



Reuse + Recycling = Waste Reduction

A Guide for Schools & Groups



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Introduction

Schools and Groups = Waste Reduction Opportunities

Organized groups have a tremendous opportunity to operate waste reduction programs. School-related groups might include science classes, environmental clubs, and parent-teacher organizations. Other groups might include Girl and Boy Scouts, Boys and Girls Clubs, 4-H, or Future Farmers. These groups can often educate the whole community about the benefits of waste reduction and encourage everyone to make waste reduction a part of their everyday life styles. Increasing the flow of reusable and recyclable materials can even generate extra funds for school departments and groups.

No matter how you live, work, and play, everyone produces waste. We can control this waste by reducing, reusing, and recycling it.

While many people already recycle products at home, waste reduction opportunities exist anywhere we have waste. Recycling is one way to reduce waste; reusing products is another. Products that can be reused and recycled are countless, and include everything from paper to clothing to worn-out electronics. Some examples of the many items we can reuse include clothing, school supplies, and sports and electronic equipment. The items we most commonly recycle are paper, aluminum, glass, steel, cardboard, and yard waste.

Most waste reduction efforts save money, energy, and natural resources, and can teach children and young adults how solid waste affects their lives and their environment.

The Benefits of Waste Reduction



Be Part of the Solution

Nearly 70 million tons of materials were recycled or composted in 2000. Help add to that number by recycling at least one pound of waste per day.



The economic and environmental benefits of waste reduction (which includes preventing waste, reusing, and recycling) accrue both locally and globally. These activities can:

- Prevent pollution created by manufacturing new products or products made from virgin materials.
- Save energy in manufacturing, transportation, and disposal of products.
- Decrease greenhouse gas emissions, which contribute to global climate change.
- Conserve natural resources such as timber, water, metals, and fossil fuels.
- Reduce the need for landfilling and incineration, which are expensive to operate and maintain.
- Protect and expand U.S. manufacturing jobs and increase U.S. competitiveness.
- Help sustain the environment for future generations.

Waste Reduction Programs that Work

You Are Unique

The ideas in this handbook require various levels of commitment and support. Depending on the nature of your school or organization, you will have different needs and considerations in terms of storage, space, time, commitment, types of materials collected, costs and level of interest and participation. As you consider various waste reduction options, think carefully about your overall capabilities to meet your program's goals. Also, keep in mind that you might run into issues specific to your school or group that need to be resolved before you can begin a program.



The following options for waste reduction programs are some suggested methods that work for others. After evaluating your needs, capabilities, and goals, choose the option that works best for you.

- **One-time or periodic reuse or recycling drives**
- **Continually operating reuse or recycling programs**
- **Stationary or mobile collection centers**
- **Sponsored waste reduction programs**
- **Credit accounts at local recycling or materials collection centers.**

After assessing these options, use the worksheets on pages 11 and 12 to help you get started.

Conduct one-time or periodic reuse or recycling drives

Students and groups can establish one-time or periodic drives to collect reusable and recyclable items. Reusable items, such as clothing, books, toys, computers, and other electronic equipment, or recyclable materials, such as paper, aluminum, glass, and plastic, can be brought to a drop-off location on an appointed day or days.

A reuse program might involve:

- Swapping with one another on site.
- Donating the collected materials to a specific beneficiary, such as a library, shelter, or charitable organization.
- Selling the collected materials at a community yard sale and using the profit for school or group activities. (These drives are also sometimes part of a national, state, or local government campaigns.)
- Collecting materials for a commercially sponsored “take-back” program.

A recycling program might involve:

- Having your local recycling center collect the materials and transport them back to the center for processing.
- Arranging for adult volunteers to take the collected materials to the recycling center.
- Hiring a hauler for transportation.

Seasonal Products

Collect Christmas trees and recycle them into mulch. Use the mulch to help offset landscaping costs in green spaces at your school or group’s location. Alternatively, you can donate the mulch to nursing homes or other organizations for their use. If you collect enough trees, you can also consider selling the mulch for fund-raising. Keep in mind that you will need to rent mulching/shredding equipment from your home improvement store, unless you can find someone to loan a free machine to a good cause! And remember, only an adult can operate such equipment.



If you have a community waste reduction or recycling coordinator, be sure to coordinate with them on this process.

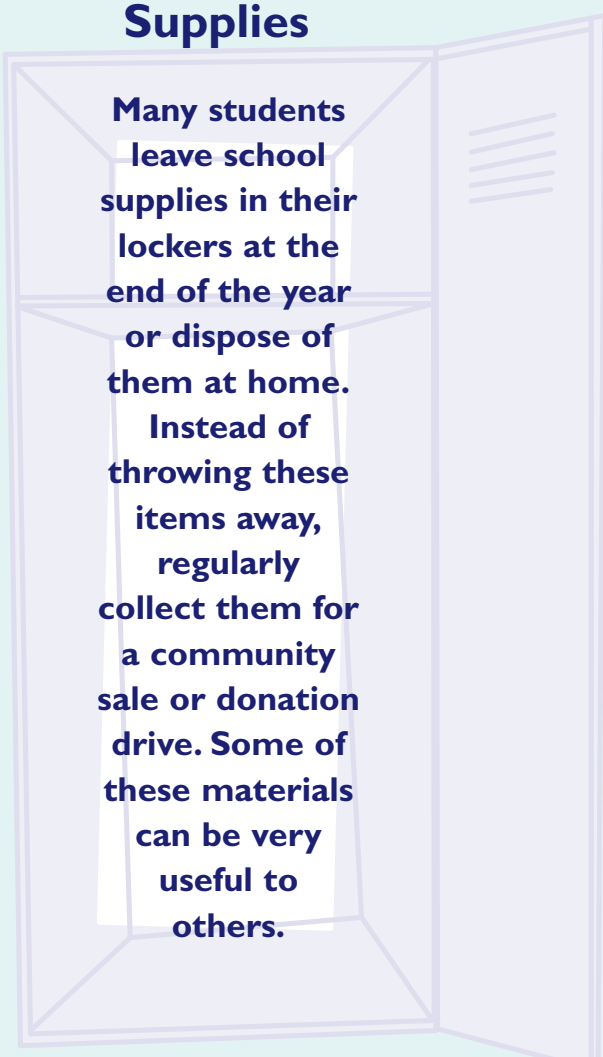
This option does not require long-term storage space, but it does require extra space in people's homes for collecting materials before they are brought to the collection location.

Establish a continually operating reuse or recycling program

Many different kinds of permanent reuse or recycling programs exist, with different options for funding, supplies, and services. Student-run clubs, local or state government programs, or nonprofit institutions are all possible sources of support for your program. For this kind of program, your school or group needs collection bins and storage space for the reusable or recyclable materials, which also should be picked up regularly by a designated hauler.

Even though a long-term reuse or recycling program requires careful planning and continuous outreach, it can also offer great rewards. Such a program allows participants to see the results of their collection efforts on a daily or weekly basis. Depending on how the program is set up, students might even run the program, with adult supervision. An in-school or outside group program also greatly encourages people to make waste reduction part of their daily routine.

School Supplies



Many students leave school supplies in their lockers at the end of the year or dispose of them at home. Instead of throwing these items away, regularly collect them for a community sale or donation drive. Some of these materials can be very useful to others.

Composting

Composting is an age-old practice with modern-day applications that appeals to people of all ages. Composting is the controlled biological decomposition of organic material, such as food scraps or lawn trimmings. It is also a waste reduction method.

Collecting certain food scraps and yard trimmings significantly reduces the amount of waste that needs to be disposed of or otherwise managed. Compost can be used as a soil additive to improve soil texture, increase the ability of soil to absorb air and water, suppress weed growth, decrease erosion, reduce the need to apply commercial soil additives, and degrade some toxic materials in the soil.

Many municipalities collect compostable materials, such as yard and food scraps, paper, and coffee grounds and filters, instead of disposing of the waste. This technique may require more time, commitment, management, supervision, and space than other waste reduction programs discussed in this handbook, but it is a viable option proven to be successful in schools, groups, and communities. Your school or group should work closely with your community leaders before beginning this kind of waste reduction program. Lawn businesses can also collect yard waste and conduct their own composting program. For more detailed information on composting, visit www.epa.gov/epaoswer/non_hw/compost/ or www.compostingcouncil.org.

Establish a stationary or mobile collection center

Because schools often serve as focal points for local residents, they are ideal for stationary reuse and recycling drop-off points. A storage facility where people can drop off their reusable and recyclable products should be put in an easily accessible holding area, such as a parking lot. You can either arrange for pickup of the collected items by a local recycling center or hauler or enlist volunteers to transport the collected materials to a nearby recycling center or charity. For some very specific materials, such as computers and other electronics, you might need to make special arrangements with a manufacturer or business that collects those particular items (sometimes called “take-back programs”).

Schools in smaller communities or rural areas can also serve as mobile recycling centers. Smaller schools or groups can make arrangements to share a trailer that travels to different locations. For example, the trailer can be borrowed from a recycling center for a special fund-raising activity.

Since these waste reduction programs directly involve the community and depend heavily on the support of its residents, be sure to widely publicize your efforts to maximize participation. Post a schedule of the trailer’s stops in schools, in area stores, and on the Internet.

You will need storage space at each pick-up point where reusables or recyclables can be collected until the trailer arrives. Arrange for convenient locations, such as grocery store parking lots, to temporarily park the trailer, and establish regular deposit schedules with your local recycling facility.

Team up with a sponsor for waste reduction programs

Corporate or government organizations sometimes sponsor reuse or recycling drives or donate money or supplies to start a waste reduction program. Corporate sponsors may be good sources for funding and advertising, but you might have to follow their guidelines and have the sponsor's name associated with your school or group.

Through EPA's "Plug-In To eCycling" program, companies that manufacture and sell consumer electronics are teaming up with government agencies to increase the opportunities Americans have to reuse or recycle their old electronics and motivate them to make use of these opportunities. Your school or group may be able to spread the word about these opportunities, or may be welcome volunteers at some events. See the "Resources" section for more information.



Do you have any old computers, cell phones, stereo equipment, televisions, VCRs, PDAs, video games, or other electronic equipment sitting around in your home? Believe it or not, these items, as well as other pieces of electronic equipment, can be recycled and refurbished for reuse in your schools and community organizations. You can help by partnering with your local government or community groups on their electronics recycling efforts.

To learn more about e-cycling and ways you can contribute to the safe reuse and recycling of electronics, see EPA's "Plug-In To eCycling Event Tool Kit." Offering valuable guidance on planning, funding, staffing, and collecting and reporting, the kit is intended to provide interested individuals with easy-to-act-on information, helping them plan successful recycling collection events for consumer electronics.

The Event Tool Kit provides valuable information about:

- Your first steps in planning an event
- Necessary tasks to complete before the event
- Things you need to know about the day of the event
- Important post-event tasks

To learn more about EPA's "Plug-In To eCycling" Program, and to view an online version of the "Plug-In To eCycling Event Tool Kit," visit www.epa.gov/epaoswer/osw/conserves/plugin/toolkit.htm.

Establish a “credit account” with a local recycling center

If a school or group establishes a “credit account” with a local recycling center, the monetary value of any recyclables dropped off there will be added to that account. Students and others can drop off recyclables and have the proceeds of those items posted to that account. That means your school or group will receive the money from those recyclables.

Promoting the school or group that will be the recipient of the recycling effort is important as a motivator for participation and to ensure that credit is properly given to the organization. Classroom activities and publicity reinforce recycling lessons and increase participation. If storage space is a problem for your location, you might want to consider this type of program.

Recycling Ideas

Paper: If you collect paper for recycling, be sure you are collecting it properly. Contact your municipal solid waste management agency or your local recycling center, and follow their specific guidelines on collecting and sorting. Your diligence in sorting will ensure that the paper is not only recyclable but also marketable to companies that can turn it into recycled-content products.

Glass: Regardless of color, most glass food and beverage containers are 100 percent recyclable and can be reused an infinite amount of times. Some glass products, such as windows, mirrors, drinking glasses, dishes, and light bulbs, cannot be recycled. Be sure to find out if your local recycling center has any restrictions regarding separation of colors before you start collecting glass for recycling. Also check with the center about metal tops and rings.

Metals: Different metals require different recycling processes. Two of the most common metals that are recyclable from schools are aluminum cans and steel (actually tin-coated steel) cans. An easy way for students to separate steel from aluminum is to hold a magnet to them. Magnets won't stick to aluminum. If you plan to collect mixed metals, you might be able to borrow magnetic sorting tables from a can recycling company. Check with your local recycling center or solid waste agency.

Plastics: Different types of plastic are chemically different and are, therefore, recycled differently. Schools commonly generate two types of recyclable plastic: polyethylene terephthalate (PET) and high-density polyethylene (HDPE). Check with your local recycling center or solid waste agency to find out which types of plastic are accepted.

Steps for Starting a Waste Reduction Program

Safety First

Remember to consider safety issues when deciding what kind of waste reduction program you want to run. For example, if you are holding a glass recycling program at an elementary school, make sure glass recyclables are safely contained and handled by adults. Middle and high school students are probably able to manage these products safely with the proper equipment. Be sure to wear heavy gloves and goggles while handling glass recyclables. Also be sure to wash glass products before adding them to the recycling bin to avoid bugs, odors, and rodents. Also make sure that everyone, including students participating in the program, is covered by the appropriate and necessary insurance in case of accidents.



The most successful reuse and recycling programs follow a series of steps, as follows:

- 1 Select the type of waste reduction program that works best for your group.
- 2 Organize a team.
- 3 Decide what materials to collect.
- 4 Identify viable end uses or markets for your materials.
- 5 Work out a budget.
- 6 Contact your local authorities for assistance.
- 7 Establish a system for collecting and storing materials.
- 8 Educate your school and group about the waste reduction program.
- 9 Set overall and individual goals.
- 10 Reward participants.

Step 1:

SELECT THE TYPE OF WASTE REDUCTION PROGRAM THAT WORKS BEST FOR YOUR GROUP

You can model your program after one described in this handbook or design one to fit your schools and group's needs. Because the success of your waste reduction program will depend on the level of interest and enthusiasm in your school or group, let others help you make this decision.

One possible way to measure the level of interest in your program is to survey students, parents, and group leaders, asking specific questions about their willingness to participate. Some questions to ask might include:

- Do you know about the benefits of reusing and recycling?
- Are you willing to keep reusable and recyclable materials at home?
- Are you able to bring reusable and recyclable material to school or another drop-off location?
- Can you donate your time to volunteer for the program?
- Can you contribute money or donate advertising for the program?

After the survey has been completed, you can use the results to gauge which type of collection program might work best for your school or group.

Step 2:

ORGANIZE A TEAM

A good team will help the program run smoothly. Besides being responsible for program planning, publicity, and operations, the team structure makes waste reduction fun. The team can include students, parents, teachers, custodians, or other volunteers. A strong team leader is essential for generating support and enthusiasm for the waste reduction program. A student leader, department director, club sponsor, or teacher, whose program benefits from the waste reduction effort, is a good choice for team leader. In fact, anyone interested in protecting the environment by reusing or recycling will probably do a great job!

Step 3:

DECIDE WHAT MATERIALS TO COLLECT

Deciding what materials to collect for reuse and recycling is an important initial step. You might know of a particular material or product that is generated in large quantities that can easily be reused or recycled, and you might want to focus your entire program on that one material. You might decide to address a once-a-year issue, such as Christmas trees or old telephone books. Or, you might want to address an issue that is not handled by your municipal recycling program, such as batteries or electronic equipment.

When deciding what materials you want to include in your reuse or recycling program, first consider what programs are already underway in your area. Use the worksheet below to help you. Next, consider materials that you know you can sell, donate, or otherwise deposit at a municipal recycling center. Participating in a community waste reduction program is only part of the reusing and recycling process. For reuse to succeed, materials must be donated or sold to people or organizations that will use the material. For recycling to succeed fully, recyclable materials must be sold to a company that can process them into new products, and those products must be purchased and used.

Paper, bottles, jars, and cans are some of the most commonly collected items in

municipalities, schools, and groups. Detailed information on collectible commodities can be found at: www.epa.gov/epaoswer/non-hw/recycle/jtr/comm/index.htm.

Step 4:

IDENTIFY VIABLE END USES AND MARKETS FOR YOUR MATERIALS

Before you embark on a collection effort, you need to identify a “home” or market for the materials you will collect. Remember the adage, “one person’s trash is another person’s treasure.” You might not have any more use for a product, but chances are, someone else does.

Before beginning any type of reuse or recycling program, assess what types of programs are already underway in your area. You can use the sample worksheet below to determine whether it is feasible or necessary to start another reuse or recycling program.

Sample Assessment of Current Reuse and Recycling Programs Already Underway in Your Area

1. What agencies/organizations/companies are already collecting reusables/recyclables? _____

- Contact names and phone numbers: _____

2. What materials are collected for reuse? _____
3. What materials are collected for recycling? _____
4. How is collection conducted? (e.g., curbside pickup, drop-off points) _____
5. Is your school or group already participating in a reuse or recycling program? _____

- How does participation work? _____
6. What are future area plans for collection of reusables/recyclables? _____

Knowledge of your own community's resources can be your first step to locating an end use for reusable materials. Libraries, charities, schools, community centers, or even local businesses might be places to donate or sell used materials. The local phone book and the Internet are good resources for material markets as well. Look in the yellow pages under recycling, charities, waste paper, and salvage or scrap dealers. If your area government already collects some materials and has a local municipal, tribal, or county recycling coordinator, that person can help you find markets for your reusable and recyclable materials. You might also contact your state environmental agency for assistance in locating viable markets.

Once you have identified a market for your reusable and recyclable materials, find out what services they have; how and when they pay; if, and how often, they collect items; and whether they transport the materials. The highest price per pound might not always be the only thing to consider if you have to transport products yourself.

The sample form on this page can help you determine items that might be good candidates for reuse or recycling by your school or group.



Reuse/Recycling Candidate Form

1. Candidate materials for reuse:

 - Candidate materials for recycling:

 2. Amount available for reuse:
_____ lbs/month
 - Amount available for recycling:
_____ lbs/month
 3. Approximate net selling price for reusables:
_____ \$/month
 - Approximate net selling price for recyclables:
_____ \$/month
 4. New costs for group to collect or reuse:
_____ \$/month
 - New costs for group to recycle:
_____ \$/month
 5. Estimated net revenues (Item 2 x Item 3 - Item 4)
 - Reuse: _____ \$/month
 - Recycling: _____ \$/month
 6. Estimated savings from current practice (Item 2 x current hauling cost)
 - Reuse: _____ \$/month
 - Recycling: _____ \$/month
 7. Net gain or less (Item 5 + Item 6)
 - Reuse: _____ \$/month
 - Recycling: _____ \$/month
 8. Subjective factors
- Consider these questions for each material on the candidate list:
- Is this material consistent with community solid waste management plans? YES NO
 - Is there a market for this material (paying market or recipient)? YES NO
 - Is reuse/recycling compatible with other reuse/recycling programs for this item in the school/group? YES NO
 - Are the equipment needs and methods for collection for this item "reasonable" and sustainable? YES NO
 - Will reusing/recycling this item have a significant environmental benefit? YES NO
 - Are there any items that can be collected or donated for free? YES NO

Step 5:

WORK OUT A BUDGET

Setting up and operating a waste reduction program costs money. These costs often can be recovered from your reuse and recycling revenues. Find out if your school, group, or sponsor's budget can cover the launch and possibly some operating costs. Look for funding sources, such as your parent-teacher organization, local service clubs, local civic or church groups, local businesses or sponsors, or the student body general fund.

Possible costs might include:

- Supplies and equipment
- Transportation of materials
- Facility construction, maintenance, and/or rental
- Storage space rental
- Insurance
- Utilities
- Advertising
- Labor wages

Step 6:

CONTACT YOUR LOCAL AUTHORITIES FOR ASSISTANCE

Because local ordinances might apply to waste reduction programs, you should contact your local authorities before starting your program. If you're considering any type of in-

Recycling Requires Recyclers

Remember that your school or school-related group can only recycle materials accepted by your local recycling facility or by other entities, such as manufacturers. Make a list of items you would like to recycle and then call your recycling center or other sources to verify that they will accept those items.

school program, check with the fire marshal, school administrators, and building superintendents regarding storage containers and collection do's and don'ts. Paper recycling, for example, might have specific requirements to prevent fire hazards. You might also check with local solid waste management officials to see if your area can get credit for your group's waste reduction efforts when applying for state tonnage grants. If so, you'll need to keep records about the types and weights or volumes of your reusable and recyclable materials.

Be careful not to compete with other local organizations that regularly conduct waste reduction programs. Existing volunteer groups (such as a Girl or Boy Scout Troop) that conduct waste reduction drives might depend on the program for money and goodwill. When possible, try to combine your resources and efforts with theirs.

Step 7:

ESTABLISH A SYSTEM FOR COLLECTING AND STORING MATERIALS

An efficient collection program is simple and well-organized. Depending on the type of program, you should designate logical deposit locations, either within or around your drop-off location. You should also acquire, label, and place appropriate containers for the collected materials.

If you store reusable and recyclable materials at school, you'll need ample

Reuse Ideas

Books: Instead of tossing your old books, consider establishing a book swap in your school or community. Or, take up a collection and donate used books to a library, nursing home, or other organization that might want them.

Art Supplies: Organize a collection of art supplies to use at school, to swap among interested students, or to donate to a needy organization such as a homeless shelter for families and children. These materials can be hazardous if sent to landfills or incinerators, so encourage complete use or donation of unused supplies.

Sports Equipment: You can collect unwanted or unused sports equipment to swap within a school, for reuse in different schools, or to raise money for charities.

Special Occasion

Items: Consider an annual prom dress swap or donation drive. Collect once-worn dresses and donate them to other interested schools and organizations. For more ideas on prom dress swaps, see the case study on page 18.

storage space with truck access. You can use a shed, garage, or even a receptacle specially designed for your type of product. Smaller spaces might need “igloo” type structures, while larger areas might hold special dumpster-like storage bins.

Properly separated recyclables usually will bring higher prices. Your local recycling center can specify how materials should be separated. Establishing a good, long-term relationship with your center can prevent possible disruption of service due to unacceptable materials.

Step 8:

EDUCATE YOUR SCHOOL, GROUP, AND COMMUNITY ABOUT THE WASTE REDUCTION PROGRAM

Notify the entire school, members of your club or group, and the surrounding community about your waste reduction program. You should explain how it will run, and when and where collections will occur. You can also display examples of reusable and recyclable materials and storage containers.

Advertising is essential to your waste reduction program’s success. At the start of your program, send flyers home with students or group members to inform parents and others of program specifics. Display posters, make announcements, and consider having a special assembly or presentation to kick off the program. Send press releases to local newspapers and radio and TV stations to encourage the community at large to

Recycle and Buy Recycled Too!

Selling your recovered materials is really only one part of the recycling process. Recycling involves separating reusable materials, collecting them, processing them, making them into new usable items, and then marketing and purchasing the new products. When people use products made from recycled materials, they are “closing the recycling loop.” Remanufactured material is critical to the success of recycling. If material is simply collected and stored, we cannot achieve our ultimate goal of waste reduction.



participate. Run announcements in weekly shopping circulars, local bulletins, and club and church newsletters. Post flyers around town in local stores. States, tribes, and communities might help promote your waste reduction program, so check with officials about special publications or presentations they might have developed about reuse and recycling.

Step 9:

SET OVERALL AND INDIVIDUAL GOALS

Goals usually encourage people to excel. Set a target amount of reusable and recyclable material that you want to reach and keep a running total prominently displayed. Children, especially elementary school-aged children, work hard to reach goals if they know what is expected. You could even set individual goals for participants.

Step 10:

REWARD PARTICIPANTS

Your program should stress the environmental benefits of reuse and recycling. A reward system, however, may provide stronger incentives to make your waste reduction program successful. Take into account school or group size and available resources when establishing rewards, so that everyone has an equal chance of winning something.

The rewards you offer will probably depend on your budget. In some successful programs, the winning group received free pizza, a zoo trip, computers, or other new school equipment. In other programs, participants were awarded “Certificates of Appreciation” or earned Scout badges. Rewards might be donated by local businesses or bought with the proceeds of the waste reduction program. Individuals can be rewarded for outstanding efforts with cash prizes or gift certificates.



Case Studies

The following case studies provide examples of how individuals, schools, municipalities, nonprofit organizations, and others have started reuse and recycling programs in their communities. These resources can give you ideas for how to start the same kinds of programs with your schools and groups.

Reuse Programs

Reusing Computer Equipment in Atlanta, Georgia

Three 13-year-old students at Westminster School in Atlanta, Georgia, recognized that many community groups and organizations needed computer equipment that they could not afford. At the same time, the students noted that many businesses and individuals had equipment that they no longer wanted or needed. Putting two and two together, the students established Free Bytes, a nonprofit organization dedicated to providing needy organizations with unused or discarded computer equipment and keeping these computers out of the waste stream. Free Bytes has been operating since 1992.

After joining efforts with a special-interest PC-users group in 1997, the organization currently operates under the name Free Bytes NP, Inc. The organization is still partially run by student volunteers and has successfully diverted more than 4,000 computers from landfills by providing them to more than 600 nonprofit organizations throughout Georgia.

For more information, contact:

Timothy L. Gott, Executive Director
Free Bytes NP, Inc.
P.O. Box 550371
Atlanta, GA 30355-0371
Phone: 404 846-8414
Fax: 501 421-7903
E-mail: questions@freebyte.net
Web site: www.freebytes.org

Salvaging Usable School Supplies in Montgomery County, Maryland

A local resident in Montgomery County, Maryland, found a creative way to address several educational and environmental challenges by starting “The Drive for Locker Supplies.” Middle schools now hold a special drive to recover and reuse school supplies, clothes, and other goods

abandoned in lockers when students leave for the summer. Student volunteers clean out students' lockers at the end of the year and usable school supplies are delivered to needy students in other states and overseas to countries such as Nicaragua and the Phillipines. From the lockers of 35 middle schools, one year's collection netted about \$50,000 worth of notebooks, pencils, calculators, and other miscellaneous items, including a closet full of unclaimed coats.

For more information, contact:

Rev. Kevin and Louise Newcomer
Learn Shop, Inc.
P.O. Box 1754
Wheaton, MD 20915-1754
Phone: 301 942-1074
Web site: www.learnshop.org

Sharing Business Supplies with Schools in Portland, Oregon

SCRAP—The School and Community Reuse Action Project—is a nonprofit group in Portland, Oregon, that collects reusable items from local businesses and distributes them to area schools, families, and children. Its mission is to keep valuable materials out of landfills, offer these materials at low prices, and inspire the creative reuse of materials.

SCRAP holds an annual “Back to SCRAP” festival every September, a creative festival of reuse education, art, and music. Educators are invited to come and find inspiration for lessons by perusing the creative reuse of materials showcased.

For more information, contact:

Teri Thomas Petersen
SCRAP 3625-B
North Mississippi Ave.
Portland, OR 97227
Phone: 503 294-0769
E-mail: info@scrapaction.org

Donating Formal Dresses for Proms in Reston, Virginia

In Spring 2002, Shauna Cole—director of the Teen Program at the Reston Community Center in Reston, Virginia—started the center's first Prom Dress Giveaway. Cole wanted to help area high school girls find the right dress for their special night without spending several hundred dollars at a department store. The Community Center collected about 500 donated dresses, as well as jewelry, shoes, and mini makeup kits, from all over Northern Virginia. Those that were not given away to high school girls were donated to area clothing drives, ensuring that someone in need received the articles. This program not only helps to complete a very special night for many DC area girls, but also minimizes the amount of materials entering the waste stream.

Many believe this program was inspired by Washington, DC residents Rita Bright and Ann Oliva, who decided to open up their closets and help out those in need. Since 1994, Rita Bright and Ann Oliva have given away more than 1,200 dresses and have inspired efforts of others in New York City, Indianapolis, and Chicago.

For more information, contact:

Shauna Cole
Reston Community Center
2310 Colts Neck Road
Reston, VA 22091
Phone: 703 476-4500
E-mail: shauna.cole@fairfaxcounty.gov

Refurbishing Bikes for City Kids in San Rafael, California

In 1988, Trips for Kids, a nonprofit organization in San Rafael, California, was incorporated in the Bay Area by Marilyn Price. Her goal was to give inner-city children the opportunity to experience the natural beauty of their environment from the seat of a mountain bike. Since the program's inception, hundreds of volunteers have helped more than 7,800 kids from 220 agencies escape the cement and concrete and head out to the hills to experience a bike ride through nature.

In 1994, the program expanded significantly and established several other programs, including the Re-Cyclery Bike Thrift Shop, located in downtown San Rafael. This program gives a second life to used bikes, parts, and accessories, while offering an affordable, alternative transportation option to low-income residents. The program's daily activities revolve around the three Rs - reduce, reuse, and recycle. In 2002, the Re-Cyclery Program repaired and sold 572 bikes after receiving over \$500,000 worth of new and used items from individuals and manufacturers. Many of these parts

would most likely have ended up in landfills. The program also provides bikes, parts, and accessories to other programs, such as the San Quentin Prison's bike shop, where prisoners repair and donate bikes to charities.

Trips for Kids became a national program in 1999. Currently, there are 27 Trips for Kids chapters around the United States and Canada. Most chapters only conduct mountain bike rides for inner city youth, however, some have incorporated bicycle thrift shops modeled after the Re-Cyclery Program.

For more information, contact:

Marilyn Price, Founder/Director
Trips For Kids
610 4th Street
San Rafael, CA 94901
Phone: 415 458-2986
E-mail: tfbike@pacbell.net
Web site: www.tripsforkids.org

Recycling Programs

Operating An Award-Wining Recycling Program in Broward County, Florida

The Broward County School Board in Florida operates an award-winning recycling program that relies on three main elements: collection, education, and tracking. Collection at more than 200 participating schools and offices is accomplished through in-school cooperation between student volunteers

and custodial staff who empty recycling bins into dumpsters for weekly pick-up through several private contracts with collection companies. Broward County also initiated a number of innovative educational programs including workshops for facilities workers, a recycling fair, and recycling career days. The program measures its success by tracking data, such as the number of pounds collected, and conducting annual waste audits.

For more information, contact:

Broward County School System
Phone: 954 765-7031
Web site: www.co.broward.fl.us/iwi03300.htm

Developing a Comprehensive School Recycling Program in Calico Rock, Arkansas

Calico Rock High School in Calico, Arkansas, founded a recycling program that has, as of 2003, prevented 26,880 pounds of cardboard, plastic bottles, and paper from being thrown away. The school estimates that this effort saved 93,800 gallons of water, 228 trees, 44.4 cubic yards of landfill space, and 54,940 kilowatt hours of electricity. During the 1997-1998 school year, CRHS recycled 544+ pounds of aluminum cans. This averaged 15.1 pounds per week (2.2 pounds per day) which saved enough electricity to power a television for over two years. The program was funded by an Excellence in Recycling Award grant from

the Weyerhaeuser Company Foundation in 1997 and was granted another \$1,000 award the following year to expand to both campuses, as well as both cafeterias. The school also used their second grant to set up a recycling center for the community on its elementary school campus. This center now has over 20 volunteers and is open to the public two days per week, with their recyclables picked up weekly by Tri-County Recycling Center of Ash Flat. Items accepted include white paper, newspaper, corrugated cardboard, pasteboard, magazines, #1 and #2 plastics, steel cans, and aluminum cans.

For more information, contact:

Rachel Faulkner
Calico Rock High School
301 College Street
P.O. Box 220
Calico Rock, AK 72519
Phone: 870 297-3745
Web site: <http://pirates.k12.ar.us/crhs/academics.htm> (then follow the links to Science, then Recycling Project or Calico Rock Recycling Drop-Off Center)

Raising Money Through Recycling in Clark, New Jersey

The Clark-Winfield Girl Scouts (CWGS) in Clark, New Jersey, learned that recycling awareness not only keeps materials out of landfills and saves valuable natural resources for future generations, but it can also generate a wealth of funds through collective action.

The CWGS has participated in The Great Aluminum Can RoundUP since 1993 and, with the Clark Volunteer Fire Department, has designed a program to recycle aluminum cans to raise much-needed funds for the St. Barnabas Burn Foundation program.

The Girl Scouts bring their cans to a scheduled drop off every 2 weeks, where they are weighed and then transported to a local recycler by members of the Clark Volunteer Fire Department. In less than a year, 53 Girl Scouts collected and recycled a total of 4,583 pounds of aluminum cans. Since the inception of the program, the CWGS helped raise more than \$10,000 for the St. Barnabas Burn Foundation. This money helps purchase non-medical items and provide financial assistance for the families of young burn victims.

For more information, contact:

Clark-Winfield Girl Scouts
Janet Mannino, Service Unit Manager
12 Picton Street
Clark, New Jersey 07066

Mastering Recycling at School in Lancaster, New York

More than 1,200 5th and 6th grade students at Lancaster Central Schools in Lancaster, New York, initiated a recycling program to collect paper, cardboard, glass, plastic bottles, and milk cartons. In September 2002, the program began collecting tin cans as well. Students learned how to help collect the recyclables from their school bins and

also are tracking their program's progress. To raise awareness and support, students designed posters and helped to submit an article to the local newspaper. Lancaster Central Schools currently have six schools participating in EPA's WasteWise program, and plans are underway to expand the recycling program to three more schools. The schools have added 15 new courtyard benches made from 100 percent recycled plastic milk jugs, an effort that helped prevent 24,000 plastic milk jugs from entering landfills. In addition, Lancaster Central Schools have begun to recycle school furniture, such as television brackets, that get reused as shelving units and bench supports for team seats.

For more information, contact:

Dennis Weist
177 Central Avenue
Lancaster, NY 14086
Phone: 716 686-3209

Reducing Waste by Half in Los Angeles, California

The Los Angeles Unified School District Waste Reduction and Recycling Program in California works with facility managers to explore new methods of waste management and recycling. Currently the district recycles paper, toner cartridges, and beverage containers. The school district has successfully reduced its waste by 50 percent. In recognition of these achievements, EPA presented an Environmental Achievement Award to the Office of Environmental Health and Safety (OEHS) in 2002.

For more information, contact:

Soe Aung, Environmental Compliance Manager
Environmental Health and Safety Branch
1449 South San Pedro Street
Los Angeles, CA 90015
Phone: 213 743-5086
Web site: www.lalc.k12.ca.us/target/units/recycle/lausd.html

Composting in School in San Francisco, California

Many of San Francisco, California's students are no longer throwing away their half-eaten burritos, apple cores, and napkins. Instead, they're composting them!

With support from the San Francisco Foundation and the California Integrated Waste Management Board, the San Francisco Department of the Environment and Sunset Scavenger have assisted more than 30 San Francisco schools with establishing and maintaining organics collection programs through education, outreach, and environmental stewardship.

Schools that participate in the organics program collect all food, paper, and yard waste, which is then picked up by their waste hauler and composted at an off-site facility in Dixon, California. The result is a high quality, nitrogen-rich soil amendment that is used as fertilizer. Most importantly, as schools reduce their landfill-bound waste, the students learn the ABCs of waste reduction, and have the

opportunity to apply their knowledge by serving as peer educators and monitors for the organics program!

For more information, contact:

San Francisco Department of the Environment
School Education Program
11 Grove Street
San Francisco, CA 94102
Phone: 415 355-3700
Web site: www.sfenvironment.org

Reuse and Recycling Programs

Competing for Waste Reduction Solutions in New York, New York

In 2002, the New York City (NYC) Department of Sanitation awarded \$148,000 in cash prizes to schools all over NYC through their Golden Apple Awards program. This program consists of three contests for all NYC schools, grades K-12. In each contest, schools compete against other schools within their grade division (elementary, middle, and high school) to win cash prizes. The three contests that form part of the Golden Apple Awards include:

- **TrashMasters Reduce and Reuse Challenge:** Awards cash prizes to schools in each borough for the most innovative and successful waste prevention practices.

- **TrashMasters Super Recyclers:** Rewards schools in each borough with cash prizes for model school recycling programs that demonstrate a school-wide commitment to recycling.
- **TrashMasters Team Up To Clean Up:** Gives cash prizes to schools in each borough for outstanding community cleanup and neighborhood beautification projects.

For more information, contact:

NYC Department of Sanitation
 Golden Apple Awards
 Bureau of Waste Prevention, Reuse and Recycling
 PO Box 156
 Bowling Green Station
 New York, NY 10274-0156
 Phone: 212-837-8259
 Fax: 212-837-8162
 E-mail: bwpr.nycrecycles@verizon.net
 Web: www.nyc.gov/sanitation and
www.nycwasteless.org

Saving Money and Materials Through Reuse and Recycling in Pasco County, Florida

A recycling program in the Pasco County, Florida, school district saved Pasco County approximately \$2 million over 10 years. The program generated savings by reducing its disposal costs (from \$600,000 to \$300,000 annually) and earning nearly \$50,000 annually through the sale and auction of scrap metal and old equipment. Area students and

teachers supported the effort by appointing a recycling coordinator in each school and creating a student-led “Earth Patrol” to monitor campus recycling and energy conservation activities.

Currently, 25 schools in the district participate in the “Earth Patrol” program. Materials collected in schools for recycling include mixed paper, aluminum cans, corrugated cardboard, fluorescent light bulbs and ballasts, plastic bottles, cooking oil, pallets, seat foam, milk cartons, toner cartridges, and household batteries. During the 2001 to 2002 school year, the district recycled about 11 tons of batteries and 58 tons of milk cartons, bringing the total to more than 1,100 tons of total recycled material. In the fall of 2002, the district started a Cellular Phone Recycling Contest at 12 schools. So far they have collected a total of 353 cell phones, which will eventually be sent overseas for reuse. The first place school received a \$1,000 award, and the second and third place schools each received computer equipment for their recycling efforts.

In addition to the “Earth Patrol” program, the Pasco County School District has operated the Creation Station for the past 6 years. This program transformed an old warehouse into a reuse building that stores leftover materials such as tiles and fabric donated by various businesses. Once every 2 months, the doors are opened and school faculty members are invited to come and take what they want

to be used in various arts and crafts projects for their students. This program not only provides inspiration for the creative reuse of materials, but also saves area merchants hundreds of dollars in disposal fees.

For more information, contact:

Mary Miller
Pasco County School District
7301 Land O' Lakes Blvd.
Land O' Lakes, FL 34639
Phone: 813 794-2752
E-mail: mmiller@pasco.k12.fl.us

Making Money Through Waste Reduction in Seattle, Washington

During the 2001-2002 school year, a group of Whitman Middle School special education students in Cheryl Nixon's classes teamed up with Ecco Recycles School Fundraising Program in Seattle, Washington. The program buys back empty inkjet toner and fax and laser cartridges, and pays anywhere from 50 cents to \$12 per cartridge. The students decided to take their recycling and fundraising efforts one step further and formed their own company, Ink, Inc., complete with elected officers and business cards. In addition to learning about the benefits of recycling and reuse in their business, Nixon's students learn communication and organizational skills through writing business letters and public speaking.

Some of Ink, Inc.'s clients include the U.S. Internal Revenue Service, the city of Seattle, and IKEA. The Whitman students' success was recently featured in an October 2002 article in the Seattle Times, and the students were given an honorary membership to the Ballard Chamber of Commerce. In its first school year in business, Ink, Inc. topped \$1,000 in sales, selling roughly 500 cartridges to Ecco Recycles.

For more information, contact:

Cheryl Nixon, Special Education Teacher
Whitman Middle School
9201 15th Ave NW
Seattle, WA 98117
Phone: 206 252-1231
E-mail: showbizkidz@aol.com

Resources

EPA Publications for Teachers, Students, and the Community

The following EPA materials for teachers, students, and the community provide information on waste reduction; present ideas for classroom, after-school, and extra-credit activities; and provide lesson plans and school projects.

Unless otherwise indicated, these materials are available on the Internet at either <www.epa.gov/epaoswer/education/teachers.htm> or <www.epa.gov/epaoswer/osw/publicat.htm> or can be ordered for free by calling the RCRA Call Center at 800 424-9346.

- ***The Make a Difference Kit: Your Life, Your World, Your Choices (EPA530-E-03-001)***

A resource package of materials to encourage teens in grades 7 to 12 to make informed decisions in their everyday lives. Contents include:

The Life Cycle of a CD or DVD (EPA530-H-03-002)

A colorful poster showing the product life cycle of a CD or DVD from production through recycling/reuse/ disposal. Includes classroom and after school activities.

Service Learning: Education Beyond the Classroom (EPA530-K-02-001)

Describes how kindergarten through 12th grade students across the country are gaining hands-on awareness of waste reduction, recycling, and composting, through solid waste service-learning projects. The projects combine knowledge with service and personal reflection.

A Collection of Solid Waste Resources (EPA530-C-02-001) (interactive CD-ROM)

Contains all of the electronic files for publications and materials created by EPA's Office of Solid Waste, with topics ranging from recycling and

municipal solid waste to home health care, household hazardous waste, composting, and life cycle management. The most recent addition also contains games and activities for kids.

Volunteer for Change—A Guide To Environmental Community Service (EPA 530-K-01- 002)

Designed to assist citizens interested in initiating environmental volunteer projects. It includes “The ABCs of Volunteering” as well as short descriptions of 12 environmental volunteer activities undertaken by citizens across the nation.

- ***Science Fair Fun: Designing Environmental Science Projects (EPA530-K-00-008)***

A short booklet intended to provide students in grades 6 to 8 with ideas and resources for developing environmental science fair projects, specifically in the areas of reducing, reusing, and recycling waste materials.

- ***The Plug-In To eCycling Toolkit***

www.epa.gov/epaoswer/osw/conservel/plugin/toolkit.htm

Provides local governments, non-profit organizations, electronics manufacturers and retailers, and other interested groups with key information to help them stage electronics recycling events.

Other Publications for Schools and Groups

The following publications can provide additional information about developing and implementing a school or group waste reduction program. Ordering information is provided after each description.

- ***Beyond Recycling: A Waste Reduction Manual for Schools, Environmental Resource Program, University of North Carolina at Chapel Hill and Office of Waste Reduction, North Carolina Department of Environment, Health, and Natural Resources, undated.***

A comprehensive manual on school waste prevention and recycling, this document covers program management, waste assessments, logistics, waste reduction strategies, program maintenance, and case studies (all drawn from North Carolina). It provides guidance to school administrators, teachers, staff, students, and parents. Several worksheets and checklists aid program implementation. Available for free online at www.p2pays.org/ref/02/01432.htm or call 919 715-6500.

- ***Conducting a Waste Audit in Your School, Cuyahoga County (Ohio) Solid Waste District.***

A short step-by-step guide to performing a school waste audit. Administrators, teachers, students, or activists can use the guide to evaluate school waste. Available for free online

at <<http://cuyahogaswd.org/pdf/ConductingWasteAudit.pdf>> or

call 216 443-3749.

- ***Creating Less Trash at School, Minnesota Office of Environmental Assistance, undated.***

A pamphlet of waste prevention ideas for students. Available for free online at <www.moea.state.mn.us/campaign/download/school-2.pdf> or call 800 632-3299 or e-mail <reduce@moea.state.mn.us>

- ***Educational Resources for Waste Management, Cornell Waste Management Institute.***

A catalog of educational materials on the following topics: composting, recycling, waste management, enviroshopping, waste prevention, and sewage sludge. Many of the resources are suitable for schools (grades K-12). Order various materials online at <<http://cwmi.css.cornell.edu/Edresources.html>> or call 607 255-2080 or e-mail <resctr@cornell.edu> (The Cornell University Resource Center).

- ***How to Make Waste Reduction and Recycling Happen in Your School, Solid Waste and Financial Assistance Program, Washington State Department of Ecology, 1998.***

A document on school waste reduction, this publication aims to be a “step-by-step” guide to waste reduction for administrators. Completed sections include general buy-recycled tips, waste prevention

tips, and guidance on recycling programs. Contact Michelle Payne at <mdav461@ecy.wa.gov>.

- ***A Manual for Implementing School Recycling Programs, MassRecycle (The Massachusetts Recycling Coalition), 2002.***

A detailed guide to school recycling, this manual gives step-by-step instructions for starting, building, and maintaining school recycling programs. It provides specific guidance on the following recyclables: paper (including white, colored, mixed, and newspaper and magazines), corrugated cardboard, mixed containers, aseptic packaging (drink boxes), polystyrene, and food waste. It also contains a number of implementation and program management suggestions and several case studies. Available for free online at <www.mass.gov/dep/recycle/reduce/recprog.doc> or call 617 292-5500 (Massachusetts Department of Environmental Protection).

- ***Oregon Green School Tools, The Oregon Department of Environmental Quality, Waste Management and Clean-up Division, Solid Waste Policy & Programs Section, 1996.***

A multi-purpose document for principals, custodians, teachers, students, parents, kitchen staff, site councils, or school volunteers who are working on improving the health and

livability of their school environment. This publication is the toolkit for the Oregon Green Schools initiative (<www.oregongreenschools.org>). The theme of this toolkit is resource efficiency. The document is full of information on program management, waste assessments, student and staff education, measurement, and program maintenance. Detailed checklists, step-by-step instructions, and practical suggestions enhance the document's usability. Available for free online at <www.deq.state.or.us/lq/pubs/docs/sw/OregonGreenSchoolTools.pdf> or call 503 229-5913 or e-mail <solwaste@deq.state.or.us>.

- ***School Recycling Guide: Setting up Solid Waste Recycling Programs in Schools, Dr. J. Winston Porter for Keep America Beautiful, Inc., 2002.***

A concise, step-by-step manual for establishing, publicizing, and maintaining school recycling programs, this book is written for a broad audience: administrators, facility managers, custodians, teachers, and students. The guide centers on the mechanics of recycling—waste assessment, choosing recyclables for collection, establishing collection procedures. It covers the most common school recyclables: paper, plastics, aluminum, steel, glass, electronics, and food and yard waste. Order online for \$7.50 at <www.kab.org/shopKABI.cfm>. Material order form can be obtained online <www.kab.org/shopKABorder2.htm> or by e-mailing <orders@kab.org>.

Fax or mail order form to Keep America Beautiful at 203 325-9199 or 1010 Washington Blvd., Stamford, CT 06901.

- ***School Waste Reduction, California Integrated Waste Management Board (CIWMB).***

CIWMB's Web site for school waste reduction is designed for school administrators (especially district-level administrators). The section on school waste composition, located at <www.ciwmb.ca.gov/Schools/WasteReduce/Composition.htm>, provides some pointers for waste assessments and audits in schools. The subpage on waste reduction strategies, <www.ciwmb.ca.gov/Schools/WasteReduce/Strategies.htm>, provides extensive, practical suggestions for waste reduction by functional area: facilities and planning, food service, maintenance and operations, purchasing, technology services. Available for free online at <www.ciwmb.ca.gov/Schools/WasteReduce/>.

- ***Texas School Recycling Guide, Texas Natural Resource Conservation Commission, 2000.***

A condensed guide to school recycling, this guide highlights include practical suggestions for education and program maintenance, a list of school waste prevention strategies, and a brief discussion of school buy-recycled activities. Available for free online at

<www.tceq.state.tx.us/comm_exec/forms_pubs/pubs/gi/gi-030_165389.pdf> or call 512 239-0028 or e-mail <Recycle@tnrcc.state.tx.us>.

- **Waste Audit Manual, Ijams Nature Center.**

An activist's guide to school waste audits, this site was written by AmeriCorps volunteers who performed school waste audits as a service project. They estimated total waste by analyzing three waste streams: cafeteria waste, classroom waste, and office waste. Available at

<www.ijams.org/pdf/Waste%20Audit%20Manual.PDF>.

- **Waste Wise Schools Program, EcoRecycle Victoria/Gould League.**

The home page for an Australian "Waste Wise" program for schools. The program stresses school waste prevention and recycling. This site provides a library of waste reduction checklists by functional area (general, school administration, classroom, cafeteria); 10 steps for waste minimization, a page on program management; a discussion of program maintenance. Available at <www.sustainability.vic.gov.au/www/html/1861-waste-wise-schools.asp>

Become a Waste Wise Member

Once your school or group's reuse and recycling program is underway, consider becoming a partner in EPA's WasteWise program. As a WasteWise partner, you will receive personal guidance from your partner representative, as well as other technical assistance in the form of bulletins and updates. Your school or group also will have an opportunity to be nationally recognized for your waste prevention activities. Any size program is eligible for WasteWise membership. Check it out at: <www.epa.gov/wastewise>.





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