Less is More Supplemental Guide

The materials in this kit were funded by a generous grant #11660 from the Chesapeake Bay Trust and from Maryland Department of Natural Resources Wildlife & Heritage Service (http://www.dnr.maryland.gov/).

This kit has been designed to supplement Less is More, a Growing Up WILD activity. Growing Up WILD is an early childhood education program designed to teach kids aged 3-7 about nature through interdisciplinary, developmentally appropriate activities. Growing Up WILD has been aligned with Common Core (K-2), Head Start Domains, NAEYC standards and Maryland Environmental Literacy Standards.

 The Growing Up WILD guide with 27 activities can be purchased directly from CEE (www.projectwild.org) or can be obtained by attending a workshop in Maryland. Check out the Maryland Dept. of Natural Resources website (https://dnr.maryland.gov/wildlife/Pages/Education/GrowingUpWILD.aspx) to find out about upcoming workshops or contact Sarah Witcher at 410-260-8566, sarah.witcher1@maryland.gov. Workshops can be set up for free with your organization if a minimum number of participants can be achieved.

Less is More Kit Contents:

1. 3 recycling sorting bins and cards
2. 16 laminated recycling bingo cards
3. Schoolhouse Earth DVD
4. Adventures of a Plastic Bottle book
5. Where Does Garbage Go book
6. Cleaning Up Litter book
7. Three R's: Reduce, Reuse, Recycle book
8. Laminated activity, supplemental guide and resource CD

Please inventory the toolkit upon receipt and before return. Please notify the Wildlife and Heritage Service of any missing or broken items at 410-260-8566. Thank you!

Recycling Facts

Recycling is the process of turning used waste and materials into new products. This prevents potentially useful materials from being wasted as well as reducing energy use and pollution.

- Recycling is part of the waste disposal hierarchy - **Reduce, Reuse, Recycle**.
- A wide variety of different materials can be recycled, including paper, plastic, glass, metal, textiles and electronic equipment.
- The idea of recycling isn't something new, historical evidence shows that humans have been recycling various materials for thousands of years.
- There are different methods of waste collection. These include drop off centers (where waste materials are dropped off at a specified location), buy back centers (where certain materials are exchanged for money), and curbside collection (where recycling vehicles are used to pick up waste material intended for recycling along residential streets).
- Powerful magnets are used to sort through different types of metals.
- Recycled paper can be made from three different types of paper: mill broke (paper scrap and trimmings), pre-consumer waste (paper that was discarded before consumer use), and post-consumer waste (paper discarded after consumer use, such as old newspapers).
- Recycling plastic can be more difficult than other materials, and plastics are not typically recycled into the same type of plastic.
- Different types of plastics are labeled by numbers (plastic identification code), for example polyethylene (PET) is number 1 and polyvinyl chloride (PVC) is number 3.
- Recycling old aluminum uses only 5% of the energy used to make new aluminum.
- Aluminum can be recycled from cans, bicycles, computers, cookware, wires, cars, planes and other sources.
- Glass recycling is often separated into colors because glass keeps its color after recycling.
- For every ton of recycled glass turned into new products, 315 kilograms of extra carbon dioxide that would have been released during the creation of new glass are saved.

Non-Recyclable Materials

187,553 tons of non-recyclable materials were disposed of at the King County landfill in Washington in 2008.

What will it be in the future?
Some materials are not readily recyclable and are appropriate for disposal *today*. But with research and advancements in technology they could become resources *tomorrow*.

Eighty percent of materials thrown away are resources – not waste.

- **Aerosol cans:** Sure, they're metal. But since spray cans also contain propellants and chemicals, most municipal systems treat them as hazardous material.
- **Batteries:** These are generally handled separately from both regular trash and curbside recycling.
- **Brightly dyed paper:** Strong paper dyes work just like that red sock in your white laundry.
- **Ceramics and pottery:** This includes items such as coffee mugs. You may be able to use these in the garden.
- **Diapers:** It is not commercially feasible to reclaim the paper and plastic in disposable diapers.
- **Hazardous waste:** This category includes household chemicals, motor oil, antifreeze and other liquid coolants. Motor oil is recyclable, but it is usually handled separately from household items. Find out how your community handles hazardous materials before you need those services.
- **Household glass:** Window panes, mirrors, light bulbs and tableware are impractical to recycle. Bottles and jars are usually fine. Compact fluorescent lightbulbs (CFLs) are recyclable, but contain a small amount of mercury and shouldn't be treated as common household bulbs.
- **Juice boxes and other coated cardboard drink containers.** Some manufacturers have begun producing recyclable containers. These will be specially marked. The rest are not suitable for reprocessing.
- **Medical waste:** Syringes, tubing, scalpels and other biohazards should be disposed as such.
- **Napkins and paper towels:** These items are discouraged from recycling because of what they may have absorbed. Consider composting.
- **Pizza boxes:** Typically, pizza boxes contain too much grease to recycle. While some compost enthusiasts steer clear of adding pizza box cardboard to their pile, others report no problems. It's that or the trash.
- **Plastic wrap**

- **Plastic-coated boxes, plastic food boxes, or plastic without recycling marks**: These items should be disposed of safely.
- **Plastic screw-on tops:** These items should be disposed of separately from recyclable plastic bottles. Remember that smaller caps are a choking hazard.
- **Styrofoam:** Some communities have a special facility for Styrofoam.
- **Tires:** Many states require separate disposal of tires (and collect a fee at the point of sale for that purpose).
- **Tyvek shipping envelopes:** These envelopes are the kind used by the post office and overnight delivery companies.
- **Wet paper:** In general, recyclers take a pass on paper items that have been exposed to water. The fibers may be damaged, and there are contamination risks.

It should be noted that some facilities will handle some of the items listed above (like Styrofoam). So, it is best to check with your local facility first before discarding uncertain items. For now, it's important to buy carefully, use and reuse, and find ways to reduce waste wherever possible.

Additional Recycling Activities

Recycling Sorting Activity

Goal: To have students understand what items can be recycled, composted, or trashed and to open dialogue on why it is important to recycle or compost.

Materials:

- Where does Garbage Go book (provided)
- 3 sorting bins (provided)
- Sorting cards (provided)- note-templates for sorting cards found on resource CD

Procedure:

1. Read the book "Where Does Garbage Go" to students.
2. Ask students if they can define recycling. Do they recycle at school or at home? Why is it important to recycle?
3. Ask students if they can define composting. Do they compost at school or at home? Why is it important to compost? Have older students contrast composting with recycling.
4. Tell students that they will practice recycling and composting by sorting items into different bins. Hand out bins and sorting cards to students.
5. After students have sorted items, use key below to go over their selections. For items that they did not sort properly, discuss why the item belongs in another bin.
6. As a wrap up, discuss with students how they can reduce certain types of trash that they produce. Reiterate the importance of recycling and composting.
7. As an extension, consider creating a classroom compost bin or worm bin (vermiculture) to help with waste created in the classroom.

Key:

- **Trash:** Chip bag, old toothbrush, broken toy, old markers, diaper, styrofoam
- **Recycling:** Glass bottle, box, milk jug, paper bag, plastic bottle, glass jar, paper plate (can also be composted), paper, paper napkin (unused), newspaper (can also be composted), soda can
- **Compost:** Dead flowers, rotten potatoes, egg shell, apple core, banana peel, corn cob

Recycling Bingo

Materials:

- Laminated Bingo cards (provided, copies found on Resource CD)
- Bottle caps or other material to mark cards

1. Give one card to each player.
2. Call off items randomly. You can either just say a word, like "newspaper", you can show a picture, or you can describe item ("this item lets you read the news"). When a word is called, each player should find it and mark it.
3. The first player(s) to clear five words in any direction (horizontal, vertical, or diagonal) wins.

Recycling Songs

Goal: To have these catchy tunes stick in children's minds so they will think about recycling at home, school and play. All songs developed by Wisconsin DNR's Wee Recycler's Program.

"The Bottle is Recycled"
(Sing to the tune of "Farmer in the Dell")

The bottle is recycled,
The bottle is recycled,
Hi ho the dairy-o,
The bottle is recycled.

Variations:
The newspaper is recycled, . . .
The aluminum can is recycled, . . .
The plastic jug is recycled, . . .
The tin can is recycled, . . .

"If You Help to Recycle"
(Sing to the tune of "If You're Happy and You Know It.")

If you help to recycle, Clap your hands.
If you help to recycle, Clap your hands.
If you help to recycle, Then our earth will surely show it,
If you help to recycle, Clap your hands.

Variations:
Stomp your feet, Nod your head, Shout "Hurray"

"Mary Had a Bag of Trash"
(Sing to the tune of "Mary Had a Little Lamb.")

Mary had a bag of trash,
Bag of trash, Bag of trash
Mary had a bag of trash
She thought she'd throw away.
She heard our landfill will be full
Will be full, Will be full
She heard our landfill will be full
And began to recycle now.
She kept aluminum cans and glass
Cans and glass, Cans and glass
She kept aluminum cans and glass
They can be used again.
She saved newspaper and plastic, too
Plastics numbered
One and two
She saved newspaper and plastic, too
They can be used again.

"Clean Up All the Litter"
(Sing to the tune of "Hokey Pokey.")

Put your litter bag in. Take your litter bag out.
Put your litter bag in, then you shake it all about.
You clean up all the litter and you turn yourself around,
That's what it's all about!
Put your paper in. Take your paper out.
Put your paper in, then you shake it all about.
You clean up all the litter and you turn yourself around,
That's what it's all about!

Wee Recyclers Band

Developed by Wisconsin DNR's Wee Recycler's Program

Goals: To make instruments from reusable and recyclable materials. To experiment making different sounds.

Background:
Children love to make noise. Here are some ideas for making simple and inexpensive instruments with your children. Use this opportunity to experiment with creating different sounds. Discover how the tighter rubber is stretched, the higher the pitch it makes. Find out what materials will make the loudest or softest rattles.
Try to guess what an object is in a container just by shaking it.

Tambourine
Materials:

- Two aluminum tins from pot pies or frozen pies
- Four metal bottle caps
- Stapler

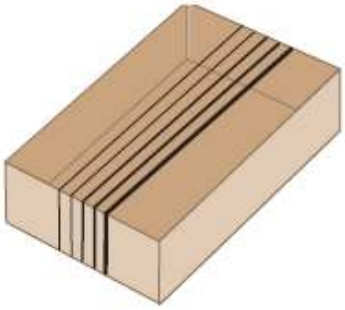
Procedure:
1. Have the children put the bottle caps inside one of the pie tins. Place the other pie tin on top of the first so that the two rims match up.
2. Staple all around the edges of the pie tins.
3. Shake!

Recycle Rattles
Materials:

- A reusable container: milk cartons, yogurt cups, margarine tubs, medicine bottles, small jars or boxes, soda cans, juice cans, etc.
- Rattle material: uncooked rice, dried peas or beans, buttons, paper clips, a rubber eraser, marbles, pasta, rocks, sand, etc.
- Crayons
- Tape

Procedure:
1. Let the children design the outside of the container with crayons.
2. Have children choose what materials they want to put into their container (only a small amount is needed). Loudness will depend on the material put inside and the hardness of the container. Experiment with different types of materials for different sounds.
3. Cover container tightly and secure with a few pieces of tape.
4. Shake!

Guitar



Materials:

- Shoe box, cigar box
- Rubber bands of different size and width
- Crayons or markers

Procedure:

1. Remove the cover from the box.
2. Let children color and design the outside of the box with crayons or markers.
3. Give each child a few different sized rubber bands to stretch across the opening of the box.
4. Strum across the rubber bands with your fingers or other objects.
5. Ask the children which rubber bands make the highest sound.

Flute

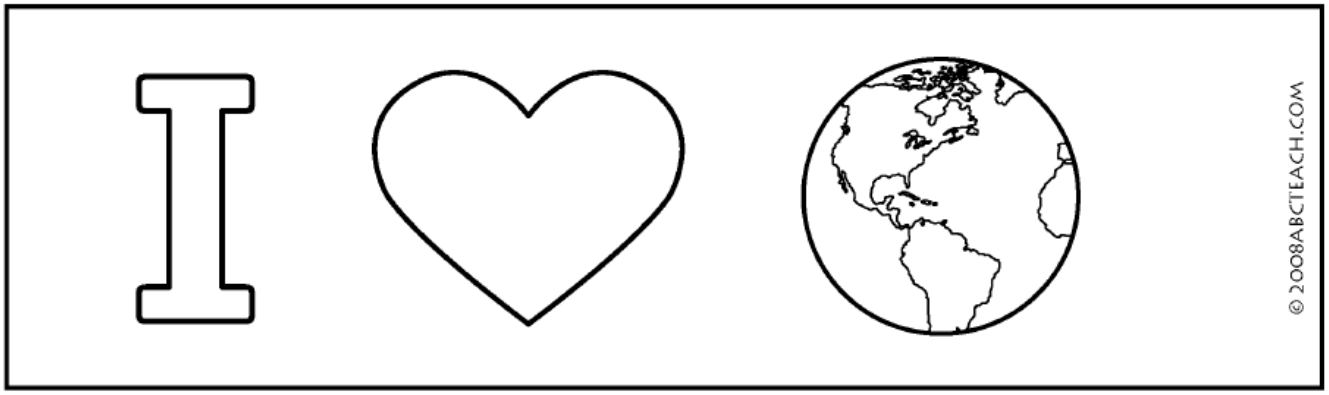
Materials:

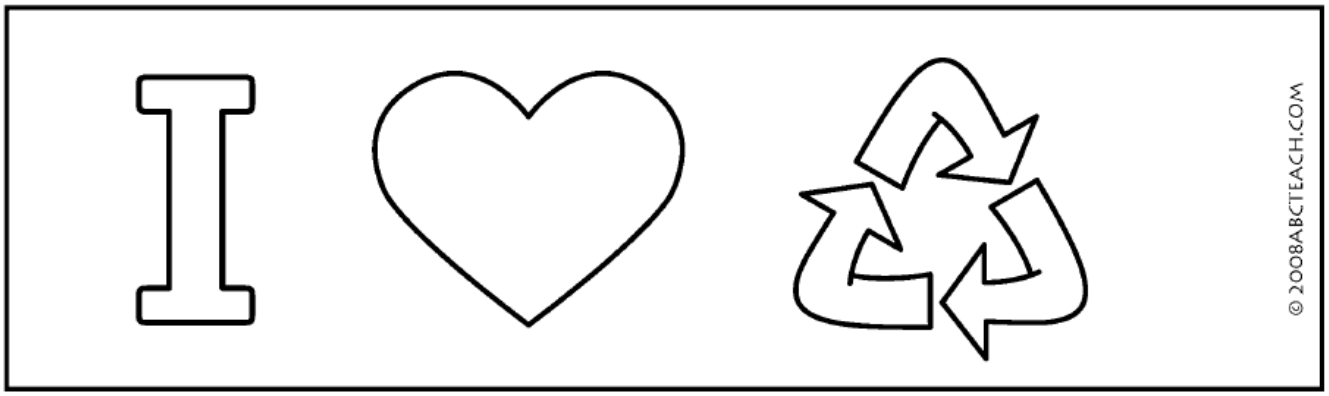
- Empty toilet paper or paper towel roll
- Rubber band
- Wax paper
- Pencil
- Crayons or markers
- Scissors

Procedure:

1. Let the children decorate the paper roll with crayons or markers.
2. Help them poke three or four holes in the roll using a sharp pencil.
3. Cut or rip a circle from the wax paper that is about two inches wider than the diameter of the roll.
4. Children can help wrap the wax paper around one open end of the roll. Make sure it is tight and smooth. Secure the wax paper in place with a rubber band.
5. Hold the open end of the flute to your mouth and hum or blow into the roll

Recycling Bookmarks





Recycling Maze

Put the bottle in the recycling bin!