

RECYCLING – TAKING IT EASY ON THE ENVIRONMENT

LEVEL: 9-12

SUBJECTS:

Science, Social Studies,
Consumer Education

VOCABULARY:

Solid waste, recycle,
“Reduce. Reuse.
Recycle.”, landfill,
ADOPT-A-HIGHWAY

LEARNING GOAL:

Students shall develop their abilities to connect and integrate knowledge from all disciplines into their own knowledge bases.

MATERIALS

Recycling checklist, recycling source list/graphs.

BACKGROUND

Reduce. Reuse. Recycle. Many Americans are making recycling a part of their everyday activity at home, work or school; while traveling or even vacationing! Americans generate almost 4 pounds of solid waste (garbage) per person per day. When we make consumer decisions to reduce solid waste, beginning at the point of purchase, we not only reduce the amount of solid waste going to landfills, but we also conserve energy, forests, minerals, water and other natural resources. Recycling benefits people and protects the environment in the following ways:

-making new cans from recycled aluminum requires substantially less energy than to manufacture them from the original mineral – bauxite, 50 billion beverage cans in 1989;

-30% of the raw material used in glass production now comes from recycled glass. Energy saved from recycling one glass bottle can light a 100-watt bulb for four hours;

-in the last decade, U.S. steel makers have recycled over 550 million tons of steel from beverage, food and paint containers to appliance and automobile frames;

-recycling plastic bottles, milk jugs and ring connectors make less demand on raw materials and less garbage going to the landfill or incinerator.

OBJECTIVE

The student will:

-understand the scope of the solid waste management problem by reviewing graphs.

-survey his/her school site for possible recycling opportunities.

-develop and implement a recycling project for the school.

-evaluate recycling efforts in his/her home and make recommendations for becoming a more environmentally-aware consumer.

CONCEPTUAL AREA

Decisions – responsible human decisions are necessary to maintain food and natural resources.

Images and attitudes – people’s images, attitudes and behaviors create the issues and trends affecting agriculture and the environment.

Refer to the “How to Make a Difference” checklist for ideas on shopping and recycling. At home, get started recycling by checking under “recycling” in the Yellow Pages to locate local drop-off and old batteries to service stations or recycling centers – never put in the garbage or pour down the sewer. Don’t collect grass clippings – let them provide free lawn fertilizer instead of using up limited landfill space. Pesticides, paint and other household chemicals must be discarded safely instead of putting in the household garbage.

PROCEDURE

1. Begin this unit by having students review the garbage/landfill graphs. What are the three methods of garbage disposal? Do students know the method used in their community – if not, where can they find out? Next, have students consider the most common products found in landfills. Which of these products become garbage from their homes? Finally, review the types of packaging found in landfills. Which packaging material appears to be used most frequently? Have students collect examples of over packaging to share with class members. What alternatives would be more acceptable? What can consumers do to decrease the amount of paper packaging on various consumer products?
2. Have students survey their school to identify missed opportunities to recycle. Students should consider classrooms, cafeteria, concession stands and school grounds. Have them develop lists of items found around school which could be recycled.
3. As a class, have students develop a plan for recycling in their school: secure permission from school officials, determine the scope of the project (paper, aluminum cans?), locate recycling centers and items accepted, recruit and train fellow student volunteers, implement the project and evaluate its effectiveness.
4. As an extension of the students’ recycling project, consider starting an outdoor environment/beautification project with support from community groups such as Farm Bureau or a garden club. Or, make recycling a part of outdoor life by participating in “ADOPT A HIGHWAY” programs and collecting litter on outdoor excursions.
5. To conclude the recycling unit, have students conduct a home recycling “audit” using the attached checklist. Have students suggest some alternatives for the consumer practices which do not support recycling in the student’s home. Allow students to share their findings with classmates.

RESOURCES

“Starting at Home – Recycling to Protect Our Environment”, Anheuser-Busch Companies, Inc.;
“How to Make a Difference,” Recycle! Nashville.

EVALUATION

Students demonstrate understanding of recycling practices by successfully planning and implementing a school recycling program which utilizes the “reduce, reuse, recycle” methods for solid waste management.



How to Make A Difference

Here are some easy ways you can reduce waste and begin recycling:

Be A Careful Consumer: _____

- before you buy, ask: do I need this? Don't be a victim of advertising!
- buy in bulk to avoid excess packaging; avoid individual serving sizes.

Look for products in recyclable or biodegradable packaging: _____

- look for peanut butter, ketchup, etc. in glass instead of plastic containers.
- buy eggs in paper cartons instead of styrofoam.
- for trash, reuse paper bags or biodegradable plastic bags (such as Bes-Pak Good Sense Degradable Trashbags)
- request paper bags instead of plastic bags at stores.

Buy and use reusable products instead of disposable products: _____

- use cloth towels instead of paper towels
- use cloth napkins instead of paper napkins
- use a cloth handkerchief or bandana over a paper tissue
- use a lunch box, or reuse bags that come with purchases
- use cloth diapers or a diaper service over disposables

When purchasing durable goods: _____

- buy high quality products that are durable and repairable
- repair durable goods, or give them to a friend or a charitable organization, such as Goodwill or DAV

Think of Ways to reuse items that you do buy: _____

- use both sides of paper; save scrap paper for notes
- reuse paper bags, plastic bags, aluminum foil, and other containers

Remove your address from junk mail lists by writing to: _____

Mail Preference Service
Direct Mail Marketing Association
6 East 43rd Street
New York, NY 10017

Buy products made from recycled materials, in order to encourage markets for recycled products. _____

Save the following items to be recycled: _____

- aluminum cans and other scrap aluminum
- newspaper
- glass bottles and jars
- tin cans (actually tin-coated steel)
- plastic, both PET (soda bottles) and HDPE (milk jugs)

Other items can be hazardous if disposed of improperly; recycle your used motor oil and car batteries. _____

Compost kitchen scraps, yard waste, wood ash, etc. _____

Encourage others to recycle: _____

- discuss recycling with friends
- encourage recycling and the use of recycled products at work
- write or call your council person

Our Thanks to RECYCLE! NASHVILLE for sharing this information.

P.O. Box 24934
Nashville, TN 37202

Recycling Information/Landfill Graphs

Need More Information To Get Started?

United States Environmental Protection Agency Solid Waste Information Clearinghouse (SWICH)

P.O. Box 7219
Silver Spring, MD 20910
1-800-67-SWICH

Container Recovery Corporation

10733 Sunset Office Drive
Suite 400
Sunset Hills, MO 63127

Keep America Beautiful, Inc.

9 West Broad Street
Stamford, CT 06902

Steel Can Recycling Institute

Foster Plaza 10
680 Andersen Drive
Pittsburgh, PA 15220

Glass Packaging Institute

1801 K Street, NW
Suite 1105-L
Washington, D.C. 20006

American Paper Institute, Inc.

260 Madison Avenue
New York, NY 10016

National Association For Plastic Container Recovery

4828 Parkway Plaza Boulevard
Suite 260
Charlotte, NC 28217

Can Manufacturers Institute

1625 Massachusetts Ave. NW
Suite 500
Washington, D.C. 20036

The Council For Solid Waste Solutions

1275 K Street, NW
Suite 400
Washington, D.C. 20005

National Recycling Coalition

1101 30th Street, NW
Suite 305
Washington, D.C. 20007

The Aluminum Association, Inc.

900 19th Street, NW
Washington, D.C. 20006

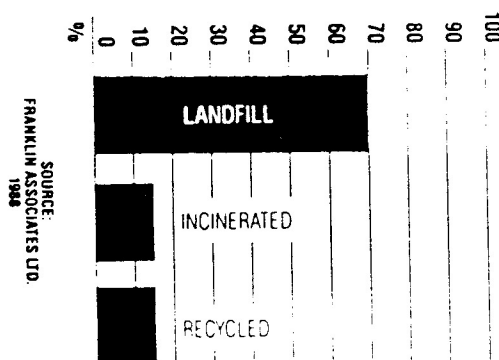
The Governmental Refuse Collection and Disposal Association (GRCDA)

P.O. Box 7219
Silver Spring, MD 20910

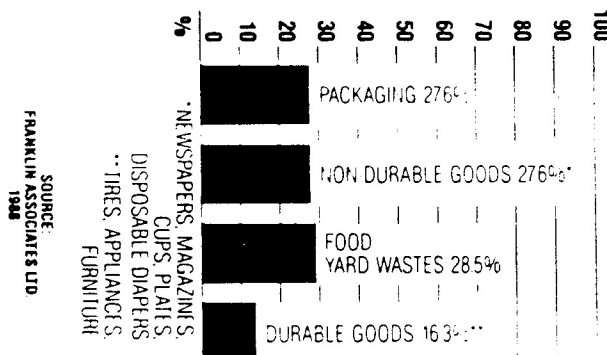
The National Soft Drink Association

1101 Sixteenth Street, NW
Washington, D.C. 20036

Where Does Our Garbage Go?



What Goes Into Our Landfills (Weight % Of Total)



Packaging In Landfills By % Of Weight (Total 27.6%)

