

Closing the Loop

Materials:

See attached list of materials

Grade Level:

Intermediate to Secondary

Content Objective:

Students will be able to:

1. Understand the importance of buying recycled products.
2. Describe the difference between items that are recycled into similar items and ones that take on a whole new appearance.

Background:

For recycling to work, there must be a company that takes your recyclables and turns them into something new. If consumers don't buy these recycled products, the manufacturers who make them will go out of business. If there are no manufacturers to take recyclables, your carefully collected materials may end up in a landfill after all.

Procedures:

Activity:

Discuss the overhead "Closing the Loop" with the students. Explain the importance of buying recycled products. Remind students that most recyclables (cans, bottles and paper) turn back into the same container or item. Steel, aluminum and glass can be recycled hundreds of times. Paper can be recycled 5 to 12 times. Most plastics, at this time can be recycled only once.

Set up recyclables on one side of a table and samples of recycled products on the other. Have students guess which material is turned into which product. Some items (like newspaper) can be turned into more than one product. Have students write down their answers on a piece of paper. Have the students form small groups and share their answers. After 15 minutes, discuss each item and its new product.

Ask students if they can think of anything else that would fit into these 2 categories. As students if they know the difference in cost of something made from recycled materials or content versus something made from the natural resource directly. Students could do research on a particular item and present their findings to the class.

This lesson adapted from
"Conserving the Future" - Renewable and Nonrenewable
Standards Based K-12 Activity Guide,
published by the PA Dept. of Education

List of Recyclables and Products

Newspaper - ceiling tile, pencil, house insulation

Office/writing paper - card, notebook paper, napkin

Cardboard - packaging material

Milk Jug - plastic lumber

Soda Bottle - carpet, batting material

Styrofoam - ruler

Tires - carpet pad, crumb rubber for asphalt, shoes

Oil - recycled oil

Steel - cans, appliances, tools, car parts

Aluminum - aluminum doors, windows, cans

Glass - insulation, asphalt, tiles, reflective paint, sandblasting beads

Paper - construction paper, grocery bags, nursery pots, roofing felt

Plastic - toys, boats, hoses, visors, flower pots

Rubber - conveyor belts, retread tires, car hoses, guardrails, doormats

Cloth - cleaning rags, mops, felt, padding, fine writing paper

Asphalt and Concrete - road fill, concrete aggregate