A Resource Guide to Solid Waste Educational Resources; Second Edition
A RESOURCE GUIDE OF SOLID WASTE EDUCATIONAL MATERIALS

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Communications Services Branch
Office of Solid Waste
U.S. Environmental Protection Agency
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INTRODUCTION

Solid waste issues are an important part of many science and environmental education classes. To help teachers and students identify resources for teaching and learning about solid waste, the U.S. Environmental Protection Agency's (EPA's) Office of Solid Waste compiled this guide of nearly 80 solid waste-related educational materials. The materials were developed by industry associations, educational institutes, state governments, environmental groups, and other organizations.

The guide includes curricula, activity guides, videos, and Internet sites that contain information on a variety of solid waste topics such as source reduction, recycling, reuse, household hazardous waste, and composting (see the Index by Key Word for a complete list of solid waste topic areas covered). All of the materials can be used in a classroom or after-school setting by teachers and students in kindergarten through 12th grade.

In evaluating materials to include in the bibliography, EPA used the following criteria:

- Information content on key solid waste topic areas
- Timeliness of information (i.e., 1994 or later)
- Information content suitable for teachers and students
Solid Waste Educational Materials

Titles: Bill Nye the Science Guy: Garbage
       Bill Nye the Science Guy: Pollution Solutions

URL: http://nyelabs.kcts.org/flash_go.html

Publisher: Disney Educational Productions
           105 Terry Drive, Suite 120
           Newton, PA 18940
           Phone: (800) 295-5010
           Fax: (215) 579-8589

Date Published/Last Update: June 1999

Cost: $49.95 for videos, guides available on Internet

Publication or Order Number: Title

Audience: Students in grades 3 through 8

Format: Internet site and video

Key Words: Composting, hazardous waste, household hazardous waste, industrial waste, littering, packaging issues, product life cycle, recycling, reuse, solid waste management, source reduction

Abstract: In the video on garbage, Bill Nye and his troop of young scientists tackle the issue of garbage during 26 minutes of fast-paced practical information. The participants explain how all living things produce waste, but that the amount and the type of waste that humans produce pose a threat to other organisms. Nye distinguishes between biodegradable and nonbiodegradable waste and advises viewers on how to reduce, reuse, and recycle before filling more landfill space. The program covers a wide range of related topics, including pollution, hazardous waste disposal, and threatened animals. The video concludes with a clever parody of Aretha Franklin's song, "RESPECT," entitled "RECYCLE." The tape also includes an episode on biodiversity. The video on solutions to pollution includes recycling and packaging issues. Episode guides to the videos, which contain a summary, facts, and an experiment, are available on the web site. Also available are teacher guides. The web site provides a monthly calendar of broadcast dates for the videos.
Title: Bullfrog Films Catalog

URL: http://www.bullfrogfilms.com

Publisher: Bullfrog Films
P.O. Box 149
Oley, PA 19547
Phone: (800) 543-3764
Fax: (610) 370-1978
Email: bullfrog@igc.org

Date Published/Last Update: May 1999

Cost: No cost for catalog, see individual entries for prices

Publication or Order Number: Title

Audience: Teachers of grades K through 12

Format: Internet site and video catalog

Key Words: History of garbage, recycled or green products, recycling, sustainability

Abstract: Bullfrog Films Catalog, available online and in print, provides an extensive collection of educational films and videos on energy and environmentally related topics. Each abstract in the catalog includes the title, length, grade level, description, companion materials, awards and/or quotes from reviews. Several examples of solid waste videos follow. *Rethink - Pollution Prevention Pays* is a short video which addresses the big issue of the three Rs (reduce, reuse, and recycle) and suggests that a fourth R should be added. It advises society that it is time to “rethink” how we can substitute, reuse and eliminate pollution. *Recycling with Worms* shows how worms can be used by everyone to reduce garbage. This humorous video demonstrates how to design, build and operate a small classroom size vermicomposter. In *Recycling is Fun!* three young children learn about the three Rs by visiting a landfill, a recycling center and their local supermarket. *Greening Business* discusses how industries have changed over the years. It illustrates the creative ways in which going green makes fiscal sense. Films and videos are available for purchase or rental.

Title: CEEIN - California Environmental Education Interagency Network

URL: http://ceres.ca.gov/education/ceein/
http://ceres.ca.gov/education/index.html

Publisher: California Energy Commission
Susan Garfield
Energy Education
CEEIN is a consortium of environmental educators representing California state departments, boards, and commissions of the Department of Education, California Environmental Protection Agency, and the California Resources Agency with oversight responsibility for protecting California's environment. The first URL listed above provides links to resources for environmental education, including the California Environmental Education Resource Guide and Environmental Education Compendium for Integrated Waste Management. The second URL is to the California Environmental Resources Evaluation System (CERES) Environmental Education Web. This site provides environmental education materials in natural science, social science, English and language arts, visual and performing arts, and other subjects for teachers and students. Examples of materials available for educators include: The Hazardous House - Teachers Manual, guide to an interactive computer game that allows the pupils to travel through a home and yard. The manual contains seven lesson plans that educators can incorporate into classroom projects. The No Waste Anthology: A Teachers Guide to Environmental Activities K-1 covers many activities pertinent to solid and hazardous waste topics.

Title: Central Contra Costa Sanitary District (Martinez, California) - Education, Student and Pollution Prevention Page

URL: http://www.centralsan.org/education/index.html

Publisher: Central Contra Sanitary District
5019 Imhoff Place
Martinez, CA 94553
Phone: (925) 228-9500
Central San offers several student education programs to teachers and schools to help students learn about protecting the environment. Descriptions of listed materials include appropriate grade levels. *The Natural Science Classroom* for students in grades K through 5 focuses on the 3 Rs (reduce, reuse, and recycle) and water pollution. *Newspapers in Education* for students in grades K through 12 contains information on household hazardous waste, recycling, and solid waste.

Title: City of Fort Worth Department of Environmental Management Kids Page


Publisher: Suzanne Sweeton
Public Education Coordinator
Department of Environmental Management
Fort Worth, TX 76102
Phone: (817) 871-8079
Fax: (817) 871-6359
Email: SweetoS@ci.fort-worth.tx.us

Abstract: At this site kids can learn about the environment and have fun doing it. “Meet the Eco Kids” introduces the Eco Kids and encourages students to write stories about what they do to help save the environment. “Eco-Kids Story” displays stories students have written about the Eco-Kids and submitted to the Kids page. “Help Captain Crud Conquer the Cruddies!” teaches students how to dispose of household hazardous waste and features pictures of Captain Crud and the five Cruddies to print and color. “Five Ways Kids Can Help the Environment” shows easy steps students can take to make their environment a better place. “Ask the Eco-Kids!” lets students ask questions about the environment and provides answers to their questions. “Eco-Kids Play” has activities
that are both fun and educational, including Peter’s word search puzzle with words relating to solid waste management. “Exploring the Internet” provides links to other environmental sites.

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<th>Title:</th>
<th>Come Along to Trash-to-Treasure Land; Composting Matters</th>
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| Publisher: | Environmental Hazards Management Institute  
10 Newmarket Road  
Durham, NH 03824  
Phone: (603) 868-1547 or (800) 446-5256 |
| Date Published: | 1996 |
| Cost: | Contact for prices |
| Audience: | Students in grades K through 3 |
| Format: | Print |
| Key Words: | Composting, recycling, reuse, source reduction |
| Abstract: | This 12-page coloring and activity book uses word puzzles and games to teach what materials can be composted, what should not be composted, how compost piles should be maintained, and uses for finished compost. |

<table>
<thead>
<tr>
<th>Title:</th>
<th>The Compost Resource Page</th>
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<tr>
<td>URL:</td>
<td><a href="http://www.oldgrowth.org/compost/index.html">http://www.oldgrowth.org/compost/index.html</a></td>
</tr>
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| Publisher: | Chris Palmarini  
Email: compost@saber.net |
| Date Published/Last Update: | February 1, 1999 |
| Audience: | Teachers and students in grades K through 12 |
| Format: | Internet site |
| Key Words: | Composting |
| Abstract: | This site serves as a hub of information for anyone interested in composting. Home composting, large-scale composting, and vermicomposting (worm composting) are discussed. Users can learn how to start and maintain a compost heap as well as what items to include and exclude from the heap. An online composting handbook, titled |
Backyard Magic!, is included as well as tips for managing yard waste, using compost for home gardens, and descriptions of composting and mulching equipment and products. The page is arranged with a few broad subject headings and a search function to pinpoint specific information on composting. “Miscellany” includes links to a compost quiz, ZooDoo information, a bumper sticker, publications, and children’s activities. There are links to sites that provide tips for successful maintenance of the various types of compost heaps. “The Microbe Zoo’s Compost Pile,” an online resource for microbial science, is also available from this site.
Title: Cycles for Science: Materials for High School Science

Publisher: Steel Recycling Institute
Foster Plaza, Number 10
680 Andersen Drive
Pittsburgh, PA 15220-2700
Phone: (800) 876-SCRI
Email: sci@recycle-steel.org

Date Published: 1995, 1996

Cost: Contact for prices

Audience: Teachers of grades K through 12

Format: Print, video

Key Words: Composting, recycling, source reduction

Abstract: This high-school curriculum and supplementary information targets a variety of subject areas, including biology, chemistry, earth science, and physics. Topics include composting with worms, sorting commingled metals, and prospecting for ore. The series also includes information about community volunteer projects, such as school recycling, appliance recycling, and food salvage. Community Activity Sheets, with tips for group involvement; Roscoe, a finger puppet in the shape of a steel can; Nature's for Me Activity Guide; and Yes, I Can, a video about recycling, are available for younger students (grades K through 7).

*********************************************************************************************************

Title: DoDo Land

URL: http://www.swifty.com/azatlan/

Publisher: Dale Bertrand
#1-16 Mayfield Road
Moseley B13 9HJ
England
Phone: 414 121 449-5477
Email: azatlan@pinc.com

Date Published/ Last Update: No date available

Audience: Students in grades K through 7

Format: Internet site

Key Words: French language, Japanese language, solid waste management, Spanish language
Abstract: Dodoland for Kids is an interactive play and learning center for children. Its purpose is to show the power of art and writing in developing children's self esteem, creativity and ability to confront environmental problems. The site contains issues developed around themes, such as “Protect the Earth.” Each Issue has four activity pods. “Island of Eyes” gives children the opportunity to meet authors, artists, and environmentalists and ask questions of them. “Night Bubble” allows kids to interact with children from around the world by writing and by showing their art. “Giant Flower Island” is an area to learn and share in environmental activities. And “Dragon Ship” is a rhyme, rap, story and world game center. “Wishes for the Earth” gives students a chance to submit their wishes for the Earth in 1999 and read wishes submitted by other children during the past three years. “Bring Back the Dodo” describes the history behind Dodoland in cyberspace. This web site is also available in Japanese, French, and Spanish.

Title: EM* Power

URL: http://www.uidaho.edu/rsrch/iwrri/empower

Publisher: Kevin M. Laughlin
EM* Power Coordinator
Idaho Waste Resources Research Institute
205 Morrill Hall
University of Idaho
Moscow, ID 83844-3011
Phone: (208) 885-2170
Fax: (208) 885-6431
Email: laughlin@uidaho.edu

Date Published/ Last Update: January 1999

Audience: Teachers and Students in grades 6 through 9

Format: Curriculum and Internet site

Key Words: Solid waste management

Abstract: EM* (Environmental Management) Power is an issues-investigation curriculum for sixth through ninth grades. It uses games and activities to develop critical thinking and inquiry skills. Included in each EM* Power binder is a Leader Guide, Youth Journal and EM* Power Poster. The program consists of six sequential lessons: “Discovering EM Concerns & Action,” “A Concern Becomes An Issue,” “Making a Difference,” “Getting the Facts,” “Issues, Issues,” and “EM Powered to Action!” Sample lesson plans are available for preview on the web site. Each lesson consists of a poster, fact cards with tidbits of environmental information, games, and objectives for teachers. This program can be ordered through the web site. The home page also provides links to other web sites with additional information.
Funded by the U.S. Department of Education, this clearinghouse is a repository for information on math and science curriculum materials. Information can be retrieved either by using a “Site Search,” which searches the contents of ENC's web sites, or a “Resource Finder Search,” which allows searching by topic, selected grade level, and cost. For instance, when the word "waste" is entered into the search engine, more than 500 records are retrieved. These materials are produced by a variety of sources, including teacher associations, state and local governments, and industry. Resources include web sites, multimedia products (including CD-ROMs), print publications, and posters. For example, one resource is a lesson developed for grades 8 through 11 that teaches students how to safely dispose of a hazardous waste by using pertinent data on the chemical's physical and hazardous properties obtained from Material Data Safety Sheets or personal observation. Another resource is an online exhibit that explores the effects of garbage on the environment and suggests some actions that visitors can take to reduce, reuse, and recycle waste in trash. Other topics include underground storage tanks, recycling at schools, landfills (including making an edible landfill), composting, recycling, and reuse. Each listing describes the resource, appropriate grade levels, cost for ordering, and other information.
Summary of Earth 911:

Earth 911 is the nation’s official, 24 hour public service providing information for homes and communities on recycling, buying recycled products, disposing of hazardous household products, composting and energy conservation. Information from all 50 states and thousands of community hotlines has been brought together so users can access it.
through one toll free phone call (800-CLEANUP) or one web site visit. This site provides materials on environmental issues including the three Rs; your nearest recycling center location (by entering your zip code); how to buy recycled products; how to handle household hazardous waste; an interactive kid’s section; and more. Click on the map of the United States and link directly to individual state Solid Waste web sites for specific information. “Handy’s Kids” contains cartoons on recycling to download and color, a quiz on recycling, and tips to make everyday Earth Day.

******************************************************************************

Title: The Earth Angels

URL: http://members.aol.com/halo4earth/index.html

Publisher: Guardian Angel Settlement Association
The Earth Angels
P.O. Box 2055
St. Louis, MO 63158
Phone: (314) 231-3188
Fax: (314) 231-3188
Email: Tambo@aol.com

Date Published/ Last Update: December 1999

Audience: Students in grades 4 through 8

Format: Internet site

Key Words: Recycling, solid waste management

Abstract: The Earth Angels is a children’s environmental group. Membership in this unique body consists of 150 pre-teen “at risk” children from the inner cities. This group works year round doing whatever they can to help the environment. Starting with the recovery and recycling of aluminum cans, steel beverage cans and glass, the Earth Angels were soon planting trees in public parks, keeping their community clean, buying environmental books for their community library and many other things designed to help improve the environment. This is not an example of a single action by a group of children, but rather the ongoing agenda of an environmental group. The web site keeps communities informed about the Earth Angels’ current projects and their accomplishments. This site serves as a supplements to environmental education in the classroom; it provides an excellent example of children’s implementation of lessons learned to improve the world around them.

******************************************************************************
Title: EarthAware: Environmental Awareness Software

URL: http://www.dcn.davis.ca.us/go/earthaware

Publisher: EnviroAccount Software
605 Sunset Court
Davis, CA 95616
Email: dwlotter@dcn.davis.ca.us

Date Published: 1995

Cost: $49.95 (Macintosh) or $69.95 (Windows). Also available as shareware at $10.00 per household. Software can be ordered or downloaded via the Internet address. (Discounts provided for quantity orders.)

Audience: Teachers and students in grades 7 through 12

Format: Computer software

Key Words: Hazardous waste, household hazardous waste, packaging issues, product life cycle, recycled or green products, solid waste management, source reduction

Abstract: EarthAware inspires students to think about their resource use through a series of activities relevant to the environment. This program has six sections, including "Consumerism" and "Waste." Each section contains questions with answers, information, and resources. After each section, an analysis screen summarizes the EarthAware score. Each user receives a score, a rating, and recommendations for areas to be improved. This software is described on the web site listed above.

Title: Earth Balloon - An Earth Awareness Program

URL: http://www.earthballoon.com/

Publisher: TerraSys, Inc.
P.O. Box 235
Circle Pine, MN 55014
Phone: (612) 785-7876
Fax: (612) 785-2098
Email: info@eartballoon.com

Date Published/Last Update: December 1999

Cost: Contact for prices

Audience: Students in grades K through 12
Abstract: Earth Balloon is a unique educational program. This portable classroom in the shape of a globe is a truly hands-on method of teaching students about the Earth. Within the Earth Balloon students learn about pollution, endangered species, water conservation, and the geology of the Earth. The Earth Balloon is offered for sale as a module including: globe, fan, carrying cases, laser pointer and complete curriculum featuring lesson plans for grades K through 12. Included in the 84 page curriculum handbook are lesson plans, worksheets, group activities, individual activities, fact sheets, puzzles and a three part audio program. The Earth Balloon is also available for school visits as an enrichment program. Description and pictures are available at the Internet address listed above.

Title: Earth Cycle - A Recycling Information Report

URL: http://www.bmicorp.com/bmi2.htm

Publisher: Bodner Metal & Iron Corporation
3660 Scallier Drive
Houston, TX 77026-3598
Phone: (800) 460-2955 or (713) 223-1148
Fax: (713) 223-1141
Email: scrap@bmicorp.com

Date Published/Last Update: December 1999

Audience: Teachers and students in grades K through 12

Format: Internet site

Key Words: Household hazardous waste, recycling, source reduction

Abstract: This quarterly report is intended for students, teachers, libraries, businesses, industries, and governments interested in learning how to conserve natural resources by increasing the volume of recycling. Each issue of the Earth Cycle Report covers different aspects of recycling and source reduction, ranging from homemade cleaners that reduce toxic waste to grass recycling. A statistical section provides facts and figures on the benefits of recycling. Teachers can print several pages that feature ROSCOE (Recycle Our Steel; Conserve Our Environment), the Steel Recycling Institute’s official spokescan, for students to color.

***************************************************************************
**Title:** Earth Day – Make Every Day Earth Day

**URL:** [http://www.earthday.org](http://www.earthday.org)

**Publisher:** earth day.org  
c/o Sherman Morrison  
50 Woodburn Street #19  
Keene, NH 03431  
Email: earthday@compserve.com

**Date Published/Last Update:** 1999

**Audience:** Teachers and Students in grades K through 12

**Format:** Internet site

**Key Words:** Recycled or green products, recycling

**Abstract:** The earthday.org web site was developed to serve individuals who want to improve their environment and communities throughout the United States and around the world. The education section offers a list of eco-educational resources that teachers may access for additional information. There is a brief history of Earth Day and links to what states and countries around the world are planning to celebrate Earth Day 2000. “Eco Gateway” displays a list of resource materials that affect or influence the environment and within these lists users can retrieve articles in specific subject areas.

*********************************************************************************************************

**Title:** Earth Force

**URL:** [http://www.earthforce.org/](http://www.earthforce.org/)

**Publisher:** L. Doney  
1908 Mount Vernon Avenue, 2nd Floor  
Alexandria, VA 22301  
Phone: (703) 299-9400 or (800) 23Force [233-6723]  
Fax: (703) 299-9485  
Email: earthforce@earthforce.org

**Date Published/Last Update:** August 1999

**Audience:** Students in grades 5 through 9

**Format:** Internet site

**Key Words:** Recycling economics, sustainability

**Abstract:** Earth Force is a national nonprofit organization designed to teach students how to
improve the environment by developing citizenship skills. The Community Action and Problem-Solving (CAPS) program helps young people address the environmental problems of their own communities. This ambitious program combines environmental education with the citizenship development and community problem-solving skills central to service learning. Young people aged 10-15 work with their teachers and/or youth leaders to identify local environmental issues. Together, they develop and implement a well-conceived plan that leads to long-term improvement of the community's local, environmental needs. One example is the Massachusetts Earth Force Program that works with schools and community programs throughout the Boston area and Eastern Massachusetts. In the 1997-1998 academic year, 300 young people and 20 educators were enrolled in the program at six middle schools and four community-based organizations. Massachusetts Earth Force participants worked on a wide range of meaningful projects, including open-space beautification, recycling, and composting. The web site contains a chat room where students can share tips and projects for addressing and solving environmental problems.

Title: Earth Share Environmental Resource Guide: Resources for Teachers and Students

URL: http://www.earthshare.org/resource/index.html

Publisher: Earth Share
3400 International Drive NW, Suite 2K
Washington DC 20008
Phone: (800) 875-3863
Email: info@earthshare.org

Date Published/Last Update: January 1999

Audience: Teachers and Students in grades K through 12

Format: Internet site

Key Words: Recycled or green products. recycling

Abstract: This resource guide is a directory of resources from member charities [a federation of non-profit environmental and conservation charities that promotes environmental education] for teachers and students interested in environmental education. Resources available include children's magazines and club programs for children, curricula and teachers’ guides, posters, web pages and videos. Materials are listed by topics; for example, action skills, general, pollution, and waste. “Environmental Tips” provides environmental action tips as a public service to individuals interested in finding ways to improve the Earth. In “Career Resources” and “Environmental Volunteering” member organizations provide both general information on environmental careers and information specific to their organizations.
Earth to Kids - Environmental Defense Fund

URL: http://www.edf.org/earth2kids

Publisher: Environmental Defense Fund
257 Park Avenue South
New York, NY 10010
Phone: (800) 684-3322

Date Published/Last Update: November 1999

Audience: Teachers and students in grades K through 12

Format: Internet site

Key Words: Composting, household hazardous waste, recycling, solid waste management

Abstract: Earth to Kids, a web site created by the Environmental Defense Fund, is for students of all ages. "Resources for Teachers" provides various classroom materials and activities on current environmental issues, such as composting and household hazardous products. Teachers and their classrooms can become members and receive a bimonthly newsletter. "Books for Kids and Parents" describes books by grade level. It includes several titles with information and activities for exploring the environment with children, as well as books for children on relevant topics, such as recycling. Books may be ordered online. "Kids Talk Back" allows students to voice their opinions on the environmental issues that concern them. "Kids’ Poems" contains poems by students about the environment. Children may submit their own poems.

Eco-Detectives: Teaching About the Economics of the Environment

URL: http://www.perc.org/enved.htm

Publisher: National Council on Economics Education
Order Department
1140 Avenue of the Americas
New York, NY 10036
Phone: (800) 338-1192 or (212) 730-7007

Date Published: 1996

Cost: $29.95

Audience: Teachers and students in grades 7 through 12

Format: Curriculum and Internet site

Key Words: Recycling economics, reuse, solid waste management
Abstract: This 18-lesson curriculum introduces students to a productive way of thinking about environmental problems, including solid waste. The lessons address environmental problems as mysteries worthy of investigation. One of the topics in the curriculum asks, “Why, in spite of today's emphasis on recycling, are bottles, cans, and papers routinely tossed into landfills?” Such questions launch lessons that teach students about human behavior by introducing basic economic principles. A sample chapter is provided on the web site listed above. Also available on this web site are a teacher’s guide and sample lesson plans, a student newsletter, and information about teacher workshops sponsored by the Political Economy Research Center (PERC), located in Bozeman, Montana. Print materials can be ordered on the web site.

Title: Eco Education

URL: http://www.blacktop.com/ecoeducation/

Publisher: Eco Edquarters
275 East Fourth Street #821
St. Paul MN 55101
Phone: (651) 222-7691
Fax: (651) 222-3425
Email: ecoed@minn.net

Date Published/Last Updated: September 1999

Audience: Teachers and Students in grades K through 12

Format: Internet site

Key Words: Recycling. sustainability

Abstract: The Eco Education home page allows the user to select the “Student Tour,” which leads to the “EcoSphere” or the “Teacher Tour,” which goes to “Eco Edquarters.” “EcoSphere” allows students to share environmental stories, projects, and ideas with others from around the globe. “Do It To It” provides activities and projects, including making your own recycled paper, making your own envelopes, and completing a garbage tally. “You Said It” offers poems, stories and pictures from other kids. “You Did It” tells what other kids are doing to protect the environment. “Now Read This” has articles about the environment and interviews with individuals who are working to preserve and protect it. “Off This Page” is a list of resources and eco-sites on the web that can be e contacted for additional information. “Eco Edquarters” provides environmental education activities and resources that teachers can use in their classrooms.
Title: Educational Resources for Solid Waste Management

URLs:  
http://www.cfe.cornell.edu/wmi/GenInfo/EdRes98.html  
http://www.cfe.cornell.edu/compost/schools.html

Publisher: The Cornell Waste Management Institute  
100 Rice Hall  
Cornell University  
Ithaca, NY 14853-5601  
Phone (607) 255-1187  
Fax (607) 255-8207  
Email: cwmi@cornell.edu

Last Updated: July 1999

Cost: No cost

Audience: Teachers and Students grades K through 12

Format: Internet site

Key Words: Composting, recycling, reuse

Abstract: This web site provides a variety of resources for teachers and students. Some examples of materials available on recycling follow. Life After the Curb: Recycling Processes, a video for youth, demonstrates how materials are reprocessed into new products. It shows separation and recycling processes and end products for plastic, steel, aluminum, glass, and paper. Reasons to reduce, reuse, and recycle are covered, and ways to reuse materials are shown. Recycling in Your School Makes Good Sense, a slide presentation, shows how to start a recycling program for office paper in a school. Students in grades 6 through 12 will increase their awareness of recycling, interact with people in the community, learn to plan, and bring important recycling information home. “Composting in Schools” section explains composting. For teachers, it provides background information on composting, lab activities for the classroom (e.g., monitoring the composting process or observing compost invertebrates), and information on indoor composting (e.g., classroom activities involving worm composting). It also suggests activities for incorporating lessons on composting into language arts, math, sciences, geography, social studies, and other subject areas. For students, this site provides fun and interesting sites such as information about “weird and unusual composting.”

Title: Energy, Economics and the Environment: Case Studies and Teaching Activities for Middle School

Publisher: Indiana Department of Education  
Office of Program Development  
Center for Schools Improvement and Performance  
Room 229  
State House
Abstract: This curriculum for students in grades 6 through 8 consists of case studies supported by classroom activities, actions, and issues. The program encourages students to confront issues concerning economics, energy and the environment by giving basic information in each field. It tries to enable students to develop basic decision making skills through motivational projects. The textbook also contains graphs, simple drawings and other resources to aid students in understanding their environment. There is also a version of this publication for grades K through 4.

Title: Energy - Education Resources: Kindergarten Through 12th Grade

URL: http://www.eia.doe.gov/kids

Publisher: National Energy Information Center, EI-30
Energy Information Administration
Room 1F-048, Forrestal Building
1000 Independence Avenue, SW
Washington, DC 20585
Phone: (202) 586-8800
Email: infoctr@eia.doe.gov

Date Published/Last Update: February 28, 1998

Cost: No Cost
Key Words: Packaging issues, product life cycle, recycling, reuse, source reduction

Abstract: This catalog, available online or in print, identifies organizations that provide free or low-cost educational materials relating to energy and the environment. Each entry includes a description of the organization, contact information, and the types of information available. Many of the organizations provide materials relevant to solid waste issues. For example, the Plastic Bag Association offers *Don't Let a Good Thing Go to Waste*, an environmental education program for students in grades 2 through 5. The interactive, interdisciplinary activities teaches children that they can make a difference in solving solid waste challenges by practicing the 3Rs: Reduce, Reuse, and Recycle. *Life of a Hamburger* is a middle-school curriculum teaches the elements of waste generation and waste prevention. Keep America Beautiful offers *Waste in Place*, a curriculum supplement for teachers of students in grades K through 6. It introduces children to responsible waste handling in more than 30 lesson plans.

Title: Envirolink


Publisher: The Enviro Link Network
5808 Forbes Avenue, Second Floor
Pittsburgh, PA 15217
Phone: (412) 420-6400
Fax: (412) 420-6404
Email: support@envirolink.org

Date Published/Last Update: No date provided

Audience: Teachers and students in grades K through 12

Format: Internet site

Key Words: Composting, recycled or green products, recycling, reuse, solid waste management, source reduction

Abstract: EnviroLink is an extensive clearinghouse of environmental resources available on the Internet. "Educational Resources" section of the EnviroLink Library is a searchable database of sites offering environmental education materials. A wealth of relevant information can be located using the terms in their subject list – e.g., recycling, green design, waste management. "Actions You Can Take" lists various projects that students can participate in or resources describing activities that students can do to protect the environment.

*********************************************************************************************************
**Title:** The Environment Center School Kit  
**URL:** [http://www.iinet.net.au/~ecwa/info/skoolkit.html](http://www.iinet.net.au/~ecwa/info/skoolkit.html)  
**Publisher:** II Net Technologies  
250 St. Georges Terrace  
Perth, WA 6000  
Australia  
Phone: +61-8-9214-2222 or +61-8-9322-7773  
Email: iinet@iinet.net.au  
**Date Published/Last Update:** November 1999  
**Audience:** Students in grades 4 through 7  
**Format:** Internet site  
**Key Words:** Recycled or green products, recycling  
**Abstract:** The Environmental Centre’s main goals are investigating and responding to the environmental information needs of the Western Australian community. However, many of the materials on the site are useful in any locale. This site emphasizes the connection between lifestyle and environment. “The Environmental School Kit” addresses a range of environmental issues in a nontechnical way. “How Practical Recycling can $AVE you DOLLAR$” offers reasons for recycling, using less to do more, and provides practical ideas for reusing things. “Things You Can Do” displays a list of activities students can do within their communities to make a difference, including recycling and buying environmentally friendly products.

**Title:** Environmental ACTION!  
**URL:** [http://www.enviroaction.org](http://www.enviroaction.org)  
**Publisher:** E2: Environmental and Education  
P.O. Box 20515  
Boulder, CO 80308-3515  
Phone: (303) 442-3339  
Fax: (303) 442-6633  
Email: e2ee@enviroaction.org  
**Date Published/Last Update:** 1998  
**Cost:** Teacher Resource Guide - $13.95; Student Edition - $5.95; General Resource -$5.95
Title: Environmental Education Link on the Internet

URL: http://eelink.net/

Publisher: The Environmental Education and Training Partnership (EETAP)
North American Association for Environmental Education
1825 Connecticut Avenue, NW, Suite 800
Washington, DC 20009-5708
Phone: (202) 884-8912
Fax: (202) 884-8455
Email: p-nowak@eelink.net

Date Published: December 1999

Cost: No cost

Audience: Teachers and Students grades K through 12

Format: Internet site

Key Words: Household hazardous waste, recycling, solid waste management

Abstract: This site provides links to environmental education (EE) resources on the Internet. It organizes environmental education into the following main topic areas: “EE Professional Resources,” “Grants and Jobs Section,” “EE Classroom Resources,” “EE Organizations and Projects,” “Environmental Facts and Data,” and “Search Page.” Each of these...
main topics is further subdivided. For example, “EE Classroom Resources” lists links to “Classroom Resources - Directories,” “Audiovisual and Software Links,” “Student EE Sites,” “EE-Related Education Sites,” and “Activities by Topic.” “Waste and Toxics” is one of the main topics. In addition to the broad topic area provided by the above described organization of the main page, the user can locate a narrow topic or specific file by going to the search page. Here the user can search all or one of several EE Resource Databases. The GAIN Directory of Environmental Organizations provides more than 13,000 records of environmental organizations throughout the US. Activity Finder provides a searchable list of more than 9000 natural resource-oriented classroom activities. Searchers can link a topic to the desired learning objective. GreenCOM Resource Library is a database of 2500 items. This collection includes curricula, handbooks, standards, monographs, case studies, reports, periodicals and newsletters, and sample materials such as games, posters, videos, and computer software. The search page also allows the user to search only the EE-Link page or the text of all files on 30 other EE-oriented sites, indexed by EE-Link. In addition, the search page provides a list of environmental terms with definitions, synonyms, and cross-references.

Title: Environmental Hazards Management Institute (EHMI)

URL: http://www.ehmi.org/tools/home.htm

Publisher: Environmental Hazards Management Institute
10 Newmarket Road
Durham, NH 03824
Phone: (603) 868-1547 or (800) 446-5256

Date Published/Last Updated: July 1998

Cost: See individual entries for prices

Audience: All

Format: Internet site and Print

Key Words: Composting, household hazardous waste, recycling, reuse, source reduction

Abstract: This site provides descriptions and ordering information for educational materials for schools to use as curricular enhancements. “Tools for Community & Employee Outreach” highlights materials suitable for children with a yellow sunburst. Kidswheel® on Common Household Products emphasizes safety and the importance of reading product labels. A fun-to-use slide-chart wheel helps kids identify potentially hazardous products at home and in school. It also gives product options for common household chores and provides arts and crafts projects. Several color-in activity books present solid waste issues. BUY RECYCLED: Reduce, Reuse, Recycle, Rethink... Can You Guess What Is the Missing Link?™ introduces kids to the importance of closing the loop as it pertains to the environment and the ongoing success of recycling program. Composting Matters introduces young children to the world of home composting. EHMI Earth Express® FOUR Pack contains publications for children ages 7 through 11. They are
tabloid-sized, colorful, informative, and easy-to-understand. The word games and fun learning activities are ideal for home, classroom (teacher's master included), camp, scout troop, and community outreach efforts. The FOUR Pack addresses the following issues: Household Chemical Product Safety, Recycling/Waste Reduction/Buy Recycled, Energy Conservation, and Home Composting.

********************************************************************************

Title: Environmental Protection on Native American Lands

Publisher: The Center for Indian Community Development
Humboldt State University
Arcata, CA 95521
Phone: (707) 826-3711

Date Published: 1995

Cost: $25 donation requested

Audience: Teachers of students in grades 1 through 12

Format: Curriculum

Key Words: Composting, hazardous waste, history of garbage, household hazardous waste, packaging issues, recycled or green products, recycling, solid waste management, source reduction, sustainability

Abstract: This 300-page curriculum is targeted at teachers of Native American children on rural tribal lands. It includes 52 lessons and related activities on various topics, including solid waste, hazardous waste, recycling, composting, and vermiculture. It also includes lessons on air and water pollution. Student worksheets, "problem" sheets, and survey forms are included, as are suggested related curriculum areas, teaching times, and materials required for each lesson or activity.

********************************************************************************

Title: Federal Resources for Educational Excellence (FREE)

URL: http://www.ed.gov/free/

Publisher: Peter Kickbush
FREE
U.S. Department of Education
Office of the Deputy Secretary
400 Maryland Avenue, SW, Room 7W114
Washington, DC 20202
Email: FREE@ed.gov.

Date Published/Last Update: December 1999
Audience: Teachers and Students in grades K through 12
Format: Internet site
Key Words: Household hazardous waste, recycling, solid waste management, sustainability
Abstract: Federal Resources for Educational Excellence (FREE) is a compendium of government supported educational resources. The user can search for materials available at the site from the more than 30 participating federal agencies. Or the user can search “Gateway to Educational Materials” (GEM) to locate other educational resources on the internet. A sample search using the key word “recyclable” on GEM found Costume Building with Recyclable Items and Recycled Costumes: Creative and Easy on Your Budget, both for use by students in grades 6 through 12. Each entry provides a description of the item, grade levels, GEM subject and key words, audience, form (HTML, pdf, etc.), resource type (e.g., lesson plan, activity), publisher, and a link to the full text of the item. Another search using the keywords recycle bin found Excavating Your Recycling Bin as a Fossil Record. Users can find a wide range of materials relating to solid waste issues that are pertinent to most curricular areas -- art, science, drama, social studies, etc. “Tell Us Your Favorite” allows students, parents, and teachers to send comments about their favorite resources, lets users view submitted comments, and provides special resources for each of the three audiences.

Title: Glass Packaging Institute
URL: http://www.gpi.org
Publisher: GPI Headquarters
1627 K Street NW, Suite 8000
Washington DC 20006
Phone: (202) 887-4850
Fax: (202) 785-5377
Email: gpidc@erols.com

Date Published/Last Update: No date provided
Audience: Teachers and students in grades K through 12
Format: Internet site and print
Key Words: Product life cycle, recycled or green products, recycling, reuse
Abstract: The Glass Packaging Institute offers an educational packet containing an interactive poster and grade appropriate Teacher’s Guide. Guides are available for grades K through 3, 4 through 6, 7 through 9, and 10 through 12. Each guide contains reproducible pages of information that can be used for classroom discussion, glass recycling illustrations, and suggested classroom activities. The suggested activities are designed to engage students on a number of levels and to provide them with meaningful
challenges.

Title: The Global Thinking Project
URL: http://www.gtp.org/
Publisher: Department of Middle/Secondary Education and Instructional Technology
Georgia State University
Atlanta, GA 30303
Phone: (404) 651-2518
Date Published: November 1999
Cost: $75 per school year. Teacher's Guide is $35.
Audience: Teachers and students in grades 5 through 12, after-school leaders
Format: Project kit
Key Words: Solid waste management
Abstract: The Global Thinking Project (GTP) is a "hands across the globe" education project that provides students and teachers with the opportunity to participate in environmental study and to communicate with students and teachers in other countries. During the course of the project, students learn to monitor and analyze important physical and biological aspects of their environment, including solid waste management. The skills and knowledge that students develop are then applied as they engage in collaborative learning projects that link classrooms globally. In so doing, students learn that problems that are typically addressed as science problems have social, political, economic and ethical aspects, as well. In Project Solid Waste students examine their own personal waste stream and begin to identify ways that they might contribute to a reduction in the production of non-biodegradable solid waste. Teachers and community groups can use GTP in a variety of settings, including science and social studies classes and after-school or club activities. GTP has created cross-cultural teaching materials that have been field tested in more than 100 schools and with thousands of students over the past seven years.

Title: Gould League of Victoria Australia - Recycling Education Centre
URL: http://www.gould.edu.au/index1.htm
Publisher: Gould League Headquarters
PO Box 1117
Genoa Street
Involved with environmental education since 1909, the Gould League of Victoria is an independent, environmental education organization which enables people to understand, appreciate and protect the environment. Online resources include “Schools Waste Wise Program,” a compost guide, and “Waste-Stoppers,” a series of information sheets dealing with all aspects of recycling, suitable for students, teachers and the public. This site provides a catalog of relevant resources with brief description and cost.

Title: Green Teacher
URL: http://www.web.net/~greentea/
Publisher: Green Teacher
P.O. Box 1431
Lewiston, NY 14092
Phone: (416) 960-1244
Fax: (416) 925-3474
Email: greentea@web.net

Abstract: This magazine was created for and by educators to improve environmental and global education across the curriculum at all age levels. The magazine is published quarterly and each issue features perspective articles, ideas for rethinking education in light of
environmental and global problems; practical articles, reports of what successful
teachers, parents, and schools are doing; ready-to-use activities, cross-curricular
activities for various grade levels; resource listings and reviews, evaluations of dozens of
new books, kits, games and other resources; school news, and announcements. The
table of contents of the current issue is available for viewing on the web site, as well as
sample articles from past issues. Users can order this magazine online.

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Title: Haz-Ed Classroom Activities for Understanding HazWaste

URL: http://www.epa.gov/superfund/students/clas_act/haz-ed/hazindex.htm

Publisher: U.S. Environmental Protection Agency
Order from National Service Center for Environmental Publications
Phone: (800) 490-9198

Date Published/ Last Update: April 1996

Cost: No cost

Publication or Order Number: EPA540-K-95-005

Audience: Students in grades 7 through 12

Format: Curriculum and Internet site

Key Words: Hazardous waste

Abstract: This curriculum was developed as part of the Federal Superfund Program. Haz-Ed can
be used as part of a larger curriculum, as special stand-alone activities, or on an
occasional basis to teach students about hazardous waste issues. This curriculum is a
compilation of interdisciplinary activities that focus on the scientific, technical, and
policy issues related to hazardous waste sites and Superfund. It is designed to help
students develop skills in critical thinking, problem solving, and decision making. The
curriculum contains warm-up exercises, activities, and flash facts. The warm-up
exercises focus on developing and understanding some basic concepts related to
hazardous waste. These exercises are designed to be presented by classroom
educators in series or as preparation for related activities. The activities build on the
warm-ups, although they can stand alone. Students examine issues related to
hazardous waste and site cleanup. The Fact Flashes are fact sheets that provide the
foundation of information on which the warm-up exercises and activities are built. The
Fact Flashes stand alone, or they can be used to supplement lessons.

********************************************************************************
**Title:** The Home of the Tok Family

**URL:** http://aci.on.ca/lighthouse/

**Publisher:** Lighthouse Publications
15213 Young Street, Suite 15
Aurora, Ontario L4G 1L8
Canada
Phone: (905) 727-8233
Fax: (905) 727-4713
Email: lighthouse@aci.on.ca

**Date Published/Last Update:** December 1998

**Audience:** Students in grades K through 12

**Format:** Internet site

**Key Words:** Composting, hazardous waste, household hazardous waste, recycling, solid waste management

**Abstract:**

The Home of the Tok Family is a colorful and entertaining children’s online environmental magazine that contains activities and stories to educate them about the environment. “What’s Inside” introduces students to the Tok Family, a family of aliens who have responded to a call to help save Planet Earth. There are contests, puzzles, and adventure stories. BackTok’s Nightmares features recycling and solid waste management issues. Also available on this web site is “When You Grow Up,” which addresses various kinds of environmental careers that students may consider. “Hot List for Environmental and Educational Sites” contains links to web sites and pages having to do with the environment and education for children. “Environmental Products” describes related materials that can be ordered online. Waste Reduction Week Poster/Calendar© 1997/1998 features Tommy TrashCan© who gives the Do’s and Don’ts of waste management. BackTok tells about the differences in household hazardous waste, how to identify the hazardous symbols and where they are commonly found. (Although the calendar is dated, the other features of this poster are still useful.) There is also a set of four composting posters entitled How To’s of Composting, What to Compost, What Not to Compost, Building Composts, and Types of Composts.

*********************************************************************************************************

**Title:** "Ideas: Recycling" in Arithmetic-Teacher, Vol. 41, No. 9, pp. 534-543

**Publisher:** National Council of Teachers of Mathematics
1906 Association Drive
Reston, VA 20191-1593
Phone: (800) 235-7566
Fax: (703) 476-2970
Email: orders@nctm.org
Date Published: May 1994

Cost: $4 for article reprint, plus $3 shipping and handling

Audience: Teachers of grades K through 8

Format: Article

Key Words: Recycling

Abstract: This 10-page article focuses on the connections among mathematics, the environment, and the conservation of natural resources. Each activity provides opportunities for communicating, reasoning, and problem solving skills as students become personally involved in conserving natural resources. The activities help students incorporate aspects of sorting, graphing, measuring, and collecting into their work. Students will also learn to interpret data, evaluate consumer habits, and apply the concepts they have learned.

*********************************************************************************************************

Title: The Imagination Factory

URL: http://USERS.HSONLINE.NET/KIDATART/

Publisher: Marilyn Brackney
314 Flat Rock Drive
Columbus, IN 47201
Email: Kidatart@hsonline.net

Date Published/ Last Update: November 1999

Audience: Students in grades 2 through 7

Format: Internet site

Key Words: Product life cycle, recycling economics, reuse

Abstract: This web site provides innovative ways to recycle materials by creating art projects. “Education” section addresses the relationship between recycling and art and how recycled materials can be used in art projects. “Research and Development” provides arts, environmental and general information links teachers can access to find other creative art projects. “Lessons/Activities” is updated weekly with a new project for classroom use. Past projects are available by type of art work. Also available on this page is the “Trash Matcher” created in recognition of America Recycles Day (November 15). Users click on the type of waste materials listed to quickly find the art/recycling activities which call for them. This site also features Trashasaurus Rex, a dinosaur created almost entirely from postconsumer solid waste.

*********************************************************************************************************
<table>
<thead>
<tr>
<th>Title: The Journey of Garbage from the Recycling Bin to the Store Shelf</th>
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<tbody>
<tr>
<td>URL: <a href="http://www.muhs.edu/links/riverstudies/recycle.html">http://www.muhs.edu/links/riverstudies/recycle.html</a></td>
</tr>
</tbody>
</table>
| Publisher: Marquette University High School Science Club  
3401 West Wisconsin Avenue  
Milwaukee, WI 53208  
Phone: (414) 933-7220  
Fax: (414) 937-8588  
Email: Friday@muhs.edu |
| Date Published/Last Update: Summer 1998 |
| Audience: Students in grades K through 12 |
| Format: Internet site |
| Key Words: Packaging issues, product life cycle, recycling, source reduction |
| Abstract: The Journey of Garbage is a play based on the life cycle of garbage, taking students through what occurs to recyclable materials from the time they are placed in the garbage can, through the recycling process, and returned to the grocery store shelf as a new product. There is a section of interesting facts on solid waste, plastics, glass, steel, aluminum, paper, rubber, oil, energy, and compost to add to the presentation. This site also includes a list of people, companies and organizations that have been helpful to the creators in learning about recycling and in gathering materials for their show. |

<table>
<thead>
<tr>
<th>Title: Kids for Saving the Earth</th>
</tr>
</thead>
<tbody>
<tr>
<td>URL: <a href="http://kidsforsavingearth.org">http://kidsforsavingearth.org</a></td>
</tr>
</tbody>
</table>
| Publisher: Kids for Saving the Earth (KSE) World Wide  
P.O. Box 421118  
Minneapolis, MN 55442  
Phone: (612) 559-1234  
Fax: (612) 559-6980  
Email: kseww@aol.com |
| Date Published/Last Update: No date provided |
| Cost: $33.95 - for KSE Work Central Kit; Action guides; Contact for membership costs |
| Publication or Order Number: Title |
Audience: Teachers and students in grades K through 12

Format: Internet site, print, and video

Key Words: Composting, history of garbage, recycled or green products, reuse

Abstract: A nonprofit group founded by an 11-year-old boy who died of cancer, Kids for Saving the Earth encourages “peaceful earth saving action.” The mission of KSE is to educate, inspire, and empower children to protect the Earth’s environment. KSE Worldwide provides action-oriented educational materials to kids, families, groups, classrooms and schools. Available are Education Guides for little kids (pre-K through grade 1) and Action Guides for kids (grades 1 through 12). The Earthworks Central Kit contains a video, activities about land, air, and all living things, posters, including a booklet for kids on how to teach grownups to recycle and produce less trash. KSE also offers sheet music and CD’s. The book “Amazing Earth Adventures: A Kid’s Guide to Preserving the Planet,” describes the story of Aly and Casey who realize that if they start working on one problem at a time (e.g., throwing away less trash), they can make a difference.

Title: Kids Take Action

URL: http://www.afandpa.org/kids_educators/index.html

Publisher: Kids Take Action
American Forest and Paper Association
1111 19th Street, NW, Suite 800
Washington, DC 20036
Phone: (202) 463-2700
Fax: (202) 463-2785
Email: INFO@afandpa.org

Date Published/Last Update: July 1999

Audience: Students in grades K through 6

Format: Internet or print

Key Words: Packaging issues, recycling, reuse, solid waste management, source reduction, sustainability

Abstract: American Forest and Paper Association offers a series of interactive, educational flyers on paper reuse and recycling for use in the classroom. Hey Kids, It’s Time to Take Action! gives the background of paper recycling and provides instructions for joining the Billion Bags Campaign, a nationwide effort to reuse and recycle more paper grocery bags. Paper Recycling Glossary defines common paper recycling terms and features a word search activity. Be a Curbside Kid - Make Recycling Happen teaches youth how to add paper grocery bags to their town’s curbside collection program. 20 Ways to
Reuse a Paper Grocery Bag presents 20 creative uses for a paper grocery bag, plus hands-on instructions for making recycled paper at home or school. Paper, Please! gives the top ten reasons to choose paper, plus details on how paper grocery bags can be used in recycling programs. It includes a coloring activity for K through 3. The web page offers other “Teacher Tools,” including activities and a poster. “Reduce, Reuse, and Recycle” provides a glossary, history of paper, and recycling and reuse of paper. “Bags, Boxes and More” encourages the reuse of bags and boxes.

Title: Less Waste in the First Place: Six Lessons on Packaging and Source Reduction

URL: http://www.flexpack.org

Publisher: Flexible Packaging Education Association
1090 Vermont Avenue, NW, Suite 500
Washington, DC 20005-4960
Phone: (202) 842-3880
Fax: (202) 842-3841
Email: fpa@flexpack.org

Date Published/ Last Update: 1994

Cost: Free to teachers - one copy per request

Publication or Order Number: Title

Audience: Teachers of grades 4 through 10

Format: Lesson plans

Key Words: Packaging issues, product life cycle, source reduction

Abstract: The lessons contained in this 48-page guide give students a basic understanding of the scientific and environmental principles that govern package design and development. By completing the activities that accompany each of the lesson plans, students can define a package and describe its functions, differentiate among types of packages, describe how modern packaging evolved, understand the scientific, social, and environmental considerations that affect the design of a package, discuss how packaging helps consumers reduce the amount of garbage they throw away, define and identify different types of barriers to reducing waste, and define source reduction. Lesson plans are intended to supplement existing curricula in science, ecology, and home economics.

Title: Likeable Recyclables

URL: http://family.go.com/Categories/Activities/Features/family_1999_03/famf/famf39recycle/
Abstract: This page advises: "Next time you're about to toss packing peanuts, bottle caps, twist ties or rubber bands, think twice." These items can be the perfect materials for arts and crafts in the classroom or after school. Examples include recycled boats, a dog and its house, and a recycled dollhouse with furniture. Directions allow users to replicate the crafts or can serve as a springboard for inventing their own.
teenager from the present magically transported to the underground world of a landfill. Two companions join her, one from the future and one from the past. Juliette finds that the most important thing she can do is prevent trash from being created in the first place. In *HenryCycle Special*, HenryCycle, the "superhero of recycling," and his colorful friends Ima Hippo and Brown Derby Burglar show how purchasing peanut butter in larger jars or switching from paper plates to china can make a difference. The video is an entertaining story for younger elementary students that offers tips on recycling, shows how to cut down on waste around the house and yard, and gives ideas to reduce waste on every trip to the store.

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**Title:** MOBIUS Curriculum: Understanding the Waste Cycle (Third Edition)

**Publisher:** Browning-Ferris Industries  
Attention: Community Affairs - "MOBIUS Program"  
757 North Eldridge  
P.O. Box 3151  
Houston, TX 77253  
Phone: (281) 870-7461  
Fax: (281) 870-7844

**Date Published:** 1995

**Cost:** No cost

**Audience:** Teachers of grades 4 through 6

**Format:** Curriculum

**Key Words:** Composting, history of garbage, packaging issues, recycling, reuse, solid waste management, source reduction, sustainability

**Abstract:** This 120-page curriculum focuses on helping students understand waste problems and guiding them in making good waste solutions part of their everyday lives. It also helps students learn about the cyclical nature of the environment. Students learn about landfills, incinerators, composting, recycling, groundwater contamination, the history of garbage, and packaging choices. The curriculum provides lessons for each topic area that outline concepts notions and skills addressed, materials needed, materials supplied, and instructions. It also provides topics for class discussion, science activities, and math and logic problems. This program also includes team-building and leadership activities.

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**Title:** Monroe County, Indiana Solid Waste Management District - Kids Page

**URL:** [http://www.mcswwmd.org/kids/kidshome.html](http://www.mcswwmd.org/kids/kidshome.html)
**Title:** The Museum of Solid Waste and Energy

**Publisher:** National Energy Education Development (NEED) Project Headquarters  
P.O. Box 2518  
Reston, VA 20195  
Phone: (703) 471-6263  
Fax: (703) 471-6306  
Email: need@erols.com

**Date Published:** 1997

**Cost:** $3.50

**Audience:** Teachers of grades 5 through 9

**Format:** Activity book

**Key Words:** Composting, packaging issues, recycling, reuse, solid waste management, source reduction

**Abstract:** The NEED Project is a nonprofit corporation dedicated to educating students, teachers, and the community about energy and environmental issues. Using this 60-page activity guide, students create a museum with eight exhibits or "stations," on different solid waste and energy topics. They work in small groups of two to four students to prepare each exhibit. Background information on each topic is provided; students decide which
displays to include and write scripts for how the displays will be presented to other students.

Title: National Institute of Environmental Health Science Kids’ Page

URL: http://www.niehs.nih.gov/kids/home.htm

Publisher: NIEHS
P.O. Box 12233
Research Triangle Park, NC 27709
Phone: (919) 541-3345 or (919) 541-0395
Email: sowardm@niehs.nih.gov

Date Published/Last Updated: December 1999

Audience: Teachers and students in grades K through 12

Format: Internet site

Key Words: Composting, hazardous waste, recycling, solid waste management, Spanish language

Abstract: This web site has games, surprises, riddles, puzzles, and science projects to help students learn more about the environment in which they live. “Games and Surprises” contains Vermicomposting which provides how to information on composting, worm facts, and a game. “Read All About It!” focuses on health and science issues that affect our daily lives. “Science Word Scrambles!” is an interactive scrambled word game, including some words relevant to solid waste. “NIEHS Kids Links and Resources, for More Science, Fun, and Games!” is a list of resources that allows students to choose “Amazing and Fun Sites” or “Homework and Science Project Help.” This site is also available in Spanish.

Title: National Library for the Environment

URL: http://www.cnie.org/nle/

Publisher: Committee for the National Institute for Environment
1725 K Street, NW, Suite 212
Washington, DC 20006-1401
Phone: (202) 530-5810
Fax: (202) 628-4311
Email: cnie@cnie.org
The NLE web site contains an extensive list of materials that will help older students and teachers learn about the environment and understand what needs to be done to help preserve it. “Educational Resources & Directory” contains a directory of higher education environmental programs; Starfish, which assists faculty from all disciplines integrate environmental and sustainability issues into their teaching; and Advanced Technology Environmental Education Center (ATEEC), which focuses on advancement of environmental technology education through curriculum development, professional development and the nation's community college and high schools. It includes curriculum aids, activities, and information on environmental careers for high school students. This site includes a wealth of resources for students doing research and teachers needing background information on solid waste issues. Resources include “Environmental Virtual Libraries,” “Congressional Research Service Reports,” “Briefing Books,” “Environmental Reference Tools,” “Internet Reference Desk,” “Environmental Yellow Pages,” and “Dictionaries & Glossaries.” “Your Neighborhood - Local Environmental Information” allows searching by zip code to locate facts about specific geographic areas. “Careers Resources & Listings” contains helpful links for students interested in pursuing careers in environmental protection. Some of the headings under this section include corporate research, job market analysis, resume preparation, interviewing, and education. The section about environmental journals on the web contains links to more than 300 journals; some are full-text, while other list only the table of contents.

Title: National Science Teachers Association (NSTA) Catalog
URL: http://www.nsta.org
Publisher: National Science Teachers Association
1840 Wilson Boulevard
Arlington, VA 22201-3000
Phone: (703) 243-7100
Fax: (703) 243-7177
Date Published/ Last Update: 1999
Cost: No cost for catalog, materials are individually priced
Publication or Order Number: N/A

Audience: Teachers of students in grades K through 12

Format: Catalog

Key Words: Hazardous waste, solid waste management

Abstract: The main focus of this catalog is to provide teachers access to high quality educational materials. Some entries include: Teach with Databases: Toxic Release Inventory, which includes a copy of the TRI database on CD-ROM and booklets explaining the database and how to incorporate it into lesson plans. Recycling Two-Liter Containers and Recycling 35 mm Containers provide ways for educators to teach science and as they recycle. Cost and ordering information are provided.

Title: Newton's Apple

URL: http://www.ktca.org/newtons/

Publisher: KTCA Twin Cities Public Television, 3M, and National Science Teachers Association

Date Published: 1996

Cost: No cost

Audience: Teachers and students in grades K through 12

Format: Internet site and video

Key Words: Hazardous waste, packaging issues, recycling

Abstract: This site lists activity guides arranged by subject to accompany the popular PBS series. The classroom exercises available for downloading present thought questions, a list of vocabulary words, additional sources of information, materials needed for the exercise, and instructions on their use in the curriculum. The topics on solid waste management include garbage, recycling, and hazardous materials. This site also contains a section on upcoming season topics, and links for additional information. Ordering information for video copies of the programs is provided.

Title: Passaic County, New Jersey Office of Recycling and Solid Waste Programs - The Kids Corner

URL: http://pcnjwaste.com/index_kids.htm
Publisher: B. Ellie Arnould  
Solid Waste Program Coordinator- Passaic County, New Jersey  
1310 Route 23 North  
Wayne, NJ 07470  
Phone: (973) 305-5738  
Fax: (973) 305-5737  
Email: pcnjwaste@intercall.net

Date Published/Last Updated: November 1999

Audience: Students in grades K through 8

Format: Internet site

Key Words: Composting, hazardous waste, household hazardous waste, littering, recycling

Abstract: The "Kids Corner" is for students in grades K through 8. Arranged by subject, the materials on this site provide word games, pages to print out and color, and puzzles. Teachers can use these activities to supplement course work. Topics include precycling, recycling, compost, litter, and hazardous materials.

Title: Pennsylvania's Department of Environmental Protection

URL: http://www.dep.state.pa.us/dep/deputate/enved/students.htm

Publisher: Pennsylvania Department of Environmental Protection  
Rachel Carson State Office Building  
400 Market Street  
Harrisburg, PA 17105  
Phone: (717) 787-2814  
Email: webmaster@a1.dep.state.pa.us

Date Published/Last Update: November 1999

Audience: Teachers and students in grades K through 12

Format: Internet site

Key Words: Littering, recycling, solid waste management, Spanish language

Abstract: Pennsylvania's Department of Environmental Protection (DEP) Teacher's page provides information on current issues, lesson plans and activities to help teachers become "online environmental educators." "Curriculum & Classroom Activities On-Line" includes lesson plans for recycling. "Things To Do Online" offers the opportunity to go along on a DEP inspection tour of a municipal waste landfill, a resource recovery facility, and a surface mining operation. "The Interactive Learning Center" allows users to see and hear
videos and narrated presentations on a variety of useful environmental topics, including recycling and pollution prevention. There are links to other environmental resources online, an environmental reference desk, and other information specific to Pennsylvania. “Free Stuff You Can Ask For” includes a buy recycled poster and a recycling bumper sticker. “The Litterbug is Back” announces a new anti-littering program, which includes Litter Detectives, a lesson plan for K through 12; Mountain of Trash, a QuickTime Movie; and a “print your own” litterbug mini-poster. “But What Can I Do to Protect the Environment?” is a collection of activities, including setting up a school recycling program, that students can do to protect the environment. Some information on this site is available in Spanish.

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Title: Planet Pals Earthzone

URL: http://www.planetpals.com

Publisher: Planet Pals
          c/o Finedesign
          25 Star Road
          Newton, MA 02465
          Phone: (617) 244-7531  Contact: Judith Gorgane
          Email: Judith@shore.net

Date Published/ Last Updated: December 1999

Audience: Teachers and students in grades K through 8

Format: Internet site

Key Words: Hazardous waste, recycling, reuse

Abstract: Educators can use this site to assist in teaching children about the universe, its natural resources, and its issues. This site provides informative reading for lessons, as well as projects children can work on. For teachers, there is a section encouraging school eco projects with links to what other classrooms are doing. “Parents and Teachers” contains a long list of suggestions on how to use Planetpals Earth Zone as a teaching tool. “Earth Matters” addresses recycling. The crafts page includes recycling and reusing ideas for making treasures from trash. “Save the Planet” offers quick earth friendly tips and tricks children can do. “Earthday 1999” includes a recycling kit (Note: the recycling kit on the home page does not relate to solid waste issues) that teaches children how to separate their trash. There are facts about recycling throughout this site. For example, “About Earth” presents facts about our planet, but includes some statistics on how long it takes for different materials that make up garbage to break down. Students can also join a club and exchange ideas on protecting the environment with other students.

******************************************************************************
Title: Planet Protectors Club

URL: http://www.epa.gov/epaoswer/osw/kids.htm

Publisher: RCRA Information Center (5305W)
Office of Solid Waste
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC  20460-0002
Phone: (800) 424-9346
Fax: (703) 603-9234
Email: rcra-docket@epa.gov

Date Published/ Last Updated: September 1999

Cost: No charge

Audience: Students in grades K through 6

Format: Print and Internet site

Key Words: Recycling, reuse, solid waste management, source reduction, Spanish language

Abstract: The Planet Protectors Club web site was developed to help make learning about the environment fun, yet educational. N. Trubble and the Environauts provides an opportunity for students to expand their critical thinking skills by solving a series of questions related to solid waste management. It encourages students to gather information, formulate answers, and learn whether they have answered questions correctly. Other parts of the site also enable students to apply what they have learned through a variety of hands-on activities and worksheets. Students can interact with the site individually and in groups, as well as in a classroom, after school, or home setting. It can be integrated into science, language arts, or math classes and takes approximately 25 minutes to complete. The Adventures of the Garbage Gremlin is a comic book featuring a character who is constantly outwitted by students who practice recycling. “Planet Protectors Coloring Book” allows the user to click and color the page online. “Waste No Words” is a crossword puzzle that can be worked online. Students can also download activity booklets: Follow That Trail is for students in grades K through 3 and The Case of the Broken Loop is for grades 4 through 6. Both activity books are also available in Spanish. This page also contains a link to EPA’s Office of Environmental Education, which provides grant information for schools and teachers, national requirements for teaching environmental education in schools, and links to other publications and sites for further information. Teachers can order The Planet Protectors Club Kit. The kit contains pocket guides (one for kids and one for adults), copies of the two activity books mentioned above, the official Planet Protectors Club badge and certificate, and Drop and Swap Roll, a reuse and recycling board game. The kit also includes an order form. Teachers may order additional copies of the activity booklets, kids guides, badges and certificates for their classrooms.

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Title: Plastic Bag Information Clearinghouse

URL: http://www.plasticbag.com/

Publisher: Plastic Bag Association
P.O. Box 2811
Pittsburgh, PA 15203
Phone: (800) 438-5856
Fax: (412) 381-8890
Email: pbainfo@aol.com

Date Published/Last Update: November 1998

Audience: Teachers and students in grades K through 12

Format: Internet site

Key Words: Packaging issues, recycling, reuse, source reduction

Abstract: This web site describes and allows online ordering of free lesson plans for teachers of grades 2 through 5 and grades 6 through 9. Don't Let a Good Thing Go to Waste aids pupils in grades 2 through 5 to discover that they can make a difference by practicing the 3 Rs: Reduce, Reuse, Recycle. With An Ounce of Prevention, a curriculum developed by the National Science Teachers Association, students in grades 6 through 9 can discover the connection between the trash they generate and the solid waste challenges our country faces. Its interactive, inter-disciplinary activities help students understand the reasons we create so much waste and why we must find ways to reduce it. “Earth Games” contains three interactive games that can be used in conjunction with the lesson plans. The Earth Mission Puzzles and the Grime Fighters Game are designed for pupils in grades K through 5 and the Hamburger Game for students in grades 6 through 9. “Test Your EQ” allows students to test their knowledge of source reduction and recycling. The results include practical suggestions for putting the 3 Rs to work in daily life.

Title: Popsi School Program

URL: http://www.popsi.com/school.html

Publisher: Post Consumer Products, Inc.,
2725 West Coast Highway
Newport Beach, CA 92663
Phone: (949) 646-0229
Fax: (949) 636-9404

Date Published/Last Update: 1998
The Popsi School Program is a cross-curriculum environmental educational program, providing a creative approach for teaching scientific, artistic, ecological, mathematical, musical, linguistic and logical concepts. The program designed for grades K through 3 is hosted by Popsi, a doll made from a fabric manufactured from recycled plastic beverage bottles. Her unique origins help students discover that there is value in what we generally consider worthless. The Popsi Package includes: Popsi, - the recycled toy; Teacher's Guide, containing a standards based instructional model, overview, introduction, preparation information, 12 activity lessons, spelling list, glossary, and sample rubrics; 25 copies of Secrets of the Dump, a story booklet that fictionalizes how Popsi is transformed from discarded plastic bottles found in an overcrowded landfill, into a bubbly little pixie; 25 Popsi Power Awards; recycled plastic shredded flakes and recycled fiber from plastic flakes, allowing students to touch and feel the elements from which Popsi is made; the Popsi Song audio cassette with sing along lyrics sheet that emphasizes the Popsi philosophy; and a packet of sunflower seeds, for planting in the bottom of Popsi's packaging, thus teaching the concept of reusing. A description of the materials is available at the Internet address listed above.
actions based on analysis and evaluation of the available information. The activities stimulate creativity, originality and flexibility, and encourage students to become responsible, productive and participatory members of society. PLT is an environmental education program for teachers working with pupils in grades Pre-K through 12. PLT helps students gain awareness and knowledge of the natural and built environment, their place within it, as well as their responsibility for it. All PLT activities found within the Pre-K through 12 curriculum guide the learner from awareness and knowledge to action. Students attempt personal or group action projects based on the knowledge they have gained from the activities. PLT offers workshops and training for educators in the effective use of their resources. “Curriculum” presents descriptions of lessons and activities that educators can integrate in all levels of classroom programs. Teachers must participate in a PLT workshop in order to obtain the curriculum. “GreenWorks!” is PLT’s community action and service learning program. It offers PLT educators and their students the opportunity to make a real difference in the communities in which they live and work. “Resources” displays a list of posters, videos, audio cassettes, CDs, Internet sources, books, instructional/activity kits available to teachers.

Title: Realm of Recycling

URL: http://www.bconnex.net/~mbuchana/realms/page1/recycle.html

Publisher: Marlene Buchanan
Barrie, Ontario
Canada
ICQ#3000177
Email: mbuchana@bconnex.net

Date Published/Last Update: February 1999

Audience: Students in grades K through 12

Format: Internet site

Key Words: Recycling, reuse, source reduction

Abstract: Realm of Recycling is designed to show students ways they can help the environment. There are tips on how to reduce, reuse and recycle items around the house, at school and work, and in the neighborhood. Students can send in their suggestions for additions to the lists. Following each tip in brackets is the concept it exemplifies (reduce, reuse, or recycle). In addition, this site presents a section of fun crafts made from recyclable materials.
Title: Recycle City
URL: http://www.epa.gov/kids/recyclecity.htm
Publisher: U.S. EPA Region 9
175 Hawthorn Street
San Francisco, CA 94105
Date Published/ Last Updated: January 1998
Cost: No cost
Audience: Students in grades K through 12
Format: Internet site
Key Words: Composting, hazardous waste, industrial waste, recycled or green products, recycling, reuse, solid waste management, source reduction, unit pricing
Abstract: This site provides a graphic of a town. Users can click on different parts of the town--such as the hazardous waste center, auto wrecking yard, or manufacturing plant--to learn detailed information about many aspects of recycling, reuse, and waste reduction. This site also provides a game in which students are responsible for managing and cleaning up Dumptown to turn it into Recycle City. Students learn about the current waste stream, recovered waste, and a variety of hazardous waste management programs. They also learn about municipal budgeting. All of the games and locations have been designed to enable a teacher to match different goals with lessons being taught in class. The "Activities" section recommends ways to use this site in the classroom.

Title: Recycling PETE’s Fun Page
URL: http://www.napcor.com/kids/index.html
Publisher: Jennie Windischmann
Director of Public Affairs
NAPCOR
2105 Water Ridge Parkway, Suite 570
Charlotte, NC 28217
Phone:(704) 423-9400
Fax:(704) 423-9500
Email: JWindischmann@napcor.com
Date Published/ Last Update: July 1999
Audience: Students in grades K through 8
Format: Internet site

Key Words: Packaging issues, recycling, reuse

Abstract: “Recycling PETE’s Fun Page” provides activities for kids who want to learn more about PET plastic recycling and what they can do in their own communities. “Meet Pete” allows students to meet Recycling Pete, the mascot of the National Association for PET Container Resources (NAPCOR) and learn basic facts about recycling PET plastic. “Do You Know How to Recycle Properly?” teaches the three steps for properly recycling plastic bottles. “Which Products are Packaged in PET?” gives the students a chance to choose which products in the list are packaged in PET. “Kid Facts on PET Plastic” gives interesting facts and statistics. “What You Can Do To Make A Difference” suggests activities that students can do around the house and at school. This site also offers a recycling glossary; a word search activity, containing terms that have been produced from recycled PET plastic, to print out; and Recycling PETE’s song The Bottle Blues, which teachers can download in either WAV (1.28 MB) or Real Audio (58 K) format. “Recycling PETE’s Quick Quiz” is an online test that permits students to check what they have learned about recycling PET plastic.

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Title: The Recycling Room for Students and Teachers, Fort Collins Colorado

URL: http://www.ci.fort-collins.co.us/environmental/RECYCLING/teacher/index.htm

Publisher: Shirley Bruns
300 LaPorte Avenue
Fort Collins, CO 80521-2719
Phone: (970) 221-6264
Email: sbruns@ci.fort-collins.co.us

Date Published/Last Update: November 1999

Audience: Teachers and students in grades K through 12

Format: Internet site

Key Words: Composting, littering, recycling, solid waste management

Abstract: The Recycling Room for Students and Teachers web site provides information for K through 12 students, college students, teachers, and parents. “The Learning Center” contains extensive resources for teachers, plus lots of information about recycling for students. “Teachers Resources” includes several links to environmental web sites, as well as other educational information on waste reduction, recycling, resource conservation, pollution prevention, composting, etc. Students in grades K through 12 can link to sites where they will find out more about recycling, conserving our natural resources, and worm composting. They can tour “The Smart House” and “Shop Recycled Mall.” “Fun Web Sites” takes students to different web sites where they can have fun while they learn about recycling and pollution prevention.
Title: Recycling Slide Show

URLs: http://solstice.crest.org/environment/gotwh/general/recycle-slides/

Publisher: Center for Renewable Energy and Sustainable Technology
            CREST Software
            1200 18th Street, NW, Suite 900
            Washington, DC 20036
            Phone: (888) 442-7378
            Fax: (202) 887-0497

Date Published: March 1996
Cost: $25.00 plus shipping and handling for the CD-ROM

Audience: Teachers and students in grades K through 12

Format: Internet Slides, CD-ROM

Key Words: Hazardous waste, history of garbage, recycled or green products, recycling, reuse,
          solid waste management, source reduction

Abstract: This 176-slide presentation is an introduction to recycling. It is image-intensive, with photographs and charts that teach children about recycling. It provides an annotation for each slide, but the teacher can include additional information as well. The slide show presents information about recyclable materials, collection, landfills, policy, and education. It promotes the benefits of recycling in an easy-to-understand manner and also explains the hierarchy of waste management. Text and slides appear on the Web site listed above. This online slide show is part of the Greening of the White House CD-ROM, funded by the U.S. Department of Energy, the American Institute of Architects, and the U.S. Environmental Protection Agency. This site and CD-ROM also address hazardous waste. The CD-ROM can be ordered online.

Title: Recycling Study Guide (Third Edition)

Publisher: Wisconsin Department of Natural Resources, Education Section
            Recycling Publications CE/6
            P.O. Box 7921
            Madison, WI 53707
            Phone: (608) 266-2711

Date Published: 1993, 1997 update and supplements
Cost: No cost for one copy

Publication or Order Number: IE020

Audience: Teachers of grades 4 through 12

Format: Activity guide

Key Words: Composting, packaging issues, product life cycle, recycling, recycling economics, reuse, solid waste management, source reduction

Abstract: This 36-page guide includes information, facts, figures and activities on the amount of solid waste generated by residents of Wisconsin, strategies for preventing waste and conserving natural resources, and a discussion of how solid waste is disposed of. Several activities in the guide closely examine packaging issues, encouraging students to investigate the purpose of packaging and to examine how products can be packaged differently to minimize waste. A historical perspective on solid waste is also presented. The guide encourages students to consider how changing technologies and lifestyles over time affect the amount of waste generated. Also available are an update to the activity guide, a supplement for students in grades K through 3, Nature's Recyclers (publication number IE043), and a coloring book (publication number IE042). Materials are available to requestors outside of the state.

Title: The Ring Leader Recycling Program

URL: http://www.ringleader.com/quest/menu/index.html

Publisher: ITW Hi-Cone
1140 West Bryn Mawr Avenue
Itasca, IL 60143
Phone: (800) 965-7464 or (630) 773-9300
Fax: (630) 773-3015
Email: itw@ringleader.com

Date Published/ Last Update: January 1999

Audience: Teachers and students in grades K through 12

Format: Educational program and Internet site

Key Words: Recycling, solid waste management

Abstract: “The Ring Leader Recycling Program” encourages collecting recyclable six-pack rings as a school project. More than 8500 schools participate in the program. This program allows students to learn about and participate in closed-loop recycling. Teachers join the leader program in order to receive the free recycling kit. “The Quest of the Ring
Leaders” is a cyber-adventure game. By completing the game, students gain an understanding of some solid waste management problems as well as methods to decrease environmental degradation. In coordination with traditional classroom activities, students learn how they can personally protect the environment. “Educational Resources” contains tips and ideas for implementing the program; facts and trivia about recyclable six-pack rings; information about closed-loop recycling; Ring Leader Reporter, a newsletter featuring stories about schools using the program; and lesson plans, which include subject area (e.g., science, math), objectives, methods, materials, vocabulary, procedures, discussion questions, and suggestions for additional activities.

Title: Science and Sustainability

URL: http://www.lhs.berkeley.edu/SEPUP

Publisher: Science Education for Public Understanding Program (SEPUP)
Lawrence Hall of Science
University of California
Berkeley, CA 94720-5200
Phone: (510) 642-8718
Fax: (510) 642-3131
Email: sepup@uclink.berkeley.edu

Date Published/ Last Update: December 1999

Cost: Varies

Audience: Teachers of grades 4 through 12

Format: Curriculum and Internet site

Key Words: Hazardous waste, household hazardous waste, sustainability

Abstract: At the heart of all SEPUP instructional materials are kits with laboratory equipment and printed support materials for students and teachers. Student books include directions for laboratory activities, investigations, specially selected reading materials, and sample data tables; teacher’s guides provide needed support including lesson plans, background materials, and solution preparation pages. The emphasis is on scientific literacy. SEPUP produces both year-long courses and supplementary instructional materials. All materials undergo a rigorous development process, including two years of field testing in classrooms across the country. Sections of the year-long course “Science and Sustainability” for grades 10 through 12 address disposal of hazardous waste, the utilization of natural resources, and how the by-products of ore processing can become potentially toxic waste. A SEPUP Module is a series of related activities designed for grades 6 through 9. The activities use inquiry-based problem-solving approaches to learning which emphasize the importance of basing one’s decisions on evidence. Each module contains materials needed to complete the activities, student pages, and background and instructional materials for the teacher. Available modules
include Toxic Waste: A Teaching Simulation, Plastics in Our Lives, The Waste Hierarchy: Where Is “Away”? Investigating Hazardous Materials, and Household Chemicals. The CHEM-2 program for grades 4 through 6 consists of a printed Teacher’s Manual that includes blackline masters of all recommended student activity sheets, a tool kit for integrating CHEM across the curriculum (with its own blackline masters), and a kit of materials and equipment. Units include Hazardous Home and Trash or Cash?

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**Title:** Searching SEEK (Sharing Environmental Education Knowledge)

**URL:** http://www.seek.state.mn.us

**Publisher:** SEEK Coordinator
520 Lafayette Road North
St. Paul, MN 55155-4100
Phone: (612) 215-0205 or (800) 657-3843
Email: seek@moea.state.mn.us

**Date Published/Last Updated:** December 1999

**Cost:** Varies

**Audience:** Teachers of grades K through 12

**Format:** Internet site

**Key Words:** Composting, hazardous waste, history of garbage, household hazardous waste, recycling, reuse, source reduction

**Abstract:** This is a clearinghouse for environmental education resources. It is Minnesota's interactive directory of environmental education resources. Here teachers can find out about curricula, videos, programs, events and more. Resources from over 100 organizations can be located on SEEK's searchable database. The user can click on "Individual Quick Searches" and then, under "Title or Abstract Keyword," type in an environmental term such as "Recycling" or "Hazardous Waste." What follows is a list of relevant educational resources, with ordering, price, and contact information. Many of the resources are available online, including Reduce, Reuse, Recycle: ESL Textbook/Workbook, which provides key vocabulary words in twelve different languages.

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**Title:** Service Learning Beyond the Classroom

**URL:** http://www.epa.gov/epaoswer/general/educate/svclearn.htm

**Publisher:** RCRA Information Center (5305W)
Office of Solid Waste
Abstract:
This booklet describes how students across the country are gaining hands-on awareness of waste reduction, recycling, and composting, through solid waste service-learning projects. Service-learning, an educational experience that combines knowledge with service and personal reflection, is teaching students in grades K through 12 various aspects of safe solid waste management, such as reducing household hazardous waste and buying recycled-content products. This booklet contains 19 profiles of school-based and community projects organized by grade level. It includes contacts and additional resources providing information on how to start a solid waste service-learning program.

Title: Virtual Recycling
URL: http://www.virtualrecycling.com/index2.htm
Publisher: Manitoba Product Stewardship Corporation
280 - 530 Kenaston Boulevard
Winnipeg, Manitoba R3N 1Z4
Canada
Phone: (204) 989-6222
Fax: (204) 989-6229
Email: lbereza@mpscmb.ca

Audience: Teachers and students in grades K through 12
Format: Internet site
Key Words: Recycling, solid waste management
Abstract: Virtual Recycling is an educational initiative of the Manitoba Product Stewardship Corporation. Designed as a resource for the K through 12 school system, this site brings teachers and students a wealth of recycling information, statistics and news in a paperless and interactive format. The section for teachers provides tips by grade level for using this web site with their students, links to external environmental sites, and new site features for frequent visitors. The section for students has a wealth of information on recycling, divided into the following segments: General Recycling Information, All About Recyclable Materials, How Recyclable Materials are Collected, What Happens After Pick Up, Markets for Recyclable Materials and Cool Recycling Facts. Each consists of one or more fact sheets with accompanying quizzes and links to related web sites. Some sections have special features; e.g., “What's Happened to the Milk Carton & Drinking Box Market?” in the markets for recyclable materials category. Some of the information on this site is specific to Manitoba; however, most of it is useful anywhere. Most links are to web sites in Canada and the United States.


URL: http://www.aseptic.org

Publisher: Information Clearinghouse
Aseptic Packaging Council
P.O. Box 3794
Washington, DC 20007
Phone: (800) 277-8088

Date Published/Last Update: 1995

Cost: No cost

Audience: Teachers of grades K through 12

Format: Activity guide

Key Words: Composting, packaging issues, product life cycle, recycling, reuse, solid waste management, source reduction

Abstract: Activities in this 48-page guide focus on the volume of waste generated in the United States, options for handling waste, the purpose of packaging, decisions about packaging, and the life cycle of the aseptic package. In one of the lessons, students are given an opportunity to learn about the relationship between the weight of product and package, discuss the economics of packaging choices, and explore how products are marketed. Student handouts accompany the kit. Also available are a brochure on drink box recycling, a recycling poster, and information on packaging for a healthy lifestyle.

*********************************************************************************************************
Title: Waste World
URL: http://www.wte.org/wwsay.html
Publisher: IWSA
1401 H Street, NW, Suite 220
Washington, DC 20005
Phone: (202) 467-6240
Fax: (202) 467-6225

Date Published/Last Update: 1997

Cost: $265.00 plus shipping and handling
Contact for grant information

Audience: Students in grades 6 through 9

Format: Curriculum

Key Words: Recycling, solid waste management, source reduction

Abstract:
Waste World is a six-part middle-school curriculum developed with the support of the U.S. Department of Energy's National Renewable Energy Laboratory. The materials are designed to teach students the environmental, economic and energy-related issues associated with managing municipal solid waste. Waste World also helps students understand the role of the integrated approach to solid waste management, which relies on a combination of source reduction, recycling, waste-to-energy technology and landfilling. The current version of Waste World has been enhanced and expanded based on teacher feedback from a national pilot study of Waste World conducted in more than 500 schools nationwide. The package includes a teacher's guide, a slide show overview of solid waste management, an interactive software program in which students act as solid waste commissioners, student role-playing activities, a glossary, and resources to support student research. All materials are contained in a single, sturdy loose-leaf binder. Sample slides and sample CD-ROM screens can be viewed at the web site listed above. The kit can also be ordered online. A limited number of grants are available that reduce the cost to $50.00.

Title: Worms Eat Our Garbage: Classroom Activities for a Better Environment
URL: http://www.wormwoman.com/frameindex.html
Publisher: Flower Press
10332 Shaver Road
Kalamazoo, MI 49024
Phone: (616) 327-0108
**Date Published:** 1993

**Cost:** $22.95 + $3.00 shipping

**Audience:** Teachers and students in grades 4 through 8

**Format:** Curriculum guide with activity book

**Key Words:** Composting, recycling, solid waste management

**Abstract:** This curriculum guide and activity book are designed to help elementary and middle school educators teach about composting with earthworms. The 215-page book teaches the physical characteristics, behaviors, needs, and habitat of the earthworm. It also teaches students how to set up and maintain a worm bin, understand the processes of vermicomposting, make and test hypotheses, record observations, interpret data, and arrive at conclusions. This book provides worksheets with quizzes; activities; questions and answers; and games that integrate science with art, reading, mathematics, geography, language arts, and history. This material can be ordered online.
GLOSSARY

This glossary includes terms that appear in the key words in the above references and in the following index.

Composting
The controlled decomposition of organic matter (such as food scraps and yard trimmings) in the presence of oxygen into a soil-like material.

Hazardous waste
Waste with explosive, ignitable, corrosive, or toxic characteristics.

Household hazardous waste
Products containing hazardous substances that are used and disposed of by individual rather than industrial consumers. These products include some paints, solvents, and pesticides.

Industrial waste
Nonhazardous wastes produced during manufacturing operations.

Product life cycle
All of the steps it takes to manufacture, distribute, use, and dispose of a product.

Recycling
Separating, collecting, processing, marketing, and ultimately using a material that would have been thrown away.

Recycling economics
The cost expenditures and savings associated with recycling and providing recycling services.

Reuse
The use of a product more than once in its same form or for the same purpose or for different purposes, such as reusing a soft-drink bottle when it is returned to the bottling company for refilling, or reusing a coffee can as a container for nuts and bolts.

Source reduction
The design, manufacture, purchase, or use of materials to reduce the amount and/or toxicity of waste. Source reduction techniques include reusing items, minimizing the use of products that contain hazardous compounds, using only what is needed, extending the life of a product, and reducing unneeded packaging.

Sustainability
Meeting the needs of the present without compromising the ability of future generations to meet their needs.

Unit pricing
A system whereby residents pay for municipal waste management services per unit of waste collected rather than through a fixed fee.
INDEX OF BIBLIOGRAPHIC REFERENCES BY KEY WORD

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The Compost Resource Page
Cuyahoga County Ohio Education Resources
Cycles for Science: Materials for High School Science
Earth 911
Earth to Kids - Environmental Defense Fund
Educational Resources for Solid Waste Management
ENC Online
Envirolink
Environmental ACTION
Environmental Hazards Management Institute (EHMI)
Environmental Protection on Native American Lands
Gould League of Victoria Australia - Recycling Education Centre
The Home of the Tok Family
Kids for Saving the Earth
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