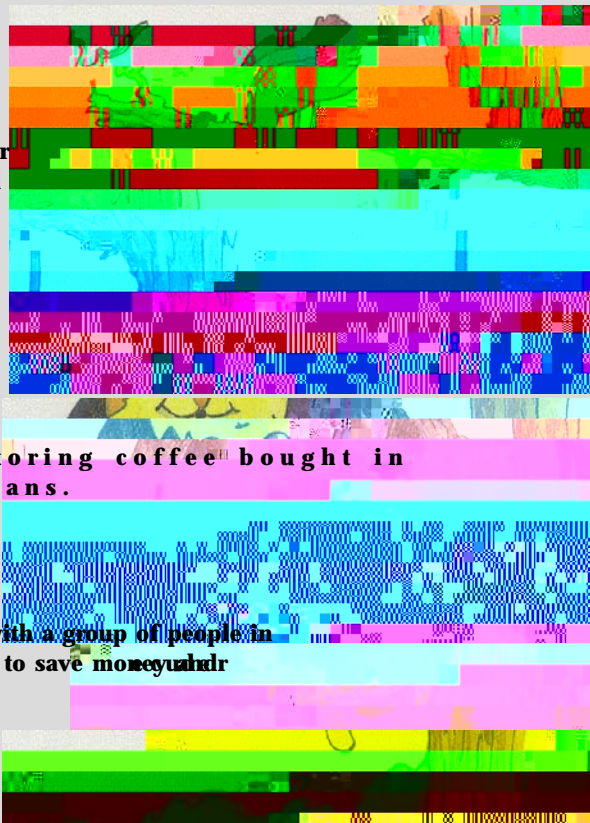
Turn used tires (not steel-belted) into children's swings or other playground equipment.

Select nontoxic inks

Combine source reduction techniques. For example, try storing coffee bought in bulk in empty coffee cans.

Choose beverages such as water or milk in reusable containers,

Place an order through the mail with a group of people in order to save money.



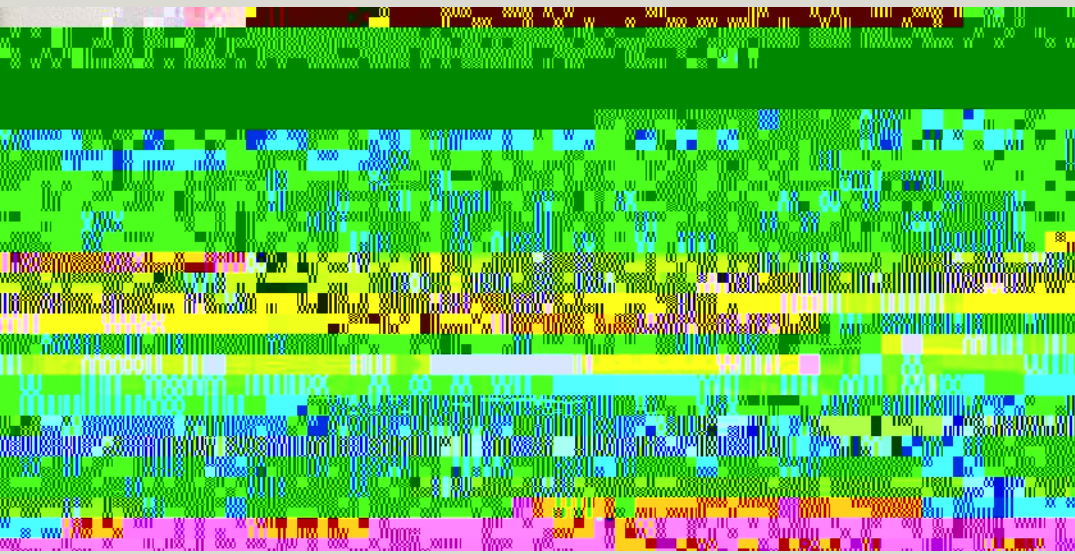
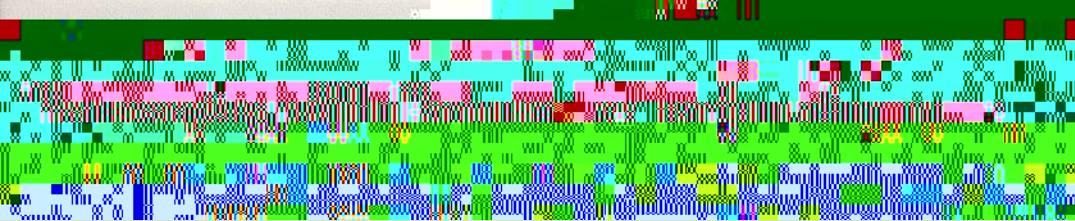
first place than to cope with it after it has been created. Through source reduction, recycling, and composting, many environmental benefits can be realized. Just remember the four "R's"...

REDUCE the amount of trash discarded.

REUSE containers and products.

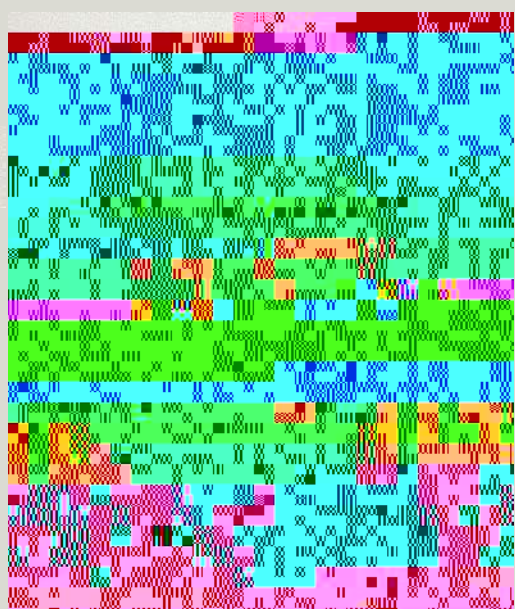
RECYCLE, use recycled products, and compost.

RESPOND to the solid waste dilemma by reconsidering waste-producing activities and by expressing preferences for less waste.

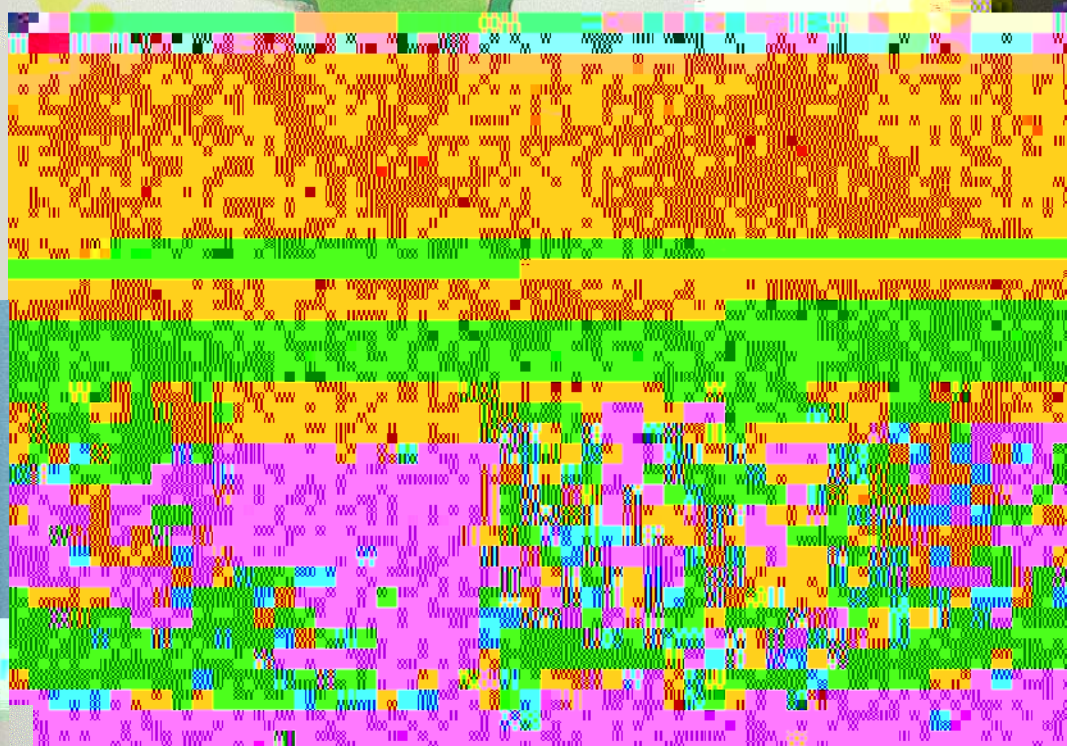


Berkeley, California, Doing It Right from the Start

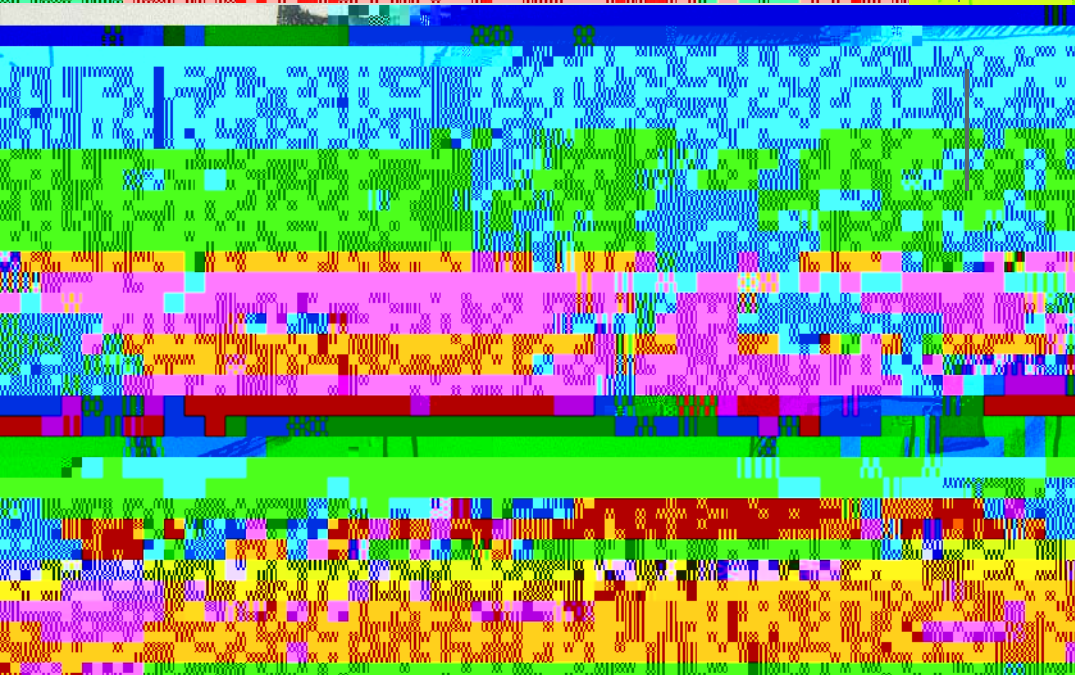
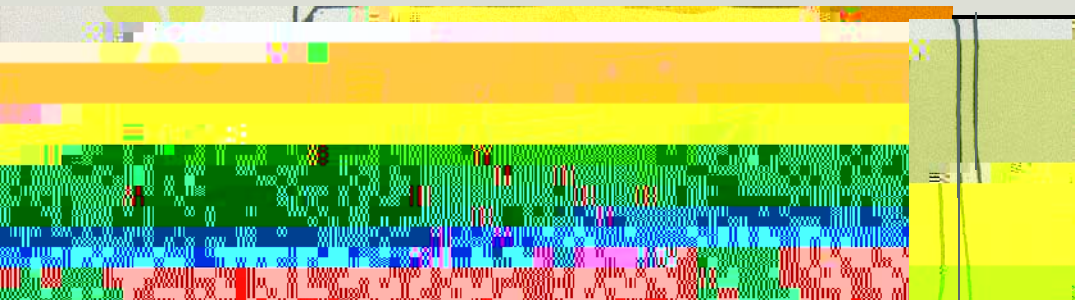
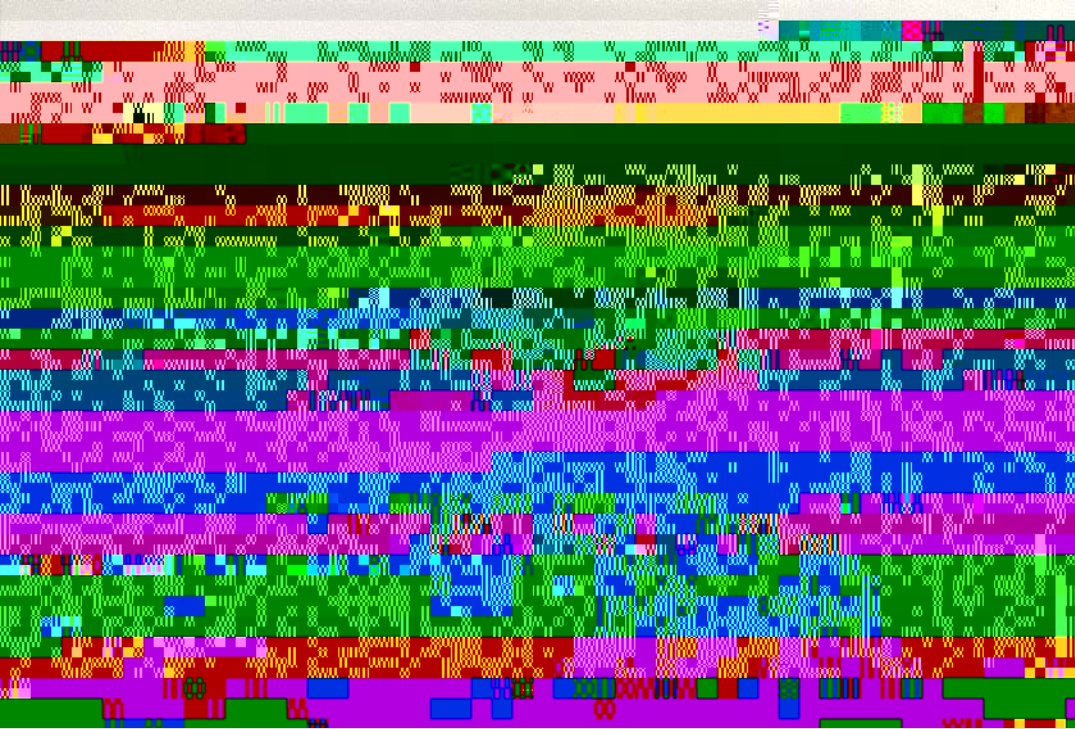
Berkeley, California, implemented a citywide campaign to help consumers make environmentally sound decisions. The City uses catchy slogans, such as “do it right from the start,



ng bins
ourage







around the house. This can be done

or products without hazardous constituents to

Drain cleaner

Use a plunger or a plumber's snake.

Oven cleaner

Clean spills as soon as possible.

Do not use this method in self-cleaning

Toilet bowl cleaner

Use a toilet brush and hot

Rug deodorizer

Deodorize dry carpets by spraying

antique silver knives. The blades

seeds or leaves around animal

DO NOT mix anything

antiseptic cleaning

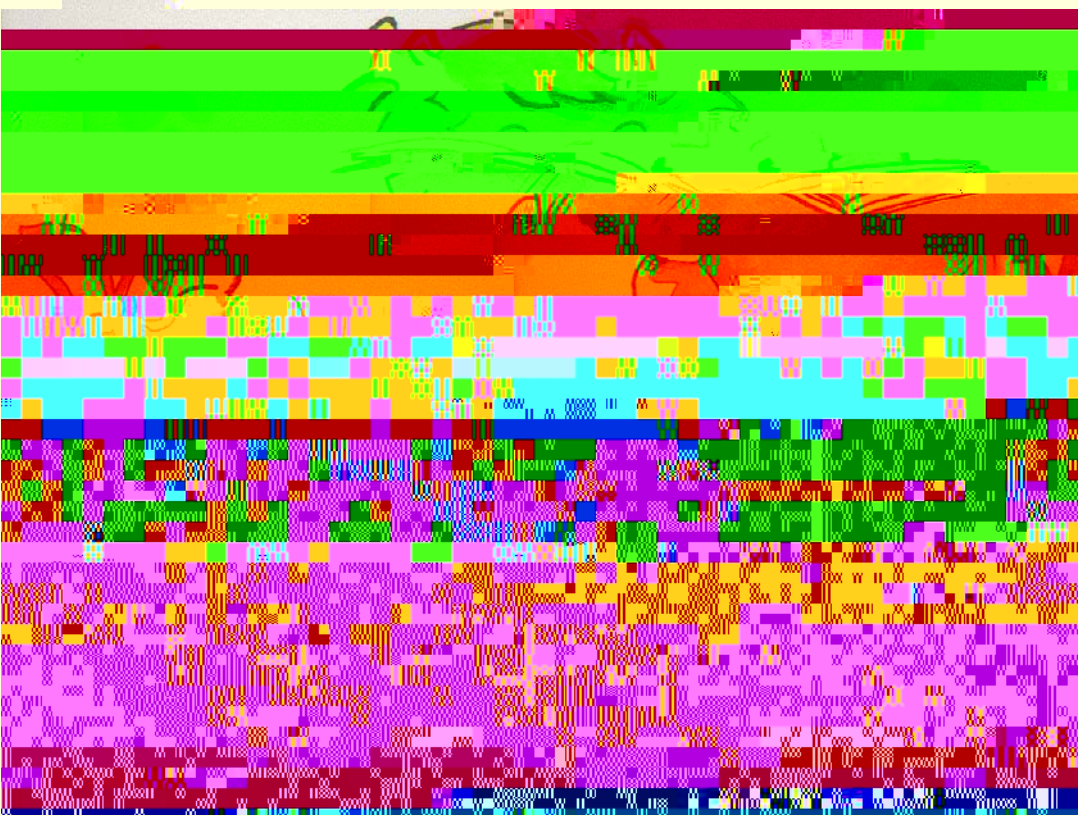
Appendix B

Bimetal - Typically refers to beverage containers with steel bodies and aluminum tops. Steel companies do recycle bimetal cans, but they are handled differently in the recycling stream from aluminum cans.

Combustion -The controlled burning of municipal solid waste to reduce volume, and, commonly, to recover energy.

Composting -The controlled microbial decomposition of organic matter (such

Recycled content - The portion of a product's or package's weight that is



• *Let's Reduce and Recycle! A*