

CELEBRATE AMERICA RECYCLES DAY - Close The Loop



It All Comes Back To You.

the social, environmental and economic benefits of recycling. The America Recycles promotion reminds us that setting materials out for recycling is only the first step. To ensure a future market and demand for recycled materials, we need to “close the loop”. This means buying products made from materials collected in local recycling programs.

Lesson 1

Background

On November 15 each year, thousands of events take place across the country to celebrate American Recycles Day through the America Recycles promotional campaign. The events are designed to promote

MI Curriculum Framework Correlations

English Language Arts Content Standard X:

All students will apply knowledge, ideas, and issues drawn from texts to their lives and the lives of others.

English Language Arts Content Standard XI:

All students will define and investigate important issues and problems using a variety of resources, including technology, to explore and create texts.

Mathematics Content Standard III: 1:

Students collect and explore data, organize data into a useful form, and develop skill in representing and reading data displayed in different formats. (Collection, Organization, and Presentation of Data)

Science Content Standard I: 1

All students will ask questions that help them learn about the world; design and conduct investigations using appropriate methodology and technology; learn from books and other sources of information; communicate their findings using appropriate technology; and reconstruct previously learned knowledge. (Constructing New Scientific Knowledge)

Science Content Standard II: 1

All students will analyze claims for their scientific merit and explain how scientists decide what constitutes scientific knowledge; how science is related to other ways of knowing; how science and technology affect our society; and how people of diverse cultures have contributed to and influenced developments in science. (Reflecting on Scientific Knowledge)

Science Content Standard III: 5

All students will explain how parts of an ecosystem are related and how they interact; explain how energy is distributed to living things in an ecosystem; investigate and explain how communities of living things change over a period of time; describe how materials cycle through an ecosystem and get reused in the environment; and analyze how humans and the environment interact. (Ecosystems)

Science Content Standard IV: 2

All students will investigate, describe and analyze ways in which matter changes; describe how living things and human technology change matter and transform energy; explain how visible changes in matter are related to atoms and molecules; and how changes in matter are related to changes in energy. (Changes in Matter)

Science Content Standard V: 1

All students will describe the earth’s surface; describe and explain how the earth’s features change over time; and analyze effects of technology on the earth’s surface and resources. (Geosphere)

Social Studies Content Standard II: 2

All students will describe, compare, and explain the locations and characteristics of ecosystems, resources, human adaptation, environmental impact, and the interrelationships among them. (Human/Environment Interaction)

Social Studies Content Standard IV: 1

All students will describe and demonstrate how the economic forces of scarcity and choice affect the management of personal financial resources, shape consumer decisions regarding the purchase, use, and disposal of goods and services, and affect the economic well being of individuals and society. (Individuals and Household Choices)

Social Studies Content Standard IV: 2

All students will explain and demonstrate how businesses confront scarcity and choice when organizing, producing, and using resources, and when supplying the marketplace. (Business Choices)

Social Studies Content Standard V: 2

All students will conduct investigations by formulating a clear statement of a question, gathering and organizing information from a variety of sources, analyzing and interpreting information, formulating and testing hypotheses, reporting results both orally and in writing, and making use of appropriate technology. (Conducting Investigations)

Learning Objectives

1. Students will learn that many products are made from recycled materials.
2. Students will learn how to identify products made from recycled materials.
3. Students will learn the benefits of recycling and “closing the loop”.

Behavioral Objectives

1. Choose to buy recycled products.
2. Talk to others about the importance of “closing the loop”.
3. Ask family and friends to consider buying recycled products.

Materials

1. Household Products
2. Worksheet 1

Suggested Procedure

Begin this lesson with a discussion of markets and demands. Establish an understanding with students that in order to sell a product there must be a demand for it. Without a demand, the manufacturer or distributor will not succeed in selling their product.

Ask students the following question: How does this relate to recycling? Summarize student responses for clarification.

Discuss the importance of closing the loop. By purchasing products with recycled content, we help ensure a market for recycled materials. Each American produces 4.4 pounds of trash per day.*

Ask: What are the benefits of recycling? Record responses on chalkboard. (Conserves natural resources, reduces waste and the need for landfilling/incineration, saves energy, prevents pollution caused by manufacturing of products from virgin materials, decreases emissions of greenhouse gases that contribute to global climate change, protects and expands U.S. manufacturing jobs, sustains the environment for future generations)

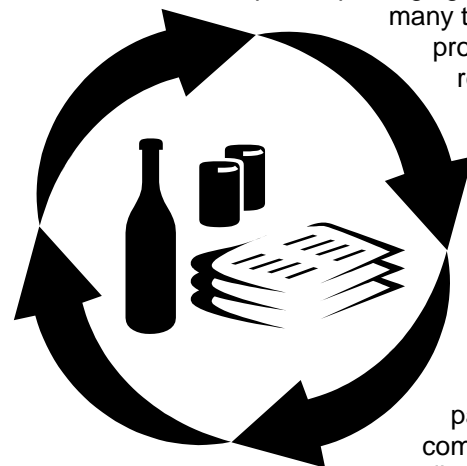
Explain and distribute Worksheet 1. Instruct students to complete Worksheet 1 for discussion the next day. As the Extension requires research beyond what students may be able to complete at home, you may want to assign it as extra credit or allow additional time for completion.

Worksheet 1 could be completed at home or at a grocery store. Instruct students to read labels carefully to determine recycled content. As regulated by the Federal Trade Commission and the Environmental Protection Agency, unless a product or package contains 100 percent recycled materials,

the label must tell you how much is recycled. Many labels on recycled products tell where the recycled material comes from. “Post-consumer” materials come from previously used business or consumer products. “Pre-consumer” materials are basically scraps leftover from the manufacturing process. Pre-consumer waste has never been used before by business or consumers, unlike post-consumer waste.

Many common types of packaging can be counted on to contain recycled content. About 50% of the aluminum in beverage cans comes from used cans, nearly 25% of the glass in bottles and jars has been used before, and molded paper pulp containers (gray or brown cardboard egg cartons, fruit trays, etc.) are made from recycled paper. Over two thirds of the steel produced in the United States is made from recovered steel. Tin cans are actually steel coated with a thin layer of tin, with a 25% content of recycled steel.

In addition to glass, steel, aluminum, paper and plastic packaging, there are many types of products with recycled content on the market.



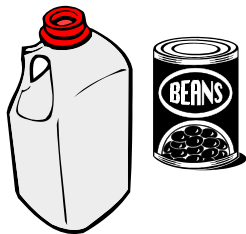
Some examples include: greeting cards, kitty litter, tire mats, pens/pencils, park benches, computers, candles and clothing (both polar fleece and cotton).

Upon completion of Worksheet 1, have the class list the recycled products on the board. Based on what the products or packaging are made of, place products in a chart according to the major components of municipal solid waste: paper (39%), yard waste (13%), other (10%), food waste (10%), plastic (10%), metal (8%), glass (6%) and wood (5%)*. Discuss the comparisons between how much trash materials we generate and how many recycled content products were found that were made from that material. Ask: In what areas could we do better?

*Reference: *Characterization of Municipal Solid Waste in the United States: 1998 Update*, U.S. Environmental Protection Agency No. 530-R-99-021

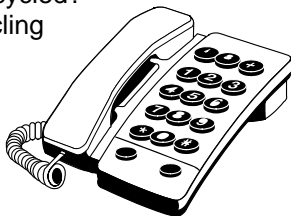
Extension

1. America Recycles offers many ideas and methods to celebrate American Recycles Day in the classroom. Students are encouraged to “pledge” to recycle and buy recycled products. Pledge cards, posters, organization action projects, and planning guides are available. For more information, contact your local recycling coordinator or the Michigan Recycling Coalition at (517) 327-9207 or info@michiganrecycles.org. Help students celebrate America Recycles Day by pledging to recycle more or buy recycled products. Use the ARD pledge at the right.
2. Ask students to pick one item from their home that contains recycled content. Ask students to draw or describe the life cycle of that product or packaging, including its manufacturing and disposal. For example, newspapers are manufactured from paper, which is made from trees. Trees are processed at a lumber mill, where wood trimmings are sent to the paper mill. The wood is ground to a pulp, mixed with water, then laid flat and rolled into large sheets. The sheets are used by the news agencies to print the newspaper on, which is then hopefully recycled. Newspaper for recycling is picked up on the curbside or dropped off at a recycling center, then sent to a materials recovery facility (MRF) for processing. The MRF then sells baled newspaper to manufacturers, who will make a new piece of newspaper or cereal box.



Pre- or Post-Questions

1. Ask students to tell whether or not each recycled content product can be recycled. Whether or not something can be recycled is not just based on the fact that there is a recycling symbol on the product (see #2).
2. Where/how can it be recycled? Contact your local recycling coordinator for more information.
3. Many product manufacturers provide a toll-free number for consumers to voice comments and suggestions. Ask students to call a manufacturer of their favorite product and



discuss the possibility of including recycled content in the manufacturer's product or package. Have students write a descriptive paragraph or essay detailing their discussion and conclusions.

America Recycles Day Pledge

Today I pledge to be responsible to my community and environment.

I promise to reduce, reuse and recycle whenever I can.

I will teach my friends, family and neighbors about recycling.

I shall do my part to close the loop by buying recycled stuff.

It is my future and what I think, do and say is important.

I am a good kid.

In honor of America Recycles Day, I choose to be responsible.

Celebrate America Recycles Day Close The Loop was excerpted and updated from the Waste Information Series for Education (WISE) curriculum (1999 Michigan United Conservation Clubs, (517) 371-1041) by the Michigan Recycling Coalition.

To learn more about:

America Recycles Day visit www.americarecyclesday.org

Michigan Recycling Coalition visit www.michiganrecycles.org

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