

TITLE: TAKE HOME RECYCLING KIT

SUBJECT: Social Studies, Language Arts, Science, Art

GRADE LEVEL: K - 6

LESSON OBJECTIVE: The student will be able to:

1. Help solve home and community waste problems by constructing a take-home recycling kit.
2. Explain to their family and friends the whys, whats, and hows of home source separation.

TEACHER BACKGROUND - KEY POINTS

1. Most products we consume are made of more than one natural resource.
2. Determining whether or not a particular material or item is recyclable depends on a number of factors.
3. The easiest place to separate materials for recycling is at home.
4. Combining two or more materials in a single product may make them nonrecyclable.
5. Some of the things we recycle can be reprocessed into more than one type of product.
6. It would be difficult for one to determine whether an item is made from recycled or virgin raw materials because the product is as good as new.

BACKGROUND INFORMATION

See Teacher Background: Recycling

DISCUSSION:

- The easiest place to separate materials for recycling is at home. Imagine how much work it would take to separate out the glass, metal, and various kinds of paper after they are mixed together in the garbage truck.
- Combining two or more materials in a single product may make them nonrecyclable. When aluminum foil and paper are glued together (e.g. gum wrappers) neither material can be recycled. Plastic or wax coatings on milk cartons make them difficult to recycle.
- Some of the things we recycle can be reprocessed into more than one type of product. For example:

Newspaper, when mixed with other types of paper at the paper mill, can be recycled into newspaper, kitty litter, egg cartons, berry boxes, and boxes for cereal, cakes, french fries, shirts, and jewelry.

Cardboard boxes, when mixed with other types of paper at the paper mill, can be recycled into cardboard boxes, brown paper hand towels, and boxes for cereal, cakes, french fries, shirts and jewelry.

Office paper, when mixed with other types of paper at the paper mill, can be recycled into tissue paper, and boxes for cereal, cakes, french fries, shirts and jewelry.

Plastic can be recycled into new plastic containers, plastic toys, polyester fiber insulation for jackets, quilts, sleeping bags, and polyester fiber for carpeting.

VOCABULARY (Potential vocabulary words are in bold type)

MATERIALS: Have students bring from home a cardboard box or six 8 1/2" x 11" pieces of cardboard, magazines, and used ribbon or twine. Regional Waste Systems "Yes, No, How" repro sheets. (Emphasize to students that they are recycling by reusing these materials.)

TEACHER MATERIALS: Marking pens, glue, scissors, hole punch, variety of colored construction papers.

LEARNING PROCEDURES

1. Assemble the "Take-Home Recycling Kit":
 - a. Have students cut cardboard into five 8 1/2" x 11" pieces.
 - b. Glue differently colored sheets of construction paper to one side of each cardboard piece.
 - c. Have students label the top of each piece of construction paper using the following headings: Glass and metal/newspaper and brown paper bags/HDPE(#2) plastic/magazines, catalogs and phone books.
2. Using the following "Yes, No, How" sheet, do one of the following:
 - a. For younger students — copy the sheet for each student. Have them cut the copied sheets on the dotted lines and paste the pertinent information on the bottom of the appropriate card.
 - b. For older students — give them the copies of the sheet and have them transfer the information in a creative manner.
3. Using the magazines, cut out pictures of the four different categories of waste. Paste these pictures below the label and above the directions on the corresponding cardboard sheets to form collages.

4. Ask students to label the remaining sheet "Recycle."
5. Copy the "How to Set Up Your Home Recycling Center" sheet for each student.
6. Read and discuss with students how they might set up centers in their homes. Paste this copy on the "Recycle" sheet.
7. Have students draw a floor plan of their home and property, marking places where they could set up home centers. Paste this plan on the back side of the recycle sheet.
8. Have students punch two holes on the right hand side of "recycle" sheet, two holes on both sides of the "newspaper and brown bags," "glass and metal," and "magazines, catalogs and phone books," sheets and two holes on the left side of "plastic" sheet. Connect the sheets with ribbon or twine.
9. Presenting the Kit:
 - a. In preparation for teaching their families, have students in class practice in groups. Each group discusses various approaches and selects one group member to present his or her kit to the class. Following presentations, discuss which approach might be most successful. Students practice their presentations in pairs until they understand and can effectively communicate the information to each other.
 - b. Have students present their kits to their families and report back in class on the reactions to their presentations.
10. List the students successful in establishing home recycling centers.
11. At the end of one month, reward students who have set up and helped continue to maintain home recycling centers with a certificate or award.

LEARNING EXTENSION

1. Have students make labels for their home recycling containers.
2. Discuss what other groups in the community students might present the kit information to. (Neighbors, other family members, other classes in schools, PTA, school staff, chamber of commerce, etc.)

PRE & POST TEST QUESTIONS:

What is "source separation?"

What materials are recyclable?

How do you prepare glass, paper, metal food cans, phone books, and plastic for recycling?

TITLE: PRODUCT PROFILES

SUBJECT: Science

GRADE LEVEL: K - 2

LESSON OBJECTIVE: Trash can be divided into basic categories of materials (glass, metal, paper, plastic, food, etc.)

BACKGROUND INFORMATION

See Teacher Background: Recycling

MATERIALS: Trash items (cleaned and rinsed); several cardboard boxes, labeled by category (paper, metal, food, etc.); labels for plastic, wood, metal, food, paper, glass; tape.

LEARNING PROCEDURES

1. Ask students to think about the composition of different items of trash. Have them name various categories of materials (plastic, food, etc.) and an example of each.
2. Line up a set of boxes on the front desk, one per category. Each should have a label — metal, plastic, paper, etc. — with an accompanying sample or illustration. Give the class a brief explanation of each category and show them an example.
3. Divide the students into small groups. Give each group a set of trash items that includes at least one example from each material category, and a set of labels. Have the students sort and label the objects by material type. Some items may be made of more than one type of material and the students will need to decide which is the most prominent.
4. When the students have finished classifying their objects, ask each group to deposit them in the correct cardboard box in the front of the room. List the trash items by category on the board. Which category has the most items? The fewest items?

SORT YOUR TRASH FOR RECYCLING

Draw a line from the waste to the bag.

