



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
Lesson Plans for Teachers

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Making a Mini-Landfill

Purpose

Grade level

4th thru 6th grades

Science TEKS

4.1a, 4.1b, 4.2c, 4.5b

5.1a, 5.1b, 5.2c, 5.2d, 5.3c, 5.11c

6.1a, 6.1b, 6.2c, 6.2d, 6.3c, 6.9c

Objective

To have students examine the materials that comprise the products they use, describe whether these materials are renewable or nonrenewable resources, observe what happens to materials when placed in a landfill and decide whether they should be disposed of in a different way.

Focus

Give some statistics about the amount of garbage each person generates in one year.

Materials

four large, clear-glass jars

soil

miscellaneous solid waste

crayons

masking tape

Procedure

1. Choose one item you threw away today. What is your item made of? Into which of the following four categories of solid waste does your item fit?
 - a. organic (e.g. potato peels)
 - b. renewable resource/recyclable (e.g. newspaper)
 - c. nonrenewable resource/recyclable (e.g. aluminum cans)
 - d. nonrenewable resource/hard to recycle (e.g. plastic toothpaste tube)
2. What happens to the item you threw away? Discuss: Where is it away? What is a landfill? How might the material that a piece of trash is made of determine how you should dispose of it?
3. List ways you can avoid disposing of your item in a landfill.
4. If your goal is to save natural resources and reduce solid waste, from which category (a-d) would you buy products? Which category would you avoid?
5. With crayons and masking tape, label each glass jar with one of the four category headings.
6. Fill each jar about half full with soil.
7. Sort each miscellaneous solid waste item into its proper category. Put a small sample of each into the jar with the corresponding label. Cover with soil. Leave the lid off and place the jar on a shelf away from people and out of direct sun.
8. Predict what you think will happen to the solid waste in each jar. Record your predictions.
9. Observe and record what changes occur during a 2-3 week period, if any.

Discuss

What happened to the items made of organic and renewable resources?

What happened to the items made of nonrenewable resources?

How did what happened compare with your predictions?

What comparisons can you make between your mini-landfill and a real landfill?

Ask students to keep a record of family purchases from the grocery store.

Discuss

What does your family do with the waste from its purchases?

Is there anything else your family could do with this waste?

If your goal is to reduce solid waste, which items would you eliminate from your shopping list?

Acknowledgments

B'Ann Beam, Stephen F. Austin State University TES course, 1994

Recycling Study Guide, Wisconsin Department of Natural Resources, Madison, WI 53707,
PUBL-IE-020, Jan., 1988.