



Environmental Character Education



Curriculum Resources

Citizenship

High School - November, 2006

Citizenship is knowing, understanding, and displaying a high regard for rules, laws, government, heritage, and for those who have served and sacrificed for community and country. America Recycles Day is November 15, 2006. The activities in this newsletter encourage students to think about the benefits of recycling and the important role they play in the recycling programs already established in their schools and neighborhoods.

Activity 1: A Throwaway Society Report

Read the following information to the students and have them write a report to effectively communicate information about citizenship and our culture as it pertains to recycling and garbage disposal. Topics students can choose include the history of recycling in the United States and why recycling is so important, the differences between recycling and reusing (with examples, pros and cons of each), recycling problems, and where in Broward County landfills and recycling centers are located.

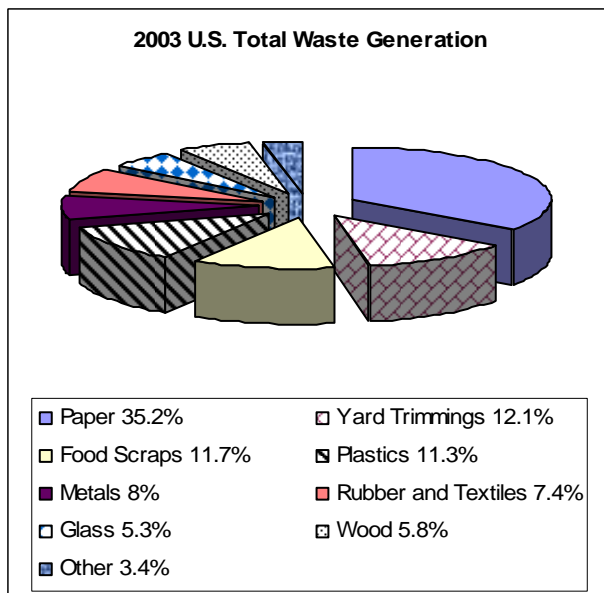
The thousands of products designed for quick use and disposal include newspapers, ballpoint pens, portable lighters, paint cans, juice and egg cartons, packaging for merchandise, mailing envelopes, magazines, and Styrofoam containers. Each year, Americans throw away 2 billion disposable razors, 18 billion disposable diapers, 30 billion tin cans, 220 million tires, 2.6 billion batteries, 25 billion Styrofoam cups, and 35 billion tons of yard waste. People in the United States also discard some 67 million tons of paper each year. The total amount of solid wastes generated yearly by U.S. consumers in their homes and workplaces is a staggering 420 million tons. That is enough refuse to fill up 5.8 million large trailer trucks.

In the past, people used to simply bury or burn their trash. This was before we mass produced products with large amounts of packaging. Of course, few people were able to foresee that we would have so much garbage today. It quickly became obvious that the old ways of garbage disposal would not work anymore. Burning or incinerating garbage has several drawbacks. Burning pours smoke, ash, and often toxic pollutants into the atmosphere. Plus, building and operating incinerators is very expensive. The largest obstacle to burying garbage in landfills is that we are running out of space. As the volume of refuse rose sharply in the second half of the twentieth century, existing landfills in the United States were quickly filled. According to the U.S. Environmental Protection Agency, there were about twenty thousand landfills in 1978; that number had dropped to 1,767 in 2002. Therefore, many cities have serious landfill problems. Almost no new landfills open because homeowners usually have the "not in my backyard" attitude.

The concept of recycling and reusing is simple and straightforward. The more materials are recycled, the less there is to burn or bury. As environmentally responsible citizens we should make our best efforts to reuse and recycle as often as possible. If you are at a location that does not have recycle bins, instead of throwing away an item which can be recycled, bring it home and place in your recycle bins. Or even better, inquire why they don't recycle and influence them to get in touch with their city for recycle bins. Recycling is something everybody can do, without spending extra money or effort. There are many other simple things we can do to help our environment. Examples include choosing products with minimum packaging, buying in bulk, photocopying on both sides of the paper, reusing plastic grocery bags for trash, and using rechargeable batteries.

Sources: *Recycling* by Don Nardo; www.epa.gov/msw/facts.htm

Sunshine State Standards: SC.H.3.4, LA.B.2.4



America Recycles Day is November 15, 2006

Visit www.americarecyclesday.org for valuable information on recycling, how recycling works, do's and don'ts of recycling, interesting end products, how to get involved in your community, various recycling events in Florida, and contest information.

Activity 2: Breathe Easier at Home

Sunshine State Standards: LA.A.2.4, LA.B.2.4

Background: Protecting your health and helping the environment are two outstanding reasons to be a good citizen. A surprising number of products used in the house and garage are toxic. There is no question that some of these products end up in our air and water. The Clean Water Fund estimates that the average American citizen uses forty pounds of unsafe household cleaners each year. Multiply that number by 245 million Americans and the effect is significant. Before cleaning products were available in the stores, people used ingredients like baking soda, vinegar, soap flakes, borax, and lemon juice. Today, most people don't know where to start, what to do, or how to use nontoxic products. This activity will introduce alternatives to using harmful cleaners and prepare students for a cleaner and safer future.

As a homework assignment, ask students to take an inventory of the cleaning supplies found in their homes. These should include surface, bathroom, oven, laundry, and degreasing cleaners. Then have the students write a list of some of the commonly used ingredients found in the cleaners. Next, have the students research the various cleaning ingredients either over the internet or at the library. A useful web site to find detailed information on over 5,000 chemicals is www.scorecard.org/chemical-profiles. Ask them to write a brief description of what the ingredients are and any health effects or environmental impacts they can find about the ingredients.

In class, hold a group discussion or ask students to write a report based on these questions:

- How did your grandparents get their clothes, bodies and homes clean?
- When do you need to clean with an anti-bacterial soap or a disinfectant? (Note: using these cleaners unnecessarily could increase a bacteria's resistance to the product.)
- If our grandparents were able to clean their homes with homemade recipes, why did companies decide to make other kinds of cleaners?
- Compare the differences in the costs of cleaners. For instance, compare the cost of baking soda and vinegar to other store-bought cleaners.
- Some of the ready-made non-toxic cleaners are more expensive; why?
- Who are and where are the toxic polluters in your community? Visit www.scorecard.org to find the top polluters, the top chemicals, and the toxic waste sites in our county.
- Compile a list of non-toxic cleaning materials. Each material should include their unique properties and recommendations for use as cleaners. For example, vinegar cuts grease, inhibits mold growth, dissolves mineral accumulation, and freshens the air. It can be used as a window cleaner, floor cleaner, dusting aid, and a drain cleaner.

Sources: www.pbs.org/kcts/affluenza/escape/guides/teach/7.html
"Clean & Green" by Annie Berthold-Bond

Activity 3: Paper or Plastic? Group Discussion

Sunshine State Standards: LA.C.1.4

A trip to the supermarket inevitably means making a decision when paying for your groceries: paper or plastic? Should you choose paper because it is easily biodegradable? But what about all those trees? Should you choose plastic because it can be recycled? If you are unsure, you are not alone. Even the experts have not completely figured this one out.

Hold a group discussion and determine how many students think plastic is better than paper. Then ask students for ideas on how they can reuse the bags. When complete, read the following information to the students.

Plastic bags do not actually biodegrade. However, bags made from LDPE (low-density polyethylene) plastic are easily recycled. Check the bag for the LDPE symbol. Most supermarkets have recycling bins for plastic bags.

Paper bags are biodegradable. However, paper bags are not usually made from recycled paper. Most paper bags are made from scratch, that is, they are made from new trees, new paper. Also, transporting paper bags to the stores uses more petroleum fuels because they are heavier than the plastic bags.

The important thing to remember is if you do not intend to recycle the plastic bags, then choose paper. At least the paper will biodegrade in the landfill.

The very best possible choice is a cloth bag which you bring with you whenever you shop at grocery stores, malls or other shops. Cloth bags are re-usable. You completely rid yourself of the question: paper or plastic?

The difficult part is remembering to bring them into the store with you. Below are a few tips:

- Keep cloth bags in the car with you. You will always see them on the seat next to you.
- Keep them in the trunk of your car. Each time you open your trunk, you will see them and over time it will become habit to use them.
- After emptying them, hang them on the inside of your front door so you do not forget to put them back in the car.
- If you often carry a back pack, use the back pack instead of a bag and also fold an extra cloth bag inside for when needed.



Source: *The Complete Saving Source Catalog* by Michelle Potter