

Lesson Objectives

By the end of the program participants will be able to:

- recognize recyclable versus nonrecyclable material,
- understand basic concepts of composting,
- apply basic conservation skills at home, and
- use creative skills to reuse basic household products.

Intended Audience

- School-aged children
- Youth groups, classrooms, after-school programs
- Anyone interested in helping children learn more about protecting the environment

Introduction

Children, like adults, have a direct relationship with the environment. This program will teach children basic principles of environmental stewardship. Key concepts of this program include:

Recycling: Children learn to identify what can and cannot be recycled through hands-on learning.

Composting: Children discover how worms help break down food waste and how this aids in plant growth.

Conserving: Children are given the opportunity to create their own energy efficient house and identify steps they can take to conserve energy at home.

Reusing: Children create “new” things from “old” materials.

Prepare the lesson

- Familiarize yourself with *Kids Go Green* fact sheet (MF2983). Have enough copies for all participants.
- Collect materials needed for the workshop program:
 - **Recycling module**
 - Bag of clean recyclable and nonrecyclable material
 - White board and markers
 - Tubs, boxes, or large sheets of paper for sorting recycling
 - **Composting module**
 - Examples of compostable and noncompostable materials
 - Glass jars, earthworms, moist soil, composting scraps for worm farm
 - **Conserving module**
 - Reused paper (back side blank)
 - Crayons, markers, or color pencils

- **Reusing module**

- Clean, empty milk jugs
- Scissors, glue, and decorative items
- Wire and wire cutter (for adults to use)
- Birdseed

Lesson Information/Delivery Methods

You may want to ask the children questions before each module to gauge what they know about the topic.

Recycling Module

This module will help children understand the difference between waste and recyclable items. To familiarize yourself with what can and cannot be recycled refer to Donna Krug's (2009) *It's Easy to be Green* fact sheet (MF2886).

Activity

Review with children items that can be recycled. Show them specific examples of plastics #1 and #2 and where to locate the plastic number on the product. Bring in examples of cardboard, chipboard, aluminum, steel, batteries, paper, and glass. (Glass should only be handled by adult instructor.) Provide examples of items that cannot be recycled, such as Styrofoam, plastics #3, #4, #5, and #6, synthetic fabrics, and other items.

Once children have a basic understanding of what can be recycled and the different types of products, have them play a sorting game. Label different areas of the floor as "plastic #1 and #2," "aluminum," "cardboard," "paper," and "trash." Place all the "safe" recyclables and nonrecyclables in the middle of the floor. Have children work as a group to sort the pile. Review each smaller pile/category with the group. If time allows, the leader can pair up students and form teams. A stopwatch or clock can be used to time how quickly and correctly each team sorts recyclable and nonrecyclable materials. Identify what was done correctly and encourage children to recategorize any misplaced items.

Finally, encourage children to share what recycling steps they are taking at home.

Composting Module

This module will help children understand the process of composting and how worms aid in plant development and growth. Familiarize yourself with KSU Horticultural Report (1992) *Making and Using Compost at Home* (MF1053) and the directions to home composting in the *Kids Go Green* fact sheet.

Activity

Bring in specific examples of items that can be composted (plant materials, paper, etc.) and items that cannot be composted (plastics, processed foods, and meat products). Review with children the basic concepts of composting. Once children have grasped these concepts, give them the opportunity to determine if an item is "worm-food friendly" or not.

Leader may also want to create a worm farm — directions found at Missouri Department of Natural Resources website (link also found in references of *Kids Go Green*) — to show children. This hands-on experience lets children see worms in action. Make sure the jar is clear, and encourage children to track worm tunnels through the jar.

Conserving Module

This module will help children apply basic conservation skills to home efficiency. The emphasis on this module is on reducing energy consumed in households.

Activity

Start this section by asking children "What does conserving mean to you?" Once children have given their own definitions, review conserving and reducing energy with them. Follow up by asking children what steps they are taking in their homes.

Give each child a piece of reused paper and coloring utensils. Encourage the children to create their own energy-efficient homes. Once they have finished this project, have volunteers share their houses with the group, specifically highlighting ways their created home conserves energy. Review answers and inform children of any further conservation skills they can use today (lights off, TV off, turn off water when brushing teeth, unplug appliances).

Reusing Module

This module encourages children to use creative ideas to "make old: things new." The emphasis is on reusing household items that would otherwise be thrown out.

Activity

Cut an opening into the side of each clean, empty milk jug and have children make them into birdfeeders. Encourage children to spend time decorating their milk jugs using craft items the leader has supplied. Once the milk jugs have been decorated, attach wire to each lid or handle so they can be hung in trees. Send home small bags (or clean, reused plastic containers) with birdfeed.

Ask children to brainstorm how reusing items helps the environment. Or ask, "What are some other items you might be able to reuse?"

Evaluation

This evaluation will be based on leader's interpretations of the workshop and children's knowledge.

What prior knowledge did the children attending the program have?

In what activities did the children seem most interested?

What knowledge did children seem to gain from the program?

Overall, would the leader repeat this program with children again?

a. Definitely b. Maybe c. Not at all

Resources

Brendler, C. (2009). *Winnie Finn, Worm Farmer*. Farrar Straus Giroux: New York.

Krug, D. (2009). *It's Easy to be Green, Fact Sheet* (MF2886). K-State Research and Extension.

Pfeffer, W. (2004). *Wiggling Worms at Work*. Harper Collins: New York.

Marr, C. (1992). *Making and Using Compost at Home* (MF1053). KSU Horticulture Report. K-State Research and Extension.

Missouri Department of Natural Resources: Division of Environmental Quality (2008). *Quart Jar Worm Farm*, Pub2188. <http://dnr.mo.gov/env/swmp/worms/wormjar.htm>

Urban Programming Resource Network: University of Illinois Extension. (no date) *Adventures of Herman the Worm*.

Authors

Erin Bishop, Family Life Agent, K-State Research and Extension – Fort Riley

Sara Mietzner, former Child Development Agent, K-State Research and Extension – Fort Riley

Reviewers

Karen Blakeslee, Extension Associate, Food Safety, K-State Research and Extension

Donna Krug, Family and Consumer Sciences Agent, K-State Research and Extension – Barton County

Brand names appearing in this publication are for product identification purposes only. No endorsement is intended, nor is criticism implied of similar products not mentioned.

Publications from Kansas State University are available at: www.ksre.ksu.edu

Publications are reviewed or revised annually by appropriate faculty to reflect current research and practice.

Date shown is that of publication or last revision.

Contents of this publication may be freely reproduced for educational purposes. All other rights reserved.

In each case, credit Erin Bishop, et al, *Kids Go Green, Leader's Guide*, Kansas State University, July 2011.

Kansas State University Agricultural Experiment Station and Cooperative Extension Service

MF2984

July 2011

K-State Research and Extension is an equal opportunity provider and employer. Issued in furtherance of Cooperative Extension Work, Acts of May 8 and June 30, 1914, as amended. Kansas State University, County Extension Councils, Extension Districts, and United States Department of Agriculture Cooperating, Gary Pierzynski, Interim Director.