CANADIAN LEARNING COMPANY'S

Discussion Guide for

PROTECTING OUR ENVIRONMENT: RECYCLE

OBJECTIVES

- To develop concern for the environment. To teach the "3Rs" of protecting the environment -recycle, reuse, and reduce.
- To show how recycling enables people to conserve non-renewable resources and limit the amount of trash discarded
- To provide detailed information about the practice and benefits of recycling.
- To explain how individuals, families, and communities can contribute to a cleaner, safer environment.

SYNOPSIS

Recycling goods and materials once thought of as waste can reduce the demand for new landfills and conserve valuable resources.

This program explains how even modest recycling efforts by individuals, families, and businesses can make a difference to the environment It discusses the products most commonly recycled, and lists other items that are often overlooked. Glass bottles, aluminum and tin cans, paper, and automobiles are shown going through the process. The program explains the many merits of recycling, then observes that the success of community recycling programs depends in large part on creating markets for recycled goods.

The lesson is reinforced by dramatic examples that detail what happens when waste is carelessly discarded. The dumping of motor oil into storm drains and sewers by weekend do-it-yourselfers, for example, causes annual environmental damage equivalent to dozens of oil tanker spills.

BACKGROUND FOR THE DISCUSSION LEADER:

- Every year, each of us throws away about ten times our weight in trash-roughly one-half ton per person. The U.S. per capita trash "output" is twice that of Switzerland, Japan, Germany, and Sweden.
- In the space of a single year, the following items ended up in "The Great American Landfill": 18 billion disposable diapers, the product of 21 million trees; 25 billion Styrofoam cups; 2 billion disposable razors; 200 million tires; 7.5 million television sets; Enough wood and paper to heat 5 million homes for 200 years; Enough aluminum to rebuild American Airlines' entire fleet 71 times.
- To the figures above, add packaging. To package the nation's consumer products requires: 50 percent of the country's paper; 8 percent of its steel; 75 percent of its glass; 40 percent of its aluminum; and 30 percent of its plastic.
- In all, packaging totals 28 billion dollars annually-almost 10 percent of the cost of the goods themselves. In some cases, that figure is even higher: More money is spent on packaging food, for example, than farmers receive for producing it. Throwing away the packaging costs another 3 billion dollars.
- Hauling all that trash puts 40 thousand trucks on the streets, every day.
- These figures can be reduced if we cut back what is thrown away. There are three principal ways to do this: Reduce use of products: Use products conservatively or don't buy them in the first place. Reuse goods and materials already in hand: Don't throw something away if it can be used again. Recycle: Give back- or sell back-to the industrial machine all your old cans, bottles, paper, and other recyclables.
- Benefits of these practices include: Preservation of natural resources-minerals, trees, and water. Conservation of energy-it takes less energy to recycle a soda can, for example, than to make a new one from raw aluminum ore. Protection of the environment-less trash means less litter and less toxins.
- There are three possible community "markets" for recyclable materials: curbside pickup, buy-back centers, and drop-off centers. Citizens should work with local governments to provide adequate opportunities for recycling. Join the City Hall that provides them; fight the City Hall that doesn't.
- Community recycling depends upon profitable industrial markets for recyclables. Refusal to buy products that are over-packaged or packaged in non-recyclable containers will stimulate demand for recyclable material. If consumers stop buying peanut butter in non-recyclable plastic containers, for example, peanut butter producers will be forced to use glass jars.
- Does it pay for individuals or families to recycle? Recycling centers refund only a few pennies on bottles and cans, but think about this: Recycling one aluminum can saves enough energy to run a television set for three hours. Recycling one glass bottle saves enough energy to light a 100-watt bulb for four hours. Recycling a four-foot stack of newspapers saves a tree. The plastic from 1,000 milk jugs will make a park bench

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QUESTIONS TO ASK BEFORE VIEWING:

- What does recycling mean to you? Try to create an implicit group consensus on the nature of recycling.)
- What kinds of products or materials do you now recycle?
- What else could you recycle if you devoted the energy and time?
- How easy is it to get your recyclable materials to recyclers? Do you have curbside recycling in your neighborhood? Where is the recycling center nearest to your home?
- What do you do with items you don't recycle?
- On a scale of 1 to 10, how would you rate yourself as a recycler? Do you have you any interest in improving your rating? If so, why? If not, why not?

QUESTIONS TO ASK AFTER VIEWING:

1. Why should we recycle? (We're running out of space to put our trash; recycling saves energy and resources.)

2. Who should recycle? (Everyone: individuals, families, businesses, government.)

3. What must happen before community recycling programs can work? (Lead discussion to the fact that recycling programs depend on a market for recycled materials. A number of other responses may also be appropriate.)

4. According to the program, what materials are most commonly recycled today? The list should begin with paper, glass, and aluminum and tin cans, then include such materials as scrap iron, copper, steel, brass, aluminum trays, used batteries, some plastics, clothes, toys, furniture, and appliances.)

5. What paper goods are recyclable? (Newsprint, computer paper, envelopes, stationery, photocopy paper, telephone books, and lunch bags.)

6. How is glass recycled? (Bottles are separated by colour, green, brown, and clear-and crushed; the crushed glass is heated to 2000 degrees, then formed into new bottles.)

7. List the steps shown in the program for recycling aluminum and tin cans. (Aluminum and tin are separated with a magnet; the cans are crushed and formed into blocks called biscuits - aluminum biscuits weighing about 18 pounds and others about 40 pounds; small biscuits are combined into larger ones weighing about 1000 pounds; the biscuits are then shipped to companies that use them in new products.)

8. What product is often made from recycled aluminum cans? New cans.) From recycled steel? New cars.)

9. What products can be made from recycled HPD (high density polyethylene) plastics? (Landscape bordering, benches for parks and bus stops, and picnic tables.)

10. What use did the program cite for recycled used tires? (They can be broken down into rubber chips and used as fuel.)

11. Into what products is used motor oil recycled? ("New" motor oil and industrial fuel.) How much motor oil is improperly disposed of each year? How was that amount characterized in the program? ("Hundreds of millions of gallons; enough to equal dozens of oil tanker spills.") What do you think would be "improper disposal" of motor oil? (Dumping motor oil into a sewer or storm drain; discarding it with the trash.)

12. To what uses are the plastic, lead, and acid in automobile batteries put when they're recycled? The plastic is used in cases for new batteries; the lead is used for fishing weights and ammunition; the acid is used to clean steel.)

13. List the steps taken to recycle automobiles. (Old cars are first stripped of any parts that are in good condition for resale. Glass, plastics, seats, and lights are removed. The remaining part of the car is crushed and the crushed car sent to companies that shred the steel. The steel can be further recycled to make new cars.)

14. About how much of every wrecked car can be recycled? (About 75 percent, or 1875 pounds.) How much of an old car goes to landfills? (25 percent, about 625 pounds.)

PROGRAMS DETAILS

LENGTH:

16 minutes

SUBJECT AREAS: SCIENCE, ENVIRONMENTAL ISSUES, HEALTH

AUDIENCE LEVELS: INTERMEDIATE-ADULT

Ages 6 - 11

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