A recycling activity and learning guide for educators and children ages 3-5

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WISCONSIN DEPT. OF NATURAL RESOURCES

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To download electronic copies of this guide, visit www.dnr.wi.gov/eek/teacher/weerecyclers.htm

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Introduction

"Wee Recyclers is Our Name; Recycling and Reusing is Our Game!"

Recycling is a simple game of saving, matching and sorting. The recycling game is fun to play because the rules are easy to understand and follow. Everyone can play, and in the end, everyone is a winner. Unfortunately, in today's society, we have forgotten how to play the recycling game. Living in a fast-paced, high-tech world of disposables, we have become a "throw-away" society; a society that has taken the attitude of: "It's okay, throw it away." Our wee ones can give us a chance to relearn the recycling game and help solve our growing solid waste problem.

Early child care programs are ideal for teaching children the importance of recycling and reusing and the skills to start recycling and reusing today. The lessons presented in Wee Recyclers coincide with many developmental skills you already teach. In Wee Recyclers activities, children sort, match and compare recyclable items and learn to separate some items by number and color. They learn to work with letters and numbers, as well as recycling words and symbols. And perhaps most importantly, children learn environmentally sound ideas and behaviors as appropriate social behaviors. The guide contains many creative ideas for reusing materials in craft projects, games, dramatic play and pretend play.

All young children who care about the earth and the things living on it can become Wee Recyclers. Wee Recyclers develop an understanding that by reducing, reusing and recycling, they are helping preserve our natural resources and prolong the life of landfills. Wee Recyclers also learn that nature has set an example we need to follow for recycling.

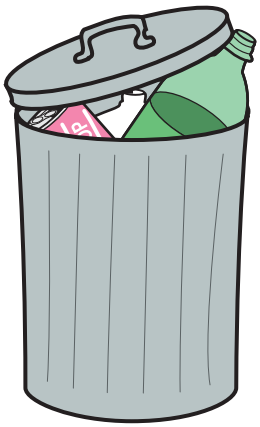
The Wee Recyclers Activity Guide helps you teach your children to become Wee Recyclers. The activities in this guide are simple, entertaining, hands-on and require minimal teacher preparation time. They contain teacher background information, easy to follow directions and suggestions for additional related activities. In addition to the teacher directed activities, this guide includes: stories and plays, songs, games, take-home recycling ideas, a complete glossary and a list of resources.

The Wee Recyclers Online Resources complement the Wee Recyclers Activity Guide with an array of supplemental materials, including posters, recycling labels, handouts, puppet patterns and the Wee Crafts guide. Online resources can be found online at http://dnr.wi.gov/eek/teacher/weerecyclers.htm.

Wee Recyclers materials are designed for use with 3-5 year olds in early child care settings. However, most activities can be modified for use with other age groups. Reproduction of any part of this guide for distribution to children and their families is encouraged.

Note: Words that appear in *italics* are defined in the glossary.

Sizing Up Solid Waste



People in Wisconsin throw out everything from toothbrushes to televisions, food scraps to plastic bags, cell phones to oil filters. If you added up all the waste from your house, the stores where you shop and the restaurants where you eat, it would amount to 4.7 pounds per person of *solid waste* thrown into the trash every day. If you multiply that by 365 days per year, then by 5.4 million Wisconsin citizens, you will find that Wisconsin generates more than 4.6 million tons of trash each year.

These materials make up our *municipal solid waste*. This much *trash* is enough to pile a typical city street 3 feet deep, curb to curb, for 500 miles – more than the distance from Superior to Chicago! Alternatively, if compressed like the way it is in landfills, that much waste would bury a 200-acre farm under 28 feet of trash each year.

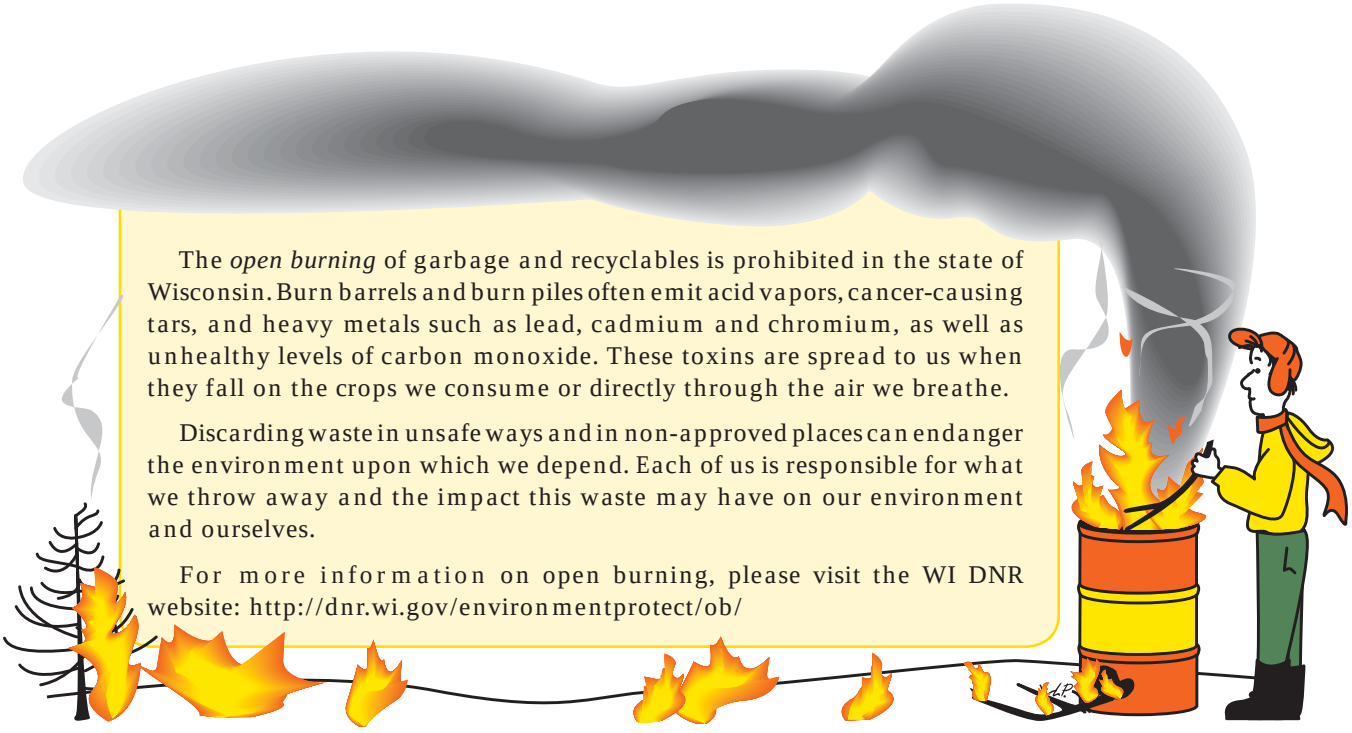
But when we throw things away, where do they go? Where is "away?" Is there such a place?

Where Does It All End Up?

About 60 percent of Wisconsin's trash or municipal solid waste ends up in the state's 41 or so licensed municipal landfills. A *landfill* is a place where trash is dumped, compacted and covered with dirt. Covering the trash controls blowing paper, odors, insects and rodents and keeps water out of the landfill. All of the licensed landfills in Wisconsin are *sanitary landfills* – designed, built and operated according to state-of-the-art standards to prevent *pollution* problems.

Approximately 40 percent of our trash gets *recycled*, composted or combusted with *energy recovered*. It's taken from your house or a drop-off site to one of the 150 or so *material recovery facilities* throughout the state. Here cardboard, newspaper, magazines, office paper, bottles and cans are sorted and sold to manufacturers who make new products out of them. Tires, vehicle batteries, motor oil and major appliances are also recycled, and about half the yard waste is managed "at home" by people who leave grass clippings on their lawn and *compost* leaves and herbaceous plants.

Unfortunately, some waste is still dumped along roadsides, in public parks or in other non- approved locations. Except for household wastes discarded on the homeowner's property, it is illegal to discard or incinerate *garbage*, trash, *industrial waste*, farm chemicals and other waste in places that are not approved by the state. Discarding waste in unsafe ways and in non-approved places can endanger the environment upon which we depend. Each of us is responsible for what we throw away and the impact that this waste may have on our environment.



The *open burning* of garbage and recyclables is prohibited in the state of Wisconsin. Burn barrels and burn piles often emit acid vapors, cancer-causing tars, and heavy metals such as lead, cadmium and chromium, as well as unhealthy levels of carbon monoxide. These toxins are spread to us when they fall on the crops we consume or directly through the air we breathe.

Discarding waste in unsafe ways and in non-approved places can endanger the environment upon which we depend. Each of us is responsible for what we throw away and the impact this waste may have on our environment and ourselves.

For more information on open burning, please visit the WI DNR website: http://dnr.wi.gov/environmentprotect/ob/

Wisconsin's Recycling Success

Wisconsin's nationally recognized recycling program was signed into law on Earth Day April 22, 1990 and fully put into action in 1995. Wisconsin was the first state to have statewide bans on landfilling large appliances, used motor oil, vehicle batteries, yard waste, steel containers, aluminum cans, corrugated paper, glass containers, magazines, newspapers, office paper, and plastic containers. Over 90 percent of households in Wisconsin recycle, which helps divert 1.6 million tons of materials from landfills each year. Not only is recycling the right thing to do, it supports thousands of jobs and adds to the 5.4 billion dollar environmental industry in Wisconsin.

What Is Required To Be Recycled In Wisconsin?

- Aluminum containers, glass containers, steel containers, containers made from a combination of steel and aluminum (bi-metal cans)
- Plastic containers #1 through #7. Currently a variance issued by the DNR allows plastic containers #3 through #7 to be landfilled or incinerated. If at some future time the DNR determines that adequate markets for these plastics exist, they will be banned from disposal.
- Magazines, catalogs and other materials printed on similar paper
- Newspaper, junk mail and office paper
- Major appliances including air conditioners, clothes washers and dryers, dishwashers, refrigerators, freezers, stoves, ovens, dehumidifiers, furnaces, boilers and water heaters
- Yard waste, including grass clippings, leaves, yard and garden debris
- Lead acid vehicle batteries, automotive waste oils and waste tires (except when incinerated with energy recovery)

Over time, there is the potential that more items will be added to this list. For an updated list of materials banned from Wisconsin landfills, visit: http://dnr.wi.gov/org/aw/wm/recycle/banned.html

Going Above and Beyond Wisconsin's Recycling Requirements

Wisconsinites are frequent recyclers, but there are new ways to do more! Thousands of tons of resources are lost each year when people place items in the trash that could be recycled, reused or composted. Besides the items banned by law, there are many other environmentally friendly opportunities to reduce waste and recycle or dispose of unwanted materials.

Food Scraps

Although yard materials are banned from Wisconsin landfills, food scraps are not. Compost your food scraps along with yard materials in your backyard. It's a simple way to save landfill space and reduce *methane gas* released from landfills. Be sure to check your local ordinances before starting a compost pile to find out if there are restrictions or other considerations that may apply.

Composting is a natural recycling process that you can begin at home with leaves, grass clippings, other lawn and garden materials and fruit/vegetable scraps. Natural microorganisms from the ground interact with compost materials to help break down plant matter. Proper moisture, air and temperature aid these natural microorganisms in their work and balanced materials prevent the compost from having an odor. Naturally fortified with nutrients, the finished compost is perfect for use as an organic plant food and soil additive.

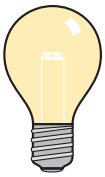
Electronics

The rapid turnover in computer technology is having a troubling side effect: each year millions of computers come to the end of their useful life. Every year 5-7 million computers, televisions, stereos, cell phones, electronic appliances and toys become obsolete in the United States.

Some of these electronics are being recycled, but there is not sufficient infrastructure for collecting, reusing, and recycling electronics. The majority are ending up in landfills or incinerators. Although electronics are not yet banned from Wisconsin's landfills, businesses and institutions must recycle discarded computers because of the *hazardous waste* they contain.

There are several states that have passed electronics recycling legislation to help keep electronics out of landfills and the environment. In 2009, Wisconsin state Senator Mark Miller introduced Senate Bill 107 to require manufacturers of electronics sold in Wisconsin to assume responsibility for the collection and proper disposal of those devices.

Light Bulbs



Incandescent light bulbs should not be included with household recyclables because they are not an acceptable kind of glass. They must be discarded with regular trash.

Compact fluorescent light bulbs (CFLs) are becoming more popular in households today because of their environmental and cost-saving benefits. However, these bulbs contain small amounts of mercury, and should be recycled to avoid contaminating the environment.

If CFLs are recycled, they release less mercury into the environment than traditional incandescent bulbs. CFLs use up to 75 percent less energy than incandescent bulbs, so less mercury is released from coal-fire power plants throughout the lifetime of the bulb. Once properly recycled, the mercury in the bulb can be recovered for reuse.

Thermometers

Many old thermometers contain mercury, which can cause air and water pollution and affect human health if released into the environment. These thermometers can be taken to your local Household Hazardous Waste Collection site. You can replace them with digital thermometers that do not contain mercury.

Although thermometers are not covered under the Wisconsin Recycling law, many communities and major retail stores have banned mercury product sales. Wisconsin communities that have banned mercury sales are Dane County, the City of Racine, and the City of Ashland.

Plastic Bags

Shoppers in the United States use an estimated 100 billion plastic bags every year and recycle only a small percentage of them. While many of the bags are reused by *consumers* as trash liners or pet waste bags, a large number still end up in landfills or cause harm in the environment without first being reused.

Plastic can take hundreds of years to *decompose*, and can pose risks even when it has degraded into smaller pieces, since these pieces are especially attractive to animals as food. Plastic bags are also believed to adversely affect landfill operations by interfering with moisture distribution and *leachate* flow within landfilled waste.

The best option is to use a reusable cloth bag or other reusable container, and reuse or recycle paper and plastic bags. Many grocery stores now offer durable, washable bags to their customers at very affordable prices.

Who Has To Recycle?

Wisconsin's recycling requirements apply to everyone in the state, in both public and private spaces. This includes daycares, schools, public places, businesses, special events, homes and apartments. The responsibility to ensure that recycling options are available at all locations lies with a local *Responsible Unit* (RU). An RU can be a municipality, county or tribe's *solid waste management* system or other unit of local government that is responsible for the planning, operating and funding of a recycling program. Each RU must develop and implement a recycling program to manage the banned materials generated within its region in compliance with state laws.

What Else Can We Do With Waste?

Wisconsin already reuses, recycles, composts or recovers energy from almost 40 percent (by weight) of its residential and commercial waste each year. This reduces the need for landfill space, saves the cost of disposal and reuses valuable natural resources. The overall goal of Wisconsin's recycling law is to reduce the volume of discarded items.

The following list includes options for managing solid waste, and is in order from most to least desirable:

Reduce the quantity of waste produced. For example, some products and packaging are designed to use less material, to be recyclable or to contain fewer hazardous chemicals. We can produce less waste through selective shopping. Also, we can encourage reduction by expressing our views about products and packaging to retailers, industry and government.

Reuse items. Food containers, old furniture, clothes, tires, appliances and automobiles, or their parts, industrial shipping containers (barrels, pallets, cardboard boxes) and many more items can be reused.

Recycle. For instance, recycled newspaper can be made into newsprint, paper bags, house insulation, egg cartons, animal bedding or cardboard. Glass and aluminum from beverage containers can be made into new containers. Cooking oils and meat fats can be made into chemicals and cosmetics, coal ash into shingles and concrete, and plastic bottles into artificial lumber, carpeting and winter jackets.

Compost organic wastes. Gardeners know both the ease and the value of composting food and yard wastes to create rich *humus* that improves soil fertility and texture. Some businesses also can compost their *organic* wastes. For example, cheese whey, organic sludge from paper mills and sewage treatment plants, and the remains from processing fish can be composted. Food wastes from grocery stores and restaurants are also compostable.

Incineration of waste with energy recovery. Each ton of solid waste has the energy equivalent of 70 gallons of gasoline – that's pretty valuable considering the rising costs of gasoline worldwide.

Landfill non-recoverable items. We may always need landfills, but using the techniques described above, Wisconsin is working to decrease this need.

Incineration of waste without energy recovery. Though this may be the lowest ranking option for disposal of waste, it is sometimes the only option for safe disposal of medical and *hazardous wastes*.

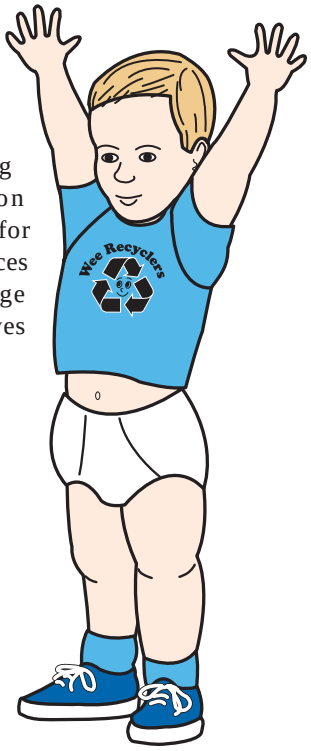
None of these options are the sole solution to our waste disposal problem. Each option has side effects that must be considered when we are selecting the best solution to each solid waste problem.

The Diaper Dilemma

Most of your "Wee Recyclers" may be too old for diapers, but there may be some children in your child care facility that use them. If so, you have a decision to make about what type of diaper to use. Consumer cost, convenience, comfort, sanitation, environmental impact, parental preference, availability of diaper services, laundry facilities, water and energy use, and trash disposal costs are just some of the variables to consider.

Wisconsin Act 335 – The Recycling Law, asks that you consider the state's commitment to reduce the volume of discarded solid waste by following the waste management hierarchy listed in the previous section.

Disposable (single-use) diapers contribute to our solid waste problem. They account for 1.3 percent of Wisconsin's municipal solid waste. Wisconsin's Recycling Law provides an exemption from sales and use taxes for cloth diapers and diaper services as an incentive to encourage people to consider alternatives to disposable diapers.



Wee Words (Glossary)

Compost: a waste management process that creates an optimal environment for decomposition by layering organic wastes like food scraps and grass clippings so they will decay into fertile humus.

Consumers: people who use up or expend goods, such as food, electronics, textiles and other products.

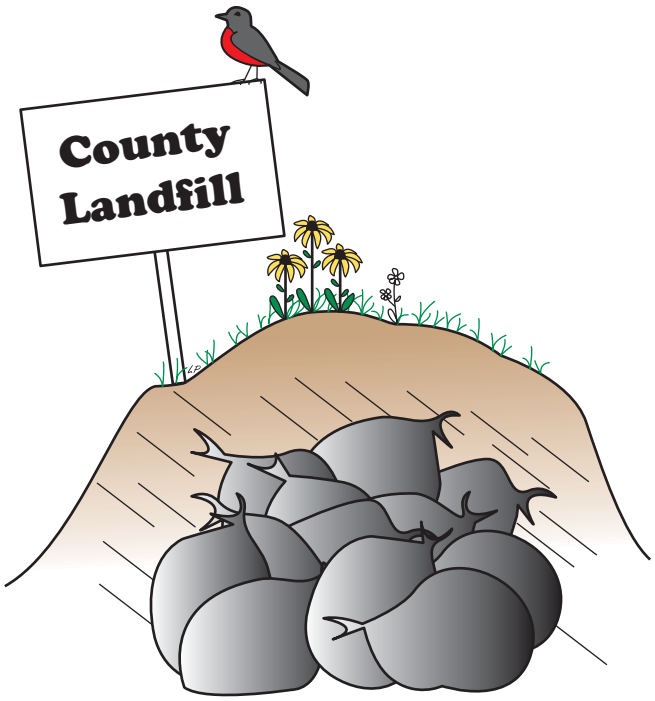
Decompose: to break down into component parts or basic elements; to rot. Decomposition is an organic process necessary for the continuation of life since it makes essential nutrients available for use by plants and animals.

Decomposer: a plant or animal that feeds on dead material and causes it to break down or decompose. Examples include fungi, lichens, earthworms, insects and bacteria.

Disposable: usually made for one-time use, or limited usage before disposal. (e.g., disposable paper cups, diapers)

Energy recovery: the generation of energy by burning solid waste.

Garbage: spoiled or waste food that is thrown away. Generally defined as wet food waste and excludes dry material (trash). The term is often used interchangeably with the word "trash."



Hazardous wastes: materials with toxins that can cause special problems for living organisms or the environment because they are poisonous, explosive, burn or dissolve flesh or metal, ignite easily with or without a flame, or carry disease.

Humus: organic material consisting of decayed vegetable matter that provides nutrients for plants and increases the ability of the soil to retain water.

Industrial waste: the waste that industries (e.g., power plants and paper mills) generate as they produce the products we use.

Landfill: a site for the controlled burial of solid waste.

Leachate: liquid that has percolated through solid waste and/or been generated by solid waste decomposition, and contains extracted, dissolved or suspended materials. May contaminate ground or surface water.

Litter: waste materials discarded in an inappropriate place. Littering is illegal in Wisconsin.

Materials recovery facility: a facility designed to sort and transport recyclable materials such as paper, aluminum, glass and plastic to facilities where they will be reused.

Methane gas: a potent greenhouse gas, is a colorless, odorless, flammable and potentially dangerous, gaseous hydrocarbon (CH4) present in natural gas and formed by the decomposition of organic matter. Can be used as a fuel.

Municipal solid waste: all solid, semi-solid, liquid and gaseous wastes; including trash, garbage, yard waste, ashes, commercial waste, and household discards such as appliances, furniture and equipment.

Natural resources: valuable, naturally occurring materials such as soil, wood, air, water, oil or minerals.

Nature's Recyclers: see decomposer.

Nutrients: a substance with nutritive value that is necessary for growth of living things.

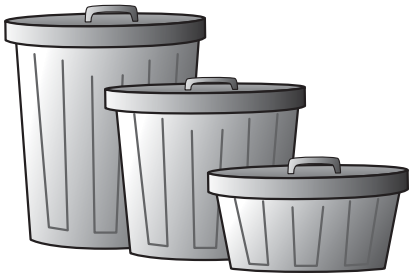
Open burning: the burning of any combustible material outdoors without any air pollution controls in place. Burning in an unconfined area, in a container or in a pile are all considered to be open burning. Open burning of garbage and recyclables is illegal in Wisconsin.

Organic: derived from living organisms.

Pollution: harmful substances deposited in the environment that can lead to a state of dirtiness, impurity or unhealthiness.

Recycle: the collection and reprocessing of manufactured materials for remanufacture, either in the same form or as part of a different product.

Recycled: to have been passed again through a series of changes or treatments in order to regain material for human use.



Reduce: to lessen in extent, amount, number or other quantity.

Responsible Unit (RU): A municipality, county, tribe, solid waste management system or other unit of local government that is responsible for planning, operating and funding a recycling program. Each RU in Wisconsin must develop and implement a recycling program for managing state mandated recyclables generated within its region.

Reuse: to extend the life of an item by using it again in some way. Possible ways to reuse an item include repairing it, modifying it or creating new uses for it.

Sanitary landfill: a specially engineered site for the disposal of solid waste on land. These landfills are constructed in a way that reduces hazards to health and safety.

Solid Waste: All solid and semi-solid wastes, including trash, garbage, yard waste, food scraps, ashes, industrial waste, demolition and construction waste and household discards such as appliances, furniture and equipment.

Solid waste management: the controlling, handling and disposal of all solid waste. One goal of solid waste management is to reduce waste to a minimum.

Source reduction: a reduction in the amount of, and/or toxicity of a waste before it enters the waste stream; also called waste prevention.

Toxins: a poisonous substance that is usually very unstable, or harmful when introduced into human, animal or plant tissue.

Trash: material considered worthless, unnecessary or offensive, that is usually thrown away. Trash is generally defined as dry material and excludes food waste (garbage) and ashes. However, the term is often used interchangeably with the word "garbage."

Wee Recycling Center

Goals:

- To establish an area where children can become familiar with recyclable and reusable items.
- To practice recycling and reusing procedures.

Background:

You can teach your children to be Wee Recyclers by encouraging them to practice reducing, reusing and recycling every day. Setting up a recycling center in your facility will give your children the practice they need. Use the center as a focal point for your recycling efforts. Use it also as a place to collect recyclables and to store items that can be reused for crafts and dramatic play. The Wee Recycling Center will be an excellent hands-on learning station for your Wee Recyclers.

Materials:

Collection containers for recyclables (boxes, bags or bins)

Recycling labels for containers *

Recycling labels (take-home) *

"Recycle – It's Easy" poster *

"Recycle – It's Easy" (take-home) *

"Recycle – It's Easy" directions *

Wee Recycling Center sign *

Storage containers/shelves for reusable items

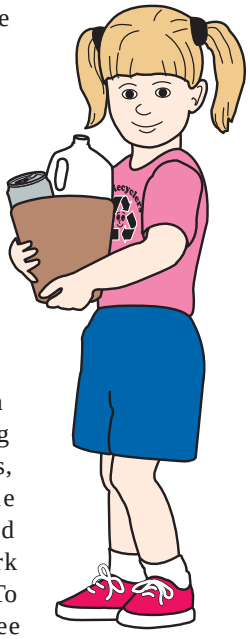
Recyclable and reusable items (See Parent Letter following this section.)

Magnet

* Found in Wee Recyclers Online Resources, http://dnr.wi.gov/eek/teacher/weerecyclers.htm

Setting Up Your Wee Recycling Center:

1. Check with your local government or recycling center to find out which items are recyclable in your community and how they should be sorted and prepared. Use this information to determine the number and type of containers needed for your Wee Recycling Center. Take the "Recycle – It's Easy" poster and mark the "yes" and "no" box for recyclability in your community.
2. Select an area for your Wee Recycling Center that will accommodate the recycling containers in addition to shelves or other containers for storing reusable items. This area should be easily accessible to children. It should have enough wall space to hang the Wee Recycling Center sign and the "Recycle – It's Easy" poster. You may want to include a shelf or table to keep recycling related books (for suggestions, see "Resources" section at the end of the guide), games and puzzles for children to work on during their free time. To increase success with your Wee Recycling Center, make sure that garbage bins are also located within the center. To reduce mix-ups and maximize participation, recycling containers should always be paired with garbage cans.



3. Gather the containers and/or shelves needed. Attach the recycling labels to the collection containers. Hang up the Wee Recycling Center sign and the "Recycle – It's Easy" poster.
4. Collect a variety of materials that can be recycled in your community for your children to practice sorting: paper, glass, plastics with different number symbols, aluminum and tin cans, etc. Choose glass jars and bottles that are small and have thick walls (medicine and extract bottles); these should not break easily. Make sure that all items have been thoroughly cleaned.
5. Take the magnet, punch a hole in the corner of it and then attach it to the tin can collection container with a piece of string. Use this to test for steel products.

How to Use the Wee Recycling Center:

1. Use the Wee Recycling Center for children to practice their sorting skills. Have a few examples of each recyclable item available for children to remove from containers and put back into the appropriate container. If space is limited, the sorting containers can be as small as five-gallon ice cream buckets or shoe boxes.
2. Numerous activities in the Wee Recyclers Activity Guide use the Wee Recycling Center as well. To prepare for other activities, start with setting up your classroom's center.
3. Use the "Recycle – It's Easy" poster to teach children how to prepare items to be recycled. Have them pretend to rinse items, remove labels and flatten if appropriate. In addition to being a good teaching tool for you, the poster also serves as a guide and a reminder for the children.
4. Discuss the expected behavior of children who play in the Wee Recycling Center. Explain to children that glass and metal can be dangerous if not handled properly. Check aluminum and tin cans for sharp edges. If the ends of tin cans have been removed, use a hammer or file to flatten or smooth rough metal edges around the rim of the can. Do not allow the removed ends of tin cans to be in the collection boxes; they are too sharp. Keep them in a separate container out of the reach of children.
5. Use this opportunity to teach children about magnets. Explain that a magnet attracts some kinds of metal but not all kinds. Aluminum and steel are two different kinds of metals used to make cans. A magnet will attract steel, but not aluminum. When children are sorting cans, they can use the magnet to test whether the can is steel or aluminum. Steel cans are often called "tin" cans because they are covered with a thin coating of shiny tin.
6. An area of confusion to some children is plastic. If you are in a community that only collects plastic bottles and jugs made from #1 or #2 plastic, some children believe that all materials must have a #1 or #2 on the bottom to be recycled. They will begin checking steel cans or glass jars for the numbers, and seeing none, will decide that the item belongs in the trash. Make sure your children know that only plastic will have the numbers.
7. Use the center to collect items that can be reused in crafts. Store the reusable items in separate containers. Attach a picture or an actual sample of the item to the outside of the container for easy identification. Ask facility staff, parents and local businesses to help by donating items for projects and activities. As children bring in items, they can sort the items in the appropriate containers. Use the Parent Letter included at the end of this section to inform parents of the new Wee Recycling Center and to encourage their participation and donation of items.
8. When making crafts from reusable and recyclable items, remind children that they are using something that may otherwise have ended up in the trash. Tell them they are doing a good thing by reusing, and therefore, reducing the amount of trash that would end up in the landfill.
9. Make copies of the recycling labels and "Recycle – It's Easy" directions for each child to take home and share with family members. (For further instruction, see the section, "Sorting Together At Home.")

Going Beyond:

- If flattening plastic bottles is appropriate in your community, let children help crush the bottles using their hands and feet.
- Purchase a simple, inexpensive can crusher. Properly secure the device to a table or wall. Instruct your children how to use it safely.
- Encourage dramatic play. Suggest that your children pretend to be recycling truck drivers picking up items at homes and businesses and taking them to the recycling center. At the recycling center, separate the different items into their correct containers. Or, pretend to be a trash collector picking up trash on the way to a landfill. Use boxes for trucks.
- When you discuss what items the recyclables will turn into, post pictures of the final products on the bins into which the items are sorted. Also, post a picture of a landfill (found in Wee Recyclers Online Resources) on the trash container as a visual reminder of where items placed in that container will go.
- Visit a real recycling center. Afterwards, discuss with children the work and procedures that occur in the center. You may want to include more dramatic play props in your Wee Recycling Center. Add the following to your center: work gloves or plastic gloves for handling recyclables, hard hats, safety glasses, a weighing scale, cash register and play money.

Dear Parent,

Since recycling is an important way to reduce the volume of household waste that goes into landfills, we have set up our very own Wee Recycling Center in our facility. In this center, your child practices how to prepare items for recycling and how to reuse things. We need you to help us collect certain items for upcoming projects and activities. Please have your child help you collect and thoroughly clean the items listed below and donate them to our Wee Recycling Center.

Thank you,

The items we are seeking include:

- A variety of different sized boxes (cereal, shoe, food boxes, gift, etc.)
- Rolls from toilet paper, paper toweling, food wraps, gift wrapping
- Egg cartons (paper and polystyrene)
- Milk cartons (different sizes of paper and plastic)
- Old magazines, greeting cards, wrapping paper, junk mail
- Polystyrene meat packing trays
- Margarine/butter tubs
- Yogurt containers (especially with clear lids)
- Coffee cans
- Plastic food containers with covers
- Cardboard pizza backings
- Fabric, yarn and ribbon scraps
- Buttons, beads, dried beans
- Baby food jars
- Spools
- Old pipe cleaners and straws
- Old paper plates
- Other:_____

Sorting It All Out

Goals:

- To make children aware of the problem of overflowing landfills.
- To introduce the practices of reusing and recycling as a means to help reduce the amount of waste we generate.
- To help children learn to sort various "trash" items by matching them to recycling labels.

Background:

The solid waste issue is a problem facing all of us today and we must solve it for the sake of future generations. We simply need to cut down on the amount of trash that is entering the solid waste stream. Two ways we can do this are to *recycle* and/or *reuse* unwanted materials. Recycling is easy. Even young children can learn to separate recyclables from trash and place them in the proper containers. Reusing is a way to help children develop creative skills. Recycling and reusing will help reduce the waste we produce and help our *natural resources* last longer. We all can help!

When teaching conceptual ideas such as recycling and reusing to young children, it is best to start with a concrete experience. These activities are ways to introduce some of the ideas and vocabulary words that will be used throughout the Wee Recyclers Activity Guide. Refer to the "Glossary" and "Introduction" for more teaching background

The Overflow Problem

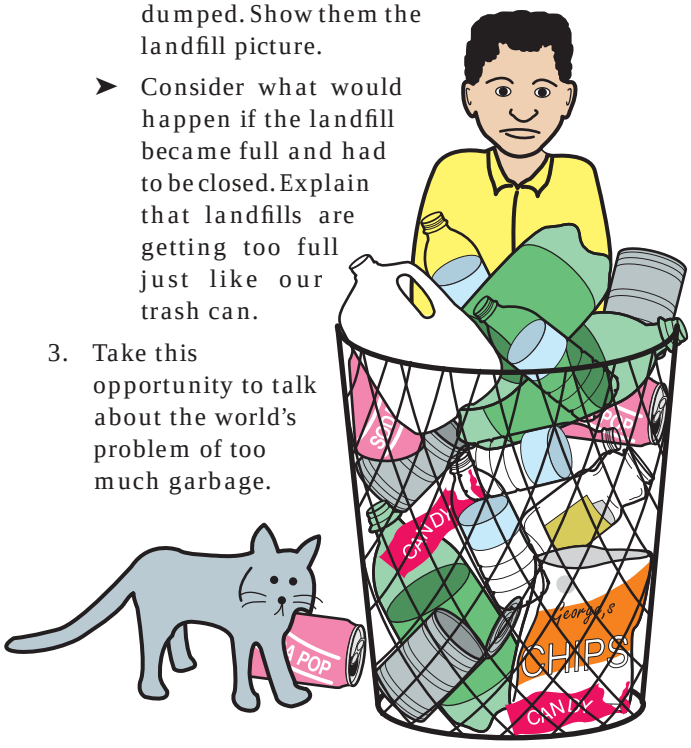
Materials:

- Full trash can from the classroom
- Newspapers to cover the floor
- Landfill picture *

* Found in Wee Recyclers Online Resources, http://dnr.wi.gov/eek/teacher/weerecyclers.htm

Procedure:

1. A day or two before starting the recycling unit, stop emptying the trash can in your room. Allow the can to begin to overflow and become messy. The children should notice the mess and come to you because it is a problem.
2. Sit down with your children to discuss the problem of "what to do with our trash." Ask them what they think should be done with the overflowing trash can. Listen to all of their ideas and consider each suggestion. Help them to understand the larger problem.
   - ➤ If a child suggests getting another trash can or a larger can, talk about what will happen if the second can is full. How many cans of trash can the classroom hold? Will the trash begin to smell bad or attract insects?
   - ➤ If a child suggests taking it outside for the garbage collectors to pick up (some children may know that local garbage is picked up by a garbage truck), talk about where the garbage truck takes the garbage. Ask if anyone has been to a landfill and ask them to describe it. Have the children imagine a large hole in which everyone's garbage is dumped. Show them the landfill picture.
   - ➤ Consider what would happen if the landfill became full and had to be closed. Explain that landfills are getting too full just like our trash can.
3. Take this opportunity to talk about the world's problem of too much garbage.



What's In Our Trash?

Materials:

Full trash can from the classroom

Newspapers to cover the floor

Rubber, non-latex gloves

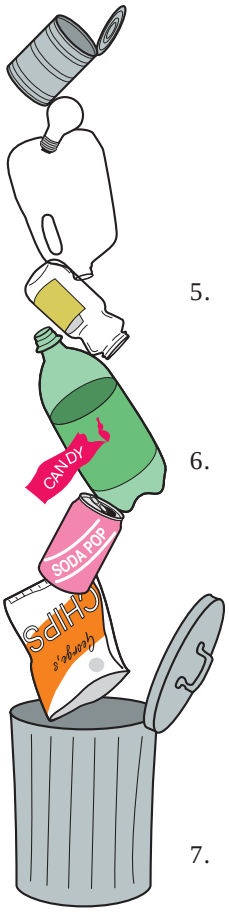
A large container for reusable items

"Reuse" label*

* Found in Wee Recyclers Online Resources, http://dnr.wi.gov/eek/teacher/weerecyclers.htm

Procedure:

1. Gather the children around the trash can. Praise your children for doing a good job of cleaning up and throwing things away.
2. Ask: What is "trash?" Trash is anything that is thrown away because we do not need or want it anymore. Ask: Who makes the trash here? Point out that all of us are responsible for making trash.
3. Cover an area of the floor with newspaper and empty the trash can onto the paper. Ask: Do any of you see something you threw away?
4. Have each child pick up and identify one item of trash. Ask: Do you think that what you are holding could possibly be used again for something else?



Encourage your children to think practically and creatively. Consider all responses. If the children decide something can be reused, let them put the item in the box labeled "Reuse." If they decide it cannot be reused, let them put it back into the trash can.

5. Sort through the rest of the trash on the floor and decide together what items can be put in the "Reuse" box and what things should be put into the trash can.
6. Take this opportunity to explain to the children that they can make less trash by reusing things. To reuse means to use something again that may have otherwise been thrown out. They can practice reusing by coloring or writing on both sides of the paper instead of just one side, or by using a paper or plastic bag more than once before throwing it away or recycling it. Scraps of string, yarn, paper or material still might have use in an art project.
7. Do an art project using materials from the "Reuse" box.

Recycle Match

Materials:

Containers for collecting and sorting trash (bags or boxes)

Recycling labels*

"Recycle – It's Easy" poster*

Recycle Symbol page*

Examples of each recyclable item: milk jug, two-liter bottle, newspaper, clear glass, green glass, brown glass, aluminum can, tin can, cell phone

* Found in Wee Recyclers Online Resources, http://dnr.wi.gov/eek/teacher/weerecyclers.htm

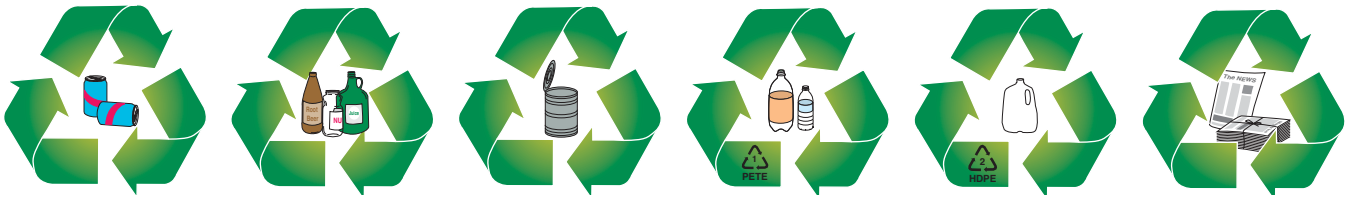
Preparation:

- Determine which items are recyclable in your community and how to prepare them. Indicate which items are recyclable on the "Recycle – It's Easy" poster and use it as a reference and teaching guide.
- Place the various recycling labels on the containers. You may consider these your permanent collection containers that will be used in the Wee Recycling Center.
- Assemble the recyclable items and have them visible as you talk about recycling.

Procedure:

1. Ask your children if anyone knows what the word "recycle" means. Does it sound like any other words they know? To recycle means to collect and remake an item into the same thing or something else. For example, old newspapers can be used to make new newspapers; old glass jars can be used to make new glass jars; metal cans can be made into new metal cans; and some plastic bottles can be made into new plastic things.

2. Show your children the Recycling Symbol page. Ask: Does anyone know what this picture means? Talk about the shape and the arrows. Explain to your children that when they see this symbol, it means that something can be recycled or that it has been made from recycled material. In order for something to be recycled, we must save it and take it to a place called a "recycling center" where it is stored until it can be made into something new.
3. Show the children the recyclable items. Let them hold and feel the items. Talk about what each item is made of and what it was possibly used for.
4. Show the children the boxes with the recycling labels. Explain to the children that we will sort the recyclable things into these different boxes so they can be recycled. Let each child match a recyclable item to the recycling label and then place the item in the box. Practice until everyone has taken a couple of turns.
5. Hang the "Recycle – It's Easy" poster near the boxes. Explain to the children that this poster is a reminder of which things can be recycled. Give an example of how the pictures on the poster match the pictures on the boxes.



Count on Plastic

Materials:

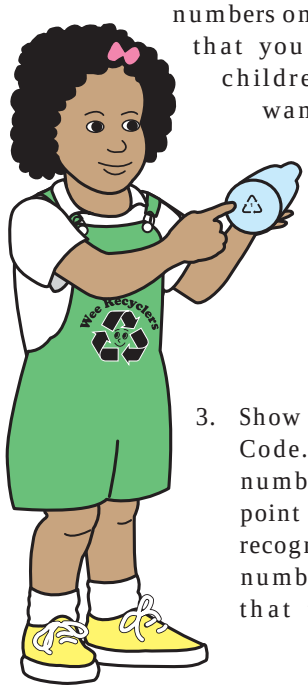
Plastic containers with code numbers on the bottom

"The Plastic Code"*

* Found in Wee Recyclers Online Resources, http://dnr.wi.gov/eek/teacher/weerecyclers.htm

Procedure:

1. Collect a variety of plastic containers with code numbers on the bottom. Select numbers that you want to review or teach children. For example, if you want to focus on the numbers one and two, then only select containers with these numbers.



2. Explain to the children that we are going to use plastic containers to help us review/learn some numbers.
3. Show your children "The Plastic Code." Help them identify the numbers on the front side as you point to them. Ask them if they recognize the shape around the numbers. Explain to the children that they can also find these numbers on the bottom of some plastic containers.
4. Give each child a plastic container and tell them to look on the bottom. Ask: Do you see a recycling symbol? Do you see a number? Do you know which number it is? Help children to figure out the number on the bottom of the container.
5. Ask the children to trade containers with another child. Point to one of the numbers on the code page and ask, "How many of you have this number on the bottom of your container? Who can tell me what number it is?" Continue in this way until all the numbers have been covered. Help your children and continue to give them encouragement. Trade bottles as many times as you feel appropriate.
6. When children seem to recognize the different numbers, explain that the numbers are used to identify different kinds of plastics. Explain that some, but not all, plastics can be recycled. Most plastic containers with a one and two can be recycled now, and hopefully, someday all plastics will be recyclable.
7. Continue using the containers to develop number and counting skills. For example, have the children determine the number on their container and then group themselves according to their number. Or ask the children to line-up in numerical order according to the number on their container. Be creative and come up with your own games.

Recycle Review

Materials:

Containers for collecting and sorting trash (bags or boxes)

Recycling labels*

"Recycle – It's Easy" poster*

A trash can

Magnet

Newspapers to cover the floor

An assortment of clean and safe trash items from the following categories:

Recyclable	Reusable	Trash
Milk jug	*Paper bag*	*Bottle caps (metal and plastic)*
Newspaper & Magazine	*Yarn scraps*	*Dirty paper plate*
Glass (clear, green and brown)	*Old crayons*	*Candy wrappers*
Plastic water bottle	*Plate (ceramic)*	*Empty toothpaste bottle*
Junk Mail, phone book, old homework/artwork.	*Margarine tub*	*Empty chip bag*
Aluminum can	*Spoon*	*Paper towels*
Steel can	*Cardboard box*	*Facial tissue*
Two-liter bottle	*Reusable water bottle*	

(Choose items children may recognize and can identify. Additional or different items may also be used. You may want to include multiples of the recyclables.)

* Found in Wee Recyclers Online Resources, http://dnr.wi.gov/eek/teacher/weerecyclers.htm

Preparation:

- Determine which items are recyclable in your community and how to prepare them (rinse, remove caps and lids, etc.). Indicate which items are recyclable on the "Recycle – It's Easy" poster and use it as a reference and teaching guide.
- Place the "Reuse," "Trash" and various recycling labels on the collection containers. You may want to consider these as your permanent collection containers to be used in your Wee Recycling Center.
- Collect examples of the items listed above, making sure they are clean and dry. Put the items in the trash can. Assemble the containers in a semi-circle around newspapers on the floor.

Procedure:

1. Assemble your children in front of the collection containers. Bring in your very full can of trash and say to the children, "Geez, I sure do have a big problem! I had all of this trash sitting at home and now I don't know what to do with it. Do you think you can help me figure out if some of it can be reused or recycled? I just don't know what to do."
2. Dump the can of trash onto the newspaper covered floor. From this point on, simply ask questions and let the children tell you how to recycle. Ask: What are these boxes for? What do these recycling labels mean? Should all of these things be in the trash? Can some of these things be reused or recycled? Let children take turns sharing explanations.
3. Select a few items. Play "dumb" and let the children help you decide the appropriate container to put it in. Ask some of the following questions:
   - What is this or what was it used for?
   - What material is it made of?
   - What color is it? (if colored glass is to be sorted)
   - Does a magnet stick to it?
   - Can you match the item with any of the pictures on the labels or on the poster?
   - Could this be used again? If so, for the same thing or something different?

   When the appropriate container is determined, place the item inside. If an item can not be reused or recycled, place it back into the trash can.
4. As children catch on to the procedure, have each of them select an item and place it in the correct container. Ask them why they chose that container. Be flexible and make the activity fun.
5. When the pile is completely sorted, thank the children for helping you with your trash-overflow problem. Point out how little trash is actually left in the trash can to throw out.
6. Emphasize that the items in the recycle containers should not be thrown in the trash anymore, but should be rinsed out, sorted and saved. Then they can be taken to the recycling center where they will be stored until they can be used to make new things again.
7. Explain to the children that recycling is good because it reduces the amount of trash we have to throw away. Reusing things is good, too, because it saves us from having to buy new things and reduces the amount of trash we have to throw away. We should reuse things as many times as possible and not be wasteful. From now on, we must remember to reuse and recycle!

Going Beyond

If your facility has a compost pile, add another category, "Compost" and include items in the pile that go into the compost pile. Examples include: food scraps like vegetable trimmings, tea bags, coffee grounds and eggshells (plastic or wooden food will serve as a good example without the odor or mess), grass clippings, weeds, leaves and sticks. For composting instructions, visit EEK! Environmental Education for Kids web site, www.dnr.wi.gov/eek and keyword search: recipes for composting.

I Can Recycle

Materials:

"I Can Recycle" book (take-home)*

Stapler

Crayons

Small samples or pictures of recyclable items

* Found in Wee Recyclers Online Resources, http://dnr.wi.gov/eek/teacher/weerecyclers.htm

Procedure:

1. Print out the two "I Can Recycle" master pages found in the Wee Recyclers Online Resources for each child. Fold each page into fourths and then staple the two folded sheets together along the middle fold.
2. Let each child decide how to fill in the blank on each page. Help them write in their request.
3. Collect small pictures (from magazines, coupons, newspapers) or small samples (pieces of cardboard or newspaper) of recyclable items. Let the children choose which picture to place on each page. Help them cut out and glue the picture into the book. The children can read their books to you and then take them home to read to a family member.

Going Beyond:

Set up the Wee Recycling Center and show it to your children.

Start your own recycling program. Designate a recycling day (once a week or month) when children can bring in clean items from home to add to the recycling containers. For safety reasons, prohibit children from bringing in glass items. You may have children help flatten cans and plastic bottles (if applicable in your community). Save money that is collected to help pay for new playground equipment or a field trip. On collection day, have children help you take recycling containers out to the curb.

Wee Help At Home

Goals:

- To reinforce the practices of reducing, reusing and recycling in the home.

Background:

Reducing, reusing and recycling are learned behaviors. The only way to make them a habit is to practice them daily at school, at work, while traveling and in the home. It's sometimes the hardest to change a household routine – especially when adults are accustomed to doing things a certain way. As your Wee Recyclers learn to reduce, reuse and recycle at your facility, they can take these behaviors home and encourage their families to make them part of their daily routine, too.

Throughout the Wee Recyclers Activity Guide there are ways for you to encourage families to participate in recycling. The Parent Letters included with "Sorting Together at Home" and "Wee Recycling Center" are a start. Not only do these communicate to parents what their children are learning, but they also give them the tools with which to reinforce the behaviors that have been taught. The "Wee-kly Recycling Ideas" will also give families ideas on how to continually *reduce*, reuse and recycle in the home. Some activities are reproducible and can be taken home for children to share with their families.

Sorting Together at Home

Materials:

"Recycle – It's Easy" directions (take-home)*

Recycling Labels (take-home)*

* Found in Wee Recyclers Online Resources, http://dnr.wi.gov/eek/teacher/weerecyclers.htm

Procedure:

Print copies of the recycling labels and "Recycle – It's Easy" directions for each child found in the Wee Recyclers Online Resources.

Let your children color and cut out their own set of recycling labels. Send the labels home along with the "Recycle - It's Easy" directions and the following Parent Letter.

Dear Parent,

Did you know that the average Wisconsin resident generates 4.7 pounds of trash every day? If you multiply that by 365 days per year, then by 5.4 million Wisconsin citizens, you will find that Wisconsin generates more than 4.6 million tons of trash each year. We are learning about recycling and reusing in order to reduce the amount of trash we throw away. We have learned that trash will eventually end up in a landfill and that our landfills are filling up quickly. Included with this letter is a direction sheet, "Recycle – It's Easy." We use this in the classroom as a guide for preparing recyclable items. We are also sending recycling labels home with your child. You can attach these to your own collection bags, boxes or carts. We hope that you and your child will work together to recycle the appropriate items and practice reusing whenever possible. You child is eager to be a Wee Recycler.

Thank you,

Wee-kly Recycling Ideas

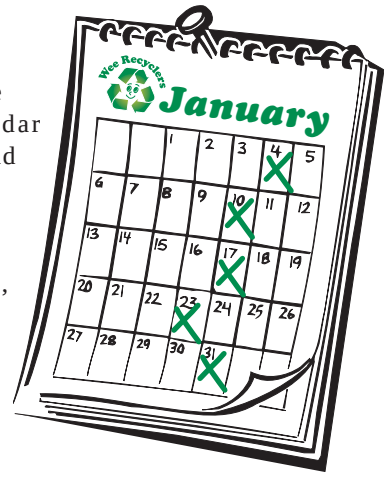
Materials:

"Wee-kly Recycling Ideas" (take-home)*

* Found in Wee Recyclers Online Resources, http://dnr.wi.gov/eek/teacher/weerecyclers.htm

Procedure:

1. Help families adjust to the reducing, reusing and recycling routine by sharing with them the Wee-kly Recycling Ideas. These are in calendar format with 12 pages to correspond with the 12 months of the year. Each page is divided into four weekly suggestions.
2. At the beginning of every month, print copies of the appropriate calendar page for each child to take home and share with family members. The ideas for reducing, reusing and recycling are practical, money-saving and earth-friendly.



Practice Makes Perfect

Wee Reggie and His Recyclable Friends

Goals:

- To demonstrate, through puppetry, how children can teach adults about recycling.
- To reinforce how to prepare recyclable items.

Background:

Once your children are introduced to recycling, it is simply a matter of practicing and reinforcing the things that can be recycled and how they must be prepared. Soon they will want to teach others. They may find it appealing to be able to teach an adult how to recycle. Reggie, Sue and brother Lou are Wee Recyclers who teach others about recycling through rhyme, rhythm and silly characters.

Materials:

Wee Crafts*

Large paper bag for Wee Reggie puppet*

Pattern for Wee Reggie puppet*

Materials needed to make the recyclable friends:

Newspaper	Markers/crayons
Plastic bottle	Scrap paper
Glass bottle/jar	Glue
Aluminum can	Scrap ribbon/yarn
Tin can	Scissors

* Found in Wee Recyclers Online Resources, http://dnr.wi.gov/eek/teacher/weerecyclers.htm

Preparation:

- Make a Wee Reggie puppet from reusable materials. Use the pattern from the Wee Recyclers Online Resources or ideas from the puppet section of Wee Crafts.
- Make the recyclable friends from recyclable items and materials. For each friend create a face on the surface of the recyclable item. Add other features and decorations if you wish. (See diagrams for ideas.)
- Find a large, paper grocery bag and write the word "Trash" on the front.

Procedure:

The following is a short play. It should be repeated several times, each time using a different recyclable friend. You may want to introduce all of the recyclable friends in one repeated performance; or you may choose to introduce one recyclable friend a day. As the play is repeated, children will begin to anticipate Wee Reggie's actions and his message. Who will be pulled from the mysterious trash bag next?

Before beginning, introduce Wee Reggie and identify the "adult" character. It may be you or you pretending to be a mom, dad or grandparent.

After each skit, talk about how to recycle the featured item. Ask children to demonstrate what to do with it.

Going Beyond

- After the recyclable friends are introduced, place them in the Wee Recycling Center for children to play with.
- Supply children with materials to create their own recyclable friends. Encourage them to make up unique names for their new friends.
- Help children make their own Wee Recycler puppet. They can use it to teach others about recycling.
- Encourage children to make up and perform their own recycling puppet shows using the puppets they made.
- Ask children if some things are okay to throw away. Explain that some things like chicken bones and facial tissue (Kleenex) should be thrown away.

Wee Reggie and His Recyclable Friends

Characters:
- Wee Reggie
- Adult
- Assorted Recyclable Friends

Recyclable Friends:
- Nadia Newspaper
- Patty Plastic
- Gavin Glass
- Alex Aluminum
- Taylor Tin

(An open brown paper bag sits on the table. It is labeled "Trash." One of the characters is inside. The paper bag starts shaking and rustling. From inside the bag comes a cry for help.)

Friend: Help! Help! Get me out of here. I don't belong in here. Help! Help me, please!

Adult: What's all this noise? What's this all about?

Reggie: It's coming from our trash bag; something's trying to get out!

Adult: Who is crying? Who can it be? *(Take the character from the bag.)*

Reggie: A [*name item*] is crying; can't you see?

Friend: Boo-hoo, Boo-hoo! Oh what a disgrace! I'm not garbage or trash; I don't belong in this place.

Reggie: Why it's [character's name]! What happened to you?

Friend: She/he put me in here, (*directed towards adult*) when she/he was through.

Reggie: Did you really do this? Did you throw him/her away?

Adult: I guess it was me; I did it yesterday.

Reggie: *(Scoldingly – children can shake their finger at adult.)* Haven't you heard? Where have you been? [Item] can be recycled and used over and over again.

Adult: Oh [character's name] I'm so sorry, please forgive me, too. I can learn to recycle, just tell me what to do.

Reggie: Recycle – it's easy, as simple as can be. Just give me your attention and watch Wee Reggie!

(Have Wee Reggie demonstrate or ask one of the children to demonstrate what to do with the recyclable item. Actual props should be used. You may want to pretend to do some actions and use "pretend water" to rinse cans and bottles. See character variations on the next page.)

Adult: Wow, recycling is easy, I want everyone to know.

Friend: Thank you for recycling; it's the way for me to go!

(Friend smothers Reggie with hugs and kisses.)

Variations:

Nadia Newspaper – Add her to a stack of other newspapers. Find a long piece of string, wrap it around the stack a few times and then tie it tight.

Patty Plastic – Unscrew her cap. Put a little water inside and swish it around. Pour out the water and look to make sure it's clean. Dry off the outside and flatten her with a stomp.

Gavin Glass – Remove the cover. Now wash him inside and outside, and don't forget around the rim. Dry him off both inside and out. Ask: What color is Gavin?

Taylor Tin – Rinse her out with water; make sure she is clean. Remove her label. Use a magnet to make sure she is tin. Does the magnet stick? Demonstrate how to flatten the can using a can other than Taylor.

Alex Aluminum – Make sure he is empty and rinsed clean. Flatten a can, other than Alex, under your foot.

Alex Aluminum

Aluminum can

Nadia Newspaper

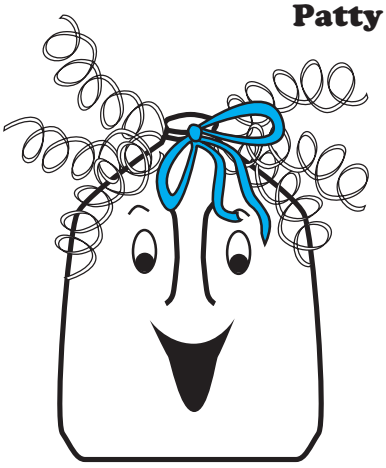
Old newspaper

Gavin Glass

Bottle

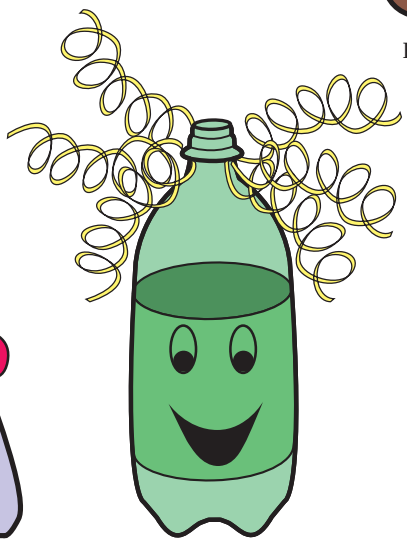
Jar

Patty Plastic



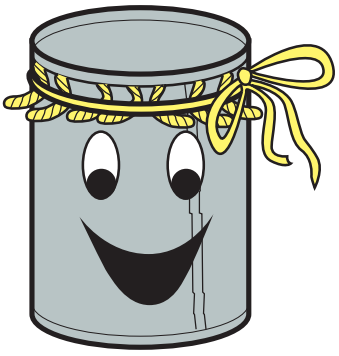
Milk bottle

Dish soap



Two liter soda

Taylor Tin



Soup or coffee can

Wee Reader

Goals:

- To let children participate in reading a story.
- To teach tracking from left to right.
- To show recycling at home with family members.

Materials:

"Wee Reader" poster*

"Wee Reader" book (take-home)*

Recycle Symbol page *

* Found in Wee Recyclers Online Resources, http://dnr.wi.gov/eek/teacher/weerecyclers.htm

Preparation:

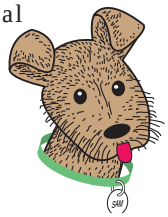
- Mount the "Wee Reader" poster on a piece of cardboard.
- Laminate the poster, if desired.

Procedure:

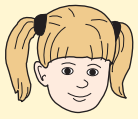
1. Gather the children for story time. Read the story from the poster aloud and point to the words and pictures as you go along. Help the children identify the pictures when you point to them. See if they can answer the question at the end of each verse. Thank the children for helping you read the story.
2. Ask the children if they can help their family to recycle at home, too. Help children put together their own Wee Reader book to read with family members.
3. Display the poster in an area where the children can practice reading on their own.

Going Beyond:

- Make a Wee Reader book for each child to take home and share with family members. Print out the Wee Reader masters from in the Wee Recyclers Online Resources. If possible, print on both sides of the paper or copy page A and page B back-to-back to save paper. Likewise, copy page C and page D back-to-back. With each page, fold along the dotted lines and cut along the solid lines. Put the pages together in numerical order to form a book. Punch two holes along the middle fold. Thread a piece of yarn through both holes and tie the ends to bind the book together. Let your children decorate the cover.



I am a Wee Recycler,

my name is 
Sue.

I live with my 
Mom, 
Dad ,

and brother 
Lou.

- Read the "Wee Reader" poster several times until children become familiar with the refrain. Use the refrain to play a game.
  1. The [item] is empty – what to do?
  2. "[Recycle] it," says brother/sister [child's name].
  3. What is it made of? Do you know?
  4. Into the [recycle] box it can go!

As a group, gather several recyclable items mentioned in the story and a "recycle box." Choose one of the children to stand by you in front of the rest of the group. Ask the child to pick up one of the items and hold it for all the children to see.

Line 1: Now, as a group, begin to recite the refrain filling in the name of the item that the child picked.

Line 2: The selected child says, "Recycle it," and the group finishes the line filling in either brother or sister and the name of the selected child.

Line 3: The group asks the questions and the selected child answers.

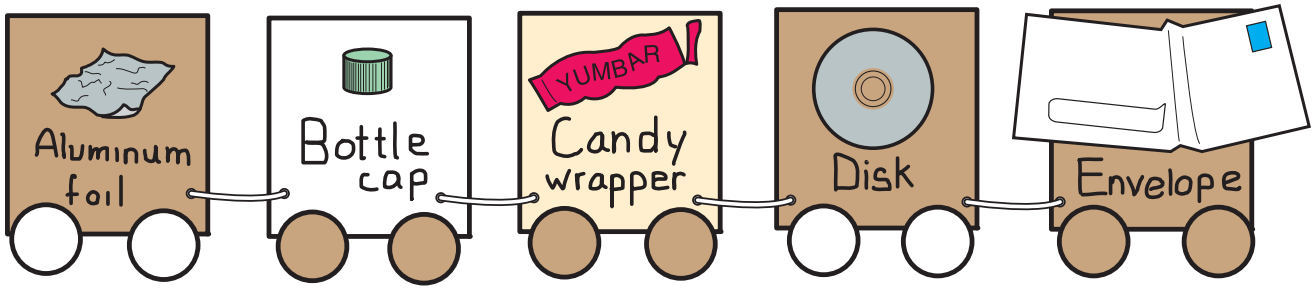
Line 4: Finally, the group recites line 4 and the selected child puts the recyclable item into the recycle box.

Repeat the game several times, selecting a different child and using a different recyclable item.

Recycle Alphabet

Goals:

- To use the letters of the alphabet to identify items that are either recyclable or that may be considered trash.
- To review or learn some letters of the alphabet.



"A" to "Z" Trash Train

Materials:

Trash items brought in by children

Sturdy paper (writing paper, paper bags, cereal boxes cut apart)

Glue, stapler, tacks

Marker

Procedure:

1. Assign each child an alphabet letter and have each of them bring in a small object that starts with that letter. It must be something that was going to be thrown away and can be attached to a piece of paper.
2. Send home the Parent Letter, located at the end of this section, with each child explaining the project.
3. Help your children assemble the trash train by attaching each item to a piece of sturdy paper. Cut out wheels and have each child attach them to their train. Ask each child to identify the item he or she brought in and help them write the name of the item and the letter it starts with on the paper train car.
4. "Link" the train cars together in alphabetical order with scraps of yarn. Attach the trash train to a wall or bulletin board. Let each child talk about his or her own train car. Use the Trash Train to periodically review the alphabet.

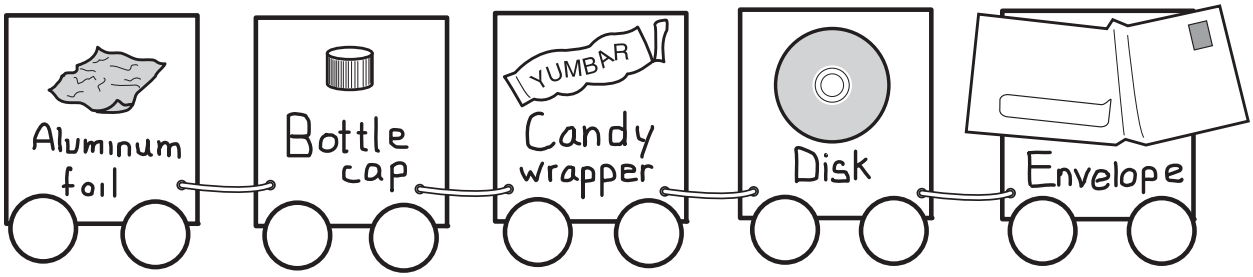
Variation: This idea could also be done as a bulletin board titled, "Our A to Z Landfill."

Dear Parent,

On _____, we will be creating an "A to Z Trash Train" for our bulletin board. Your child has been assigned the letter "___." Help your child find a clean piece of "trash" that starts with this letter. For example, A: an empty box of animal crackers; Z: a real zipper; T: a TV guide; Q: a Q-tip, etc. Please send only ONE piece of trash. Make sure that it is clean, smaller than this paper and not too heavy. We hope the children will begin to realize the huge variety of trash we throw away every day.

Thank you for your help,

Wee Recyclers



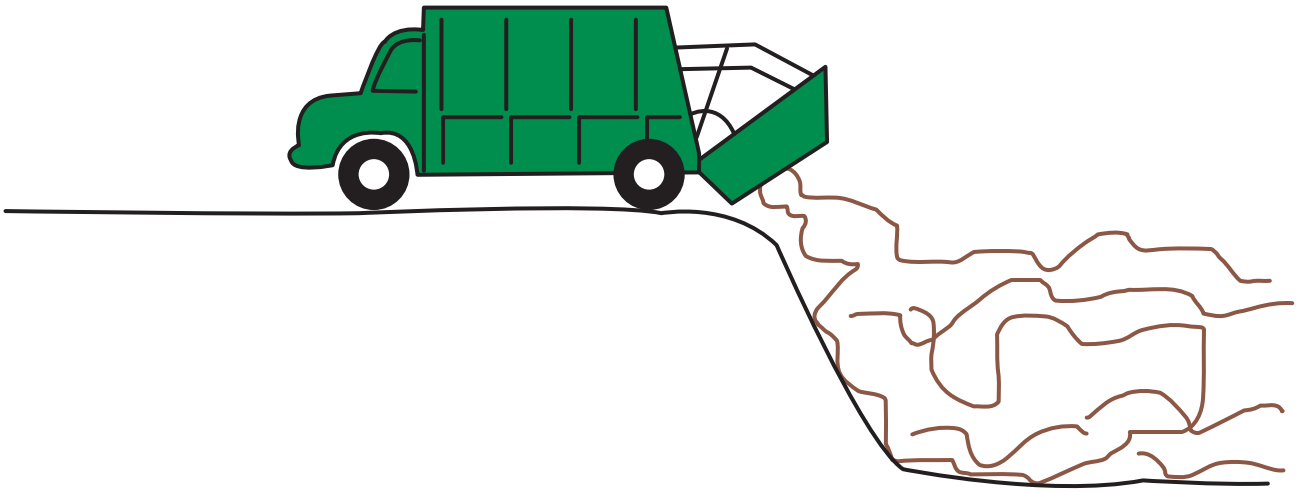
Where Does the Trash Go?

Goals:

- To demonstrate how trash is compacted and buried in a landfill.
- To help children understand that a landfill has a limited capacity.
- To help children realize that they can affect other peoples' behavior by encouraging them to recycle.

Background:

Landfills are filling up quickly and this problem directly affects all of us. Already many landfills are closing and will continue to do so over the next few years. Families, friends and neighbors must work together to reduce the amount of trash heading to a landfill. A community that reduces, reuses and recycles will extend the life of its landfill and natural resources. Young children can have as big of an impact as older folks when it comes to solving our solid waste problem. We all must say, "Recycle now, here's how!"



Make a Sandbox Landfill

Materials:

Sandbox, dirt pile, multi-sensory table or dish pan half full of dirt

Modeling clay

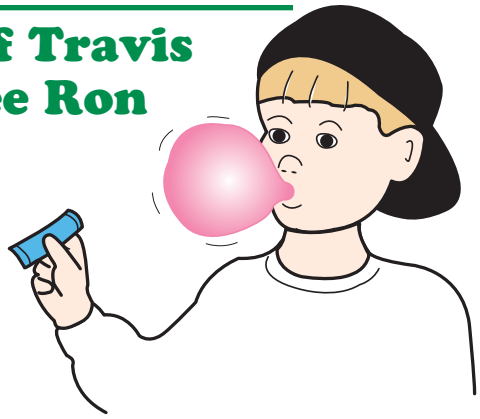
Small pieces of trash from your classroom

Toy bulldozers and tractors (optional)

Procedure:

1. Show your children the way trash is discarded in a landfill by taking them to a sandbox, dirt pile or dish pan of dirt. Let your children dig a hole in the dirt or sand.
2. Line the hole with the modeling clay. Explain to your children that the liner prevents the landfill from "leaking."
3. Cover the clay with a layer of dirt or sand.
4. Crush some of your classroom trash as tightly as you can and put it in the hole.
5. Have you children cover the trash with a layer of dirt or sand. (Let them use toy tractors or bulldozers to cover the trash.) Add another layer of trash and another layer of dirt or sand.
6. Talk about how quickly the landfill becomes full.
7. Put a clay layer cover over the landfill and add a final cover of dirt. Tell your children that the landfill is "sealed" and this is where their trash will stay.

The Stories of Travis Trash and Wee Ron



Materials:

10 story pages*

Clear contact paper

Binder rings or yarn

Landfill picture*

* Found in Wee Recyclers Online Resources, http://dnr.wi.gov/eek/teacher/weerecyclers.htm

Preparation:

- Print out the story pages from the Wee Recyclers Online Resources. Note: read pages horizontally; the binder holes appear along the upper edge of one story and along the lower edge of the other. When you bind the pages together, you can work the book like a flip chart. As you flip pages, the "Wee Ron" story will appear on the upper page and the "Travis Trash" story will appear on the lower page.
- Cover the pages with contact paper or laminate and re-punch the binder holes.
- Stack the pages in order and bind together with binder rings or yarn pieces. Pages should flip easily.

Procedure:

1. Read "Travis Trash" to the children first. Talk about what happens in Trashtown. Notice that Travis and his fellow townspeople say, "It's okay, throw it away."
2. Read "Wee Ron" by flipping through the book again reading the upper half of the page. Talk about what happens in Recycle City. Notice that Ron and his fellow townspeople say, "Recycle now, here's how!"
3. Discuss the two stories using the "Let's Talk About It" questions.

Note: Because of the short attention span of children, take a break between reading each story.

Let's Talk About It:

After reading both stories, flip through the book again holding both pages open. Ask the following questions: (Question numbers correspond to page numbers.)

1. Where does Travis Trash live? Where does Wee Ron live?
2. Which family uses things only once and then throws them away? Which family uses things over and over again?
3. Which family throws away more trash each week? Which family recycles?
4. What does Trashtown do with its glass, plastic, paper and cans? What does Recycle City do with its glass, plastic, paper and cans?
5. In which city does the garbage truck take less trash to the landfill each week?
6. What's happening to the landfill in Trashtown? What's happening to the recycling containers in Recycle City?
7. In which city is the landfill only half full? In which city is the landfill completely full?
8. In the end, which city is worried and sad? In the end, which city is proud and happy?

Going Beyond:

- Show the children the landfill picture from the Wee Recyclers Online Resources. Discuss what they see in the picture and what happens at a sanitary landfill.
- Pretend Play: Make garbage and recycling trucks out of old shoe boxes. Pretend to take trash to a landfill. Pick up recyclable items and take them to the Wee Recycling Center.
- Arrange to visit a landfill.

Let's Put an End to Litter

Goals:

- To define litter.
- To make children aware of how litter looks and how it can harm wildlife.
- To help children understand that they can have a positive influence on the environment by helping to reduce the amount of litter.

Background:

Keeping our earth clean is the responsibility of every individual. Each of us must be aware of our own behavior and how it affects the environment. We also must develop a sense of caring and ownership for the world in which we live – its air, water, land and all its inhabitants. We need to teach this to our children, too. Even children, who often feel that what they do has little or no affect, can have a positive influence on the environment by helping to reduce the amount of litter and pollution. *Litter* is anything (wrappers, packaging, paper, bottles, cans, etc.) that is left on the ground or left where it does not belong. Litter does not look nice and it can harm plants and animals living in nature. (For more information about litter, see the Background section for "Dirty Ditches.")

Observe Litter

Procedure:

1. Find an area in your neighborhood that is littered, or for learning purposes, you can temporarily place litter on the playground to show children what litter looks like.
2. Take the children outside and ask them to observe the area. Ask: What do you see? Do you see anything that does not belong here? How do you think litter looks? How does seeing litter make you feel?
3. This is an opportunity to talk about litter being not nice to look at, unsafe, unhealthy and dangerous for plants and animals.
4. Ask your children to help you pick up the litter and throw it away or recycle it.

Trash Can Hunt

Materials:

Paper

Black and blue crayons (one set for each group)

Procedure:

1. Explain to your children that just like the special places where they keep their toys, gum and candy wrappers also have a special place. Ask: Do you know where we should put wrappers? When we are done with wrappers, they belong in a trash can. When wrappers and other garbage are thrown on the ground instead of being put in the trash can, they are called litter. When we throw things on the ground it is called littering. Trash that cannot be recycled or reused belongs in the trash can.
2. Plan a trash can hunt with your children. Divide them into small groups. In each group, designate one child as the recorder and give him or her a piece of paper and a black and a blue crayon. Explore your facility, playground and surrounding neighborhood. Search for trash cans. Each time the group finds a trash can, have the recorder make a black mark on the paper. If there is a recycling bin next to the trash can, have the recorder make a blue mark as well.
3. After the hunt, bring all the children back together and give each group a chance to report on how many trash cans they found. Ask: Where did you see the trash cans? What was in the trash cans? Did you see litter nearby? Did any of the trash cans have a recycling can next to them?
4. Now that children know where several trash cans are located, encourage them to throw their trash away in one of these cans.

Wee Hunt for Litter

Materials:

Garbage bags

Heavy gloves

Newspapers

Procedure:

1. Picking up litter can be a lot of fun. Make your litter hunt a big adventure. Outfit a small group of children with gloves and special litter-hunting hats. (Help the children make these hats from folded newspaper.) Create special litter bags from paper or plastic grocery bags to hold litter that they capture.
2. Get excited about hunting for and capturing litter. Ask your children where they think litter may be hiding. Take them outside to the playground (and surrounding neighborhood, if possible). Talk about good "hunting" techniques, like looking under, behind and around things.
3. Sneak up on the litter and capture it. Make sure that glass and metal are carefully handled with gloves. Put the captured litter in the litter bag and bring it back to your classroom.
4. Afterwards, empty the litter bags onto a newspaper covered floor to see what was collected. Talk about trash that was collected. What is it? What was it used for? Who may have used it? Why might someone have left it? Where should it have gone? Can it be recycled? Properly dispose of the trash.

Litter Collage

Materials:

Litter collected from litter hunt

Frozen pizza backing for each child

Glue

Procedure:

1. Supply the children with "safe" litter collected on the litter hunt, glue and cardboard backing from frozen pizza.
2. Let the children create a trash collage from the litter. Help them attach pieces of litter onto the frozen pizza backing.

Wee Recyclers Clean Up

Materials:

Wee Recyclers Clean Up*

Crayons

* Found in Wee Recyclers Online Resources, http://dnr.wi.gov/eek/teacher/weerecyclers.htm

Procedure:

1. For each child, make a copy of the Wee Recyclers Clean Up page found in the Wee Recyclers Online Resources.
2. Tell your children to look at the first half of the picture. Ask: What do you see? How does seeing litter on the ground make you feel? Ask children to draw a face on "themselves" showing how the picture makes them feel. They can color themselves; add flowers, trees and more litter.
3. Now have your children look at the second half of the picture. Ask them how they would feel after cleaning up the litter. Ask the children to draw a face on themselves showing how they would feel after helping to clean up the litter. Finish coloring the picture.
4. Write the children's names in the blank. Have them take turns telling a story about picking up and throwing away litter.

The Story of Litter Red Riding Hood

Materials:

5 Litter Red Riding Hood story pages*

Litter Red Riding Hood sequencing (take-home)*

Garbage props: paper lunch bag containing a wrapped sandwich, orange peelings, small chip bag,

paper napkin and soda can

Clean contact paper (optional)

* Found in Wee Recyclers Online Resources, http://dnr.wi.gov/eek/teacher/weerecyclers.htm

Preparation:

- Print the story pages from the Wee Recyclers Online Resources. Laminate the pages with clear contact paper if desired.
- Assemble the garbage props in the reading area.

Procedure:

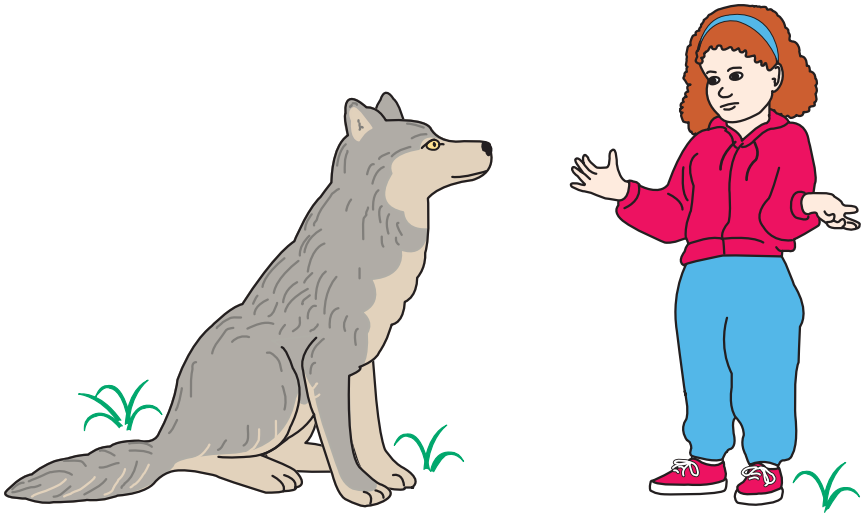
1. Read the story of Litter Red Riding Hood to your children from the back of the picture story pages. Talk about the pictures and help your children identify plants and animals. Have them imitate sounds they may hear in the forest and have samples of flowers and pine needles or cones for them to smell.
2. You may want to act out the scene where Litter Red Riding Hood eats her lunch to demonstrate how she litters.
3. After reading the story, talk to your children about what it means to litter. Use "Let's Talk About It" for discussion.

Let's Talk About It:

1. What did Litter Red Riding Hood throw on the ground?
2. How do you think the animals felt when Litter Red Riding Hood threw things on the ground? Why?
3. Why do you think the little girl's name was "Litter Red Riding Hood?"
4. After Litter Red Riding Hood learned that it is not right to litter, her name changed. Do you remember what her new name is?
5. Where did she and the wolf put the litter?
6. In the end, why were the animals happy?

Going Beyond:

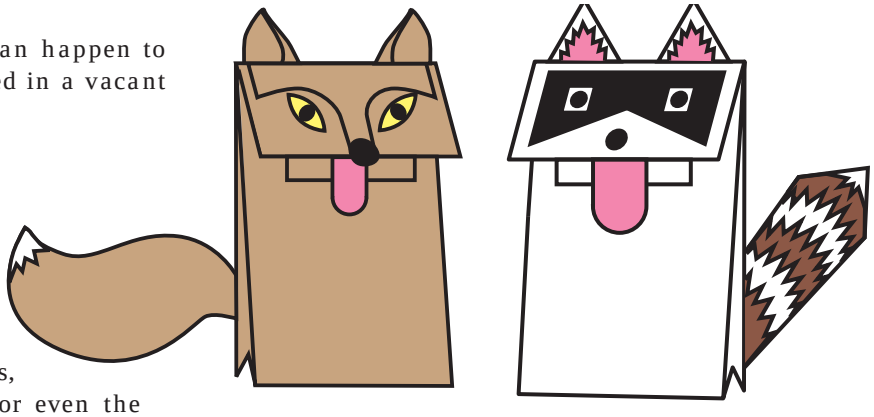
- Practice sequencing and retelling the story of Litter Red Riding Hood. In the Wee Recyclers Online Resources find and duplicate the Litter Red Riding Hood sequencing page. Cut apart the pictures and then glue them to heavier paper or laminate them, if desired. Mix the cards up. Have the children practice retelling the story and putting the pictures in the correct sequence.
- Reproduce a copy of the Litter Red Riding Hood sequencing page for each child to take home and practice retelling the story to a family member.
- Ask your children for ideas about how a Wee Recycler might pack a picnic lunch. Think about packing in reusable containers instead of disposable containers. For example, use a lunch box or picnic basket instead of a paper bag; use a thermos or reusable bottle for beverages instead of a can or plastic container; use small reusable containers for food instead of plastic bags; prepare only as much food as you can eat so that none is wasted.



Dirty Ditches Puppet Play

Goal:

To help children understand what can happen to wildlife when garbage is simply dumped in a vacant lot or along a roadside.



Background:

Every day, each person in Wisconsin throws away approximately 4.7 pounds of trash. Most people give little thought as to where it goes and what happens to it when it gets there. In the United States, "away" means a landfill, incinerator or even the ocean! All too often, however, trash that is not properly disposed of and ends up dumped in a vacant lot or in a roadside ditch. Not only is this "trash stashing" unsightly, it is also dangerous to wildlife. Birds, large fish and small mammals can be strangled in the loops of plastic six-pack holders. Some wildlife mistake shiny litter for food. When pop-tops and bottle caps are eaten they can cause injury. "Styrofoam" cups, plastic cellophane wrappers and cigarette butts have been found in the stomachs of deer. Broken glass, edges of opened cans and empty jars are all dangerous. Animals can get cut, get infections and even die. Small mammals often get trapped in slippery glass jars and pop bottles.

This activity will help children learn that dumping trash "anywhere" can be harmful to the environment. The best place to safely dispose of trash is in a sanitary landfill where it is buried with dirt. To prevent landfills from filling up too quickly, we must reduce, reuse and recycle whenever possible.

Materials:

Wee Crafts*
(patterns for raccoon, fox and owl puppets)

Band-aids

Recycling containers

Landfill picture*

Garbage pile: old shoe, crumpled newspapers, plastic six-pack holders, polystyrene tray or egg

carton, cardboard, tin can with sharp lid exposed, a piece of broken glass, glass jar, and other assorted trash and recyclable items.

* Found in Wee Recyclers Online Resources, http://dnr.wi.gov/eek/teacher/weerecyclers.htm

Preparation:

- Make puppets from reusable materials. Use the patterns from the Wee Recyclers Online Resources or ideas from the puppet section of Wee Crafts.
- Assemble garbage items into a pile near the storytelling area.
- If only one adult is available to operate puppets, use hands for the Rocky Raccoon and Freddy Fox puppets. Prop the Olivia Owl puppet in a sturdy bottle and stand it near you when Olivia Owl enters the play.

Procedure:

1. Introduce the children to Rocky Raccoon and Freddy Fox. Tell them these animals are friends who like to play in fields and wooded areas. They are very curious about anything that is unfamiliar to them. Like many animals, they don't always know the difference between what is safe and what is dangerous. Sometimes animals will eat or play with trash that people leave behind. The trash can hurt animals or make them sick.
2. Tell the children that Rocky Raccoon and Freddy Fox will learn in this story what can happen to animals when people dump their trash in the roadside ditch.
3. At the end of the story, children can help Rocky and Freddy clean up the trash and help decide how to dispose of it properly.

Dirty Ditches

Characters:

Rocky Raccoon

Freddy Fox

Olivia Owl

Narrator: Once there were two young animal friends, Rocky Raccoon and Freddy Fox. They lived and played in a big field. One sunny day, Rocky went to Freddy's house.

DING-DONG (*Freddy appears.*)

Rocky: Hi Freddy, can you come out to play with me?

Freddy: Yes, but my father says I have to stay away from vacant lots and roadside ditches.

Rocky: Why can't you play in vacant lots?

Freddy: My father says it is very dangerous. People have dumped things there that they do not want anymore. Things like old refrigerators, tires and broken windows.

Rocky: Oh. Why can't you play in roadside ditches?

Freddy: People have thrown things they don't want there, too. Things like old bottles, cans, paper and just about anything else you can think of. It is just not safe for animals to play there anymore.

Rocky: But I know a really neat ditch to play in. I think it's pretty safe. Besides, we'll be careful.

Freddy: Well, I don't know.

Rocky: Oh come on. It will be really fun. Let's at least look at it.

Freddy: Okay.

(*Animals go to ditch.*)

Freddy: Yuck! Look at all that trash.

Rocky: Hey, let's go down there and look around. I bet we'll find some neat stuff.

Freddy: No, it could be dangerous. We might get hurt.

Rocky: Oh, come on, Freddy, we'll be careful. We won't get hurt.

Freddy: (*reluctantly*) Well, okay.

(*Animals make their way into the garbage.*)

Rocky: (*picking up old shoe*) Hey, look, someone's old shoe! PEE-YEW!

Freddy: And look at all the newspaper here.

Rocky: Yes, and all the broken glass, too.

Freddy: (*appears with a plastic six-pack holder around both of his paws*) Help! Rocky help me! I can't get this off and it's hurting me! (*Rocky helps get it off.*) Thanks for helping me. I'm glad you were here.

Rocky: Hey, look at this. (*picking up some Styrofoam*) I wonder if it's good to eat? CHOMP CHOMP (*as he takes a bite*). It tastes okay (*and eats more*).

Freddy: I don't think you should eat that.

Rocky: I think you're right. Oooooohhhh, my stomach hurts now. Maybe we should go home.

Freddy: Oweee! (*Freddy cries in pain.*) I stepped on a sharp can and now my paw is bleeding! (*Freddy hops in pain.*)

Rocky: Ouch! I just got cut by a jagged piece of glass. Ow, it hurts. (*He starts to cry.*)

(*Enter Olivia Owl. She swoops down and lands by her friends.*)

Olivia Owl: Hello my friends. What's wrong? You seem to be hurt.

Freddy: We are, Olivia Owl! We got hurt by the trash that people threw in this ditch.

Rocky: Yeah, we just wanted to play. Instead we got hurt because people are so careless.

Olivia Owl: I'm sad that you are hurt. Here, I happen to have a band-aid for both of you. They should make your "owees" feel better. (*A band-aid is put on one of Rocky's paws and another is put on one of Freddy's paws.*) Sometimes people are not careful and they dump their trash anywhere. Trash doesn't belong here.

Freddy: Where does trash belong?

Olivia Owl: First of all, it is wrong to throw garbage and unwanted things in a vacant lot – it's against the law. Dumping trash along the roadside is littering and we know litter can be dangerous to plants, animals and people.

Freddy: I'll say, look what happened to us.

Rocky: So what should people do with their trash?

Olivia Owl: Maybe all of you (*directed toward the children*) can help us figure out what people should do with their trash.

Freddy: Can some of these things be recycled? (*Allow children to decide which things can be recycled. Let them tell Rocky and Freddy into which recycling containers to place items.*)

Rocky: What about the rest of this stuff?

Freddy: Can any of it be used again? Do some things belong in the trash? Where will the trash eventually end up? (*Allow for discussion of options.*)

Olivia Owl: I'm proud of all of you. You did a great job deciding which things can be recycled and reused. Any trash that can't be recycled or reused should be taken to a landfill.

Freddy: What's a landfill?

Olivia Owl: A landfill is a special place where trash is taken. Trash is put in a big hole and then carefully covered with dirt. That way, no one gets hurt – animals or people. The problem is that landfills are quickly filling up.

Rocky: If all of this trash had been recycled or put into a landfill, then we wouldn't have gotten hurt.

Freddy: Right. Everyone has to help and work together to put trash where it belongs.

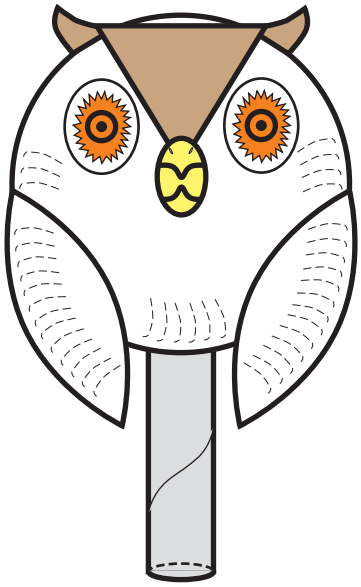
Olivia Owl: You've learned a lot today. Now it's time to go home.

Freddy: Yes. We've gotten hurt and have learned it is not safe for us to play where people have littered and left their trash.

Rocky: Well, I hope you people have learned something, too! For our sake, please don't dump your trash where it doesn't belong.

Freddy, Rocky, Olivia:

Good-bye boys and girls!



Let's Talk About It:

1. How do Freddy and Rocky get hurt?
2. How do you feel when you see litter on the ground?
3. Why shouldn't people dump their trash where it doesn't belong?
4. What should be done with things like glass, cans and newspaper?
5. Where should the rest of the trash be taken?
6. Show children the landfill picture and explain how garbage is buried and covered. (Refer to landfill activities in this guide for more ideas and information.)

Going Beyond:

- Assist children in creating their own puppet friends who can help them recycle. Use old bags, socks, leftover scraps of paper and other reusable materials. See the puppet section of this guide for ideas.
- Plastic six-pack holders should be disposed of in the garbage. However, sometimes they end up in the water or on the ground where animals get caught in them. Using a pair of child-safe scissors let your children snip through each ring of a plastic holder. Tell your children they are helping to keep animals from getting stuck in the rings. Then, have your children throw the holder into the trash.

Nature Recycles, Too

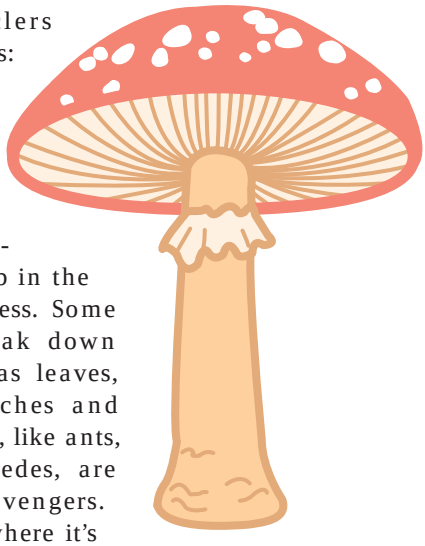
Goals:

- To help children understand that nature recycles its resources and we should too because we are part of nature.
- To observe some of nature's recyclers where they live and work.
- To observe how nature's recyclers use things over again in nature.

Background:

Did you know that nature recycles? Nature has its own clean-up crew. You can introduce your children to *nature's recyclers* and encourage them to be like nature and recycle, too! Searching for nature's recyclers is easy, although you may have to get down on your hands and knees to find them. You do not need to go to a park or woods – you can find nature's recyclers in your own yard.

The life cycle of a tree provides us with a good example of recycling in nature. Leaves fall from trees and form leaf litter on the forest floor. Leaf litter serves as a habitat for a variety of nature's recyclers. Nature's recyclers are decomposers; they *decompose* or break down leaf litter into *nutrient* components that will return to the soil and be used again to fertilize trees. The nutrients taken into the tree eventually help to form new leaves again.



Nature's recyclers come in many forms: snails, slugs, beetles, sow bugs, earthworms, millipedes, fungi, mushrooms, lichens and microbes. Each "recycler" has its own job in the decomposition process. Some recyclers help break down plant tissue such as leaves, dead plants, branches and logs. Other recyclers, like ants, spiders and centipedes, are meat-eaters or scavengers. They like to work where it's dark and moist. Leaf litter provides ideal conditions for decomposition to take place.

Try to observe nature's recyclers in their natural setting during the warmer months of the year. Don't disturb their homes any more than is absolutely necessary. Handle them with care, some may bite!

Even if bugs and worms may seem yucky to you, remember they are exciting and useful creatures. They set an important example for all of us to follow. Just as nature efficiently recycles its natural resources, we need to recycle to help preserve our natural resources, too.

In Search of Nature's Recyclers

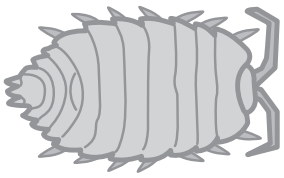
Materials:

Outdoor area (yard, park, garden, woods)

Clear viewing container with air holes (see "Going Beyond" and/or "Critter Cabin" activity in Wee Crafts for ideas)

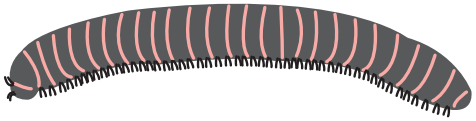
Hand-held garden spades or old spoons (optional)

Hand lens (optional)



Preparation:

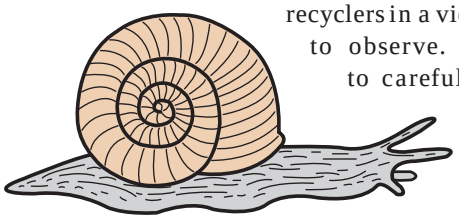
- Check out areas you plan to visit to make sure you can easily find some of nature's recyclers. You can "plant" a log or board directly on the soil several days ahead of time to draw insects to the moist, dark place.
- See the activity, "Nature's Recyclers Storyboard," for pictures of some of the nature's recyclers you will be looking for.



Procedure:

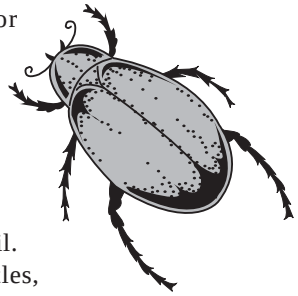
1. Assemble a small group of children and ask:
   - What happens to all the leaves and branches that fall to the ground?
   - Who cleans up the forests and fields?
   - Would you like to find out who cleans up the fallen branches and leaves?

   Explain to them that the creatures that help clean up the forest are called "nature's recyclers."
2. Prepare the children for a walk outside by telling them that they are going to become explorers and hunt for nature's recyclers. They will search for them and try to find where these creatures live and work. Everyone can be "armed" with a hand lens and viewing container if you have them.
3. Go outside and sneak up on the sites where you might expect to find nature's recyclers. Because nature's recyclers and the places they live are so small, your explorers may have to take turns looking at each site. Remind them that they will be looking into creatures' homes, so everyone must be very careful, respectful, touch gently and put "roofs" back in place.
4. Consider capturing and placing some of the nature's recyclers in a viewing container to observe. Just remember to carefully return them to their homes when everyone is done looking at them.



5. Visit some or all of the following places, taking a few minutes to discuss what you see and feel. Encourage your explorers to smell decaying wood, wet leaves and dirt along the way. When you find some of nature's recyclers, ask your explorers question like:
   - Is this a plant or an animal?
   - What is it called?
   - What color is it?
   - How many legs does it have?
   - Does it move fast or slow?
   - How does it feel? (touch gently – worms, slugs, mushrooms and lichens only)
   - How many are living together?
   - Why do they live here?
   - What are they eating?

Old Log



Roll over an old log. Look for decaying or rotting wood. Have children feel the difference between the hard wood and the soft pulp. Nature's recyclers change the old, hard wood into very soft, loose pieces that mix with the soil. Look for worms, slugs, beetles, sow bugs, millipedes and mushrooms. Return the log to where it belongs when everyone is done looking into this "home."

Tree Bark (on a dead log)

On the outside surface of the bark, look for mushrooms, lichen and moss growing. Slowly pull back a section of bark on a decaying log and look for beetles, termites and ants. Observe the creatures you see. Compare the different textures of wood. In addition to the questions listed above, ask:

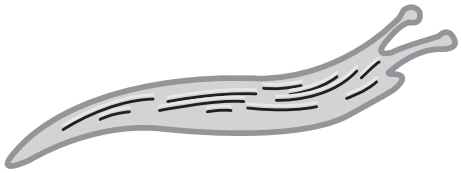
- Do you see any holes in the wood where nature's recyclers were chomping?
- Is some of the wood very loose like sawdust?
- How do you think the wood got like this?

Large Rock

Roll over a large rock. Observe the texture of the ground underneath. Feel how moist it is. Look for slugs, snails, worms and sow bugs. Also look for holes and tunnels leading underground. Roll the rock back into the place when everyone is done observing.

Underground

Have small children dig in soil, sand or wood chips with small garden spades or old spoons. Look for worms, millipedes and sow bugs. When your explorers find some of nature's recyclers, place them in a clear observation container for all to see. Talk about what they look like. The job of worms and many of nature's recyclers is to dig through the soil and make it soft and loose. Worms munch on dead leaves and other small dead things. They add nutrients to the soil. Be sure to return all creatures back to their homes and fill in any holes you made.



Leaf Litter

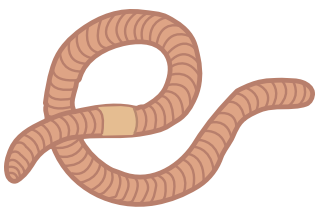
Digging through a pile of decaying leaves or grass clippings will also reveal several of nature's recyclers. Look for mushrooms, worms, beetles and millipedes. Compare the texture of a green leaf and an older decaying one. Ask:

- What color is the older leaf?
- Is it wet or dry?
- How does it smell?
- Can you see any signs of chomping and chewing by nature's recyclers?
- Which of nature's recyclers are hard at work here?

6. Following your exploration, review with the children what they saw. Ask some of the following questions:
   - Where do some of nature's recyclers live?
   - What do some of them look like?
   - What are their jobs?
   - How are wood, soil and leaves changed by nature's recyclers?

Going Beyond:

- Use deli containers with clear lids for small holding and viewing cages. Return nature's recyclers to their homes when you are done. Keep the containers in a science area for future use. (For another variation, see "Critter Cabin" in Wee Crafts in Wee Recyclers Online Resources)
- Make leaves and sticks out of scrap paper and have your children imitate how nature's recyclers tear these apart or break these down into nutrients. Also, have them imitate ants scurrying, sow bugs curling up, worms wiggling and slugs moving very slowly.
- Collect sow bugs, a few leaves and sticks. Place them all in a closed container with a few drops of water. Punch air holes in the lid. Observe for a few days and then release the sow bugs.
- Make egg carton insects (see Wee Crafts in Wee Recyclers Online Resources) or create your own nature's recyclers using recyclable materials. Encourage children to use their imaginations to come up with ideas for eyes, legs and antennae.



Nature's Recyclers Storyboard

Materials:

Flannel Board

Nature's Recyclers Storyboard cut-outs*

Felt, flannel or Velcro material for cut-out backing

"Nature Recycles" poster*

Nature Recycles (take-home)*

* Found in Wee Recyclers Online Resources, http://dnr.wi.gov/eek/teacher/weerecyclers.htm

Preparation:

- Print and cut out the pictures for Nature's Recyclers Storyboard. Glue pieces of felt, flannel or Velcro materials to the backs of each picture so they will adhere to the flannel board. Set up a flannel board and follow the diagram for picture placement.
- Prior to this lesson, take children outside for a walk to learn about the parts of a tree: leaves, branches, trunk, roots and bark. Help your children observe some of nature's recyclers before discussing them in this lesson. See the activity, "In Search of Nature's Recyclers."
- Consider the age and comprehension level of your children when planning for this activity. Not all of the material may be appropriate for all age levels.

Procedure:

1. Tell your children that in the spring and summer, trees grow new branches and green leaves. In the fall, many trees get ready for winter by stopping growth and shedding their leaves. Where do all the leaves go? What happens to twigs and branches when they fall from trees? If possible, go outside and observe new leaves growing in the spring or leaves dropping in the fall.
2. Explain to your children that we are going to talk about what happens to leaves when a tree is done using them. Explain that nature uses leaves again. Nature has its own recyclers.
3. Begin the activity in one of the following ways:
   - To evoke interest, read the poem, "Nature Recycles" first. Then, using the cut-outs, go back and work through the narrative for discussion.
   - Work through the narrative, placing the cut-outs on the flannel board as you discuss them with the children. Use the poem, "Nature Recycles" for review and reinforcement.

- For very young children, use the flannel board cut-outs along with the poem, "Nature Recycles." Discuss things that children question or show an interest in.

4. Remind the group that nature's recyclers are exciting and important creatures even though bugs and worms may seem yucky.

Narrative for Discussion:

a. Here is a tree. Let's look at the different parts. Here are the roots, the trunk, the branches and leaves. This covering is called bark – it protects the inside of the tree. Ask:
   - What color is the bark?
   - What color are the leaves?
   - In which season do leaves turn red, orange and brown?

b. In the fall, the weather turns cooler and the leaves become dry and die. They turn from green to red, yellow or brown. The tree can't use its leaves anymore, so the tree throws its leaves away. Ask:

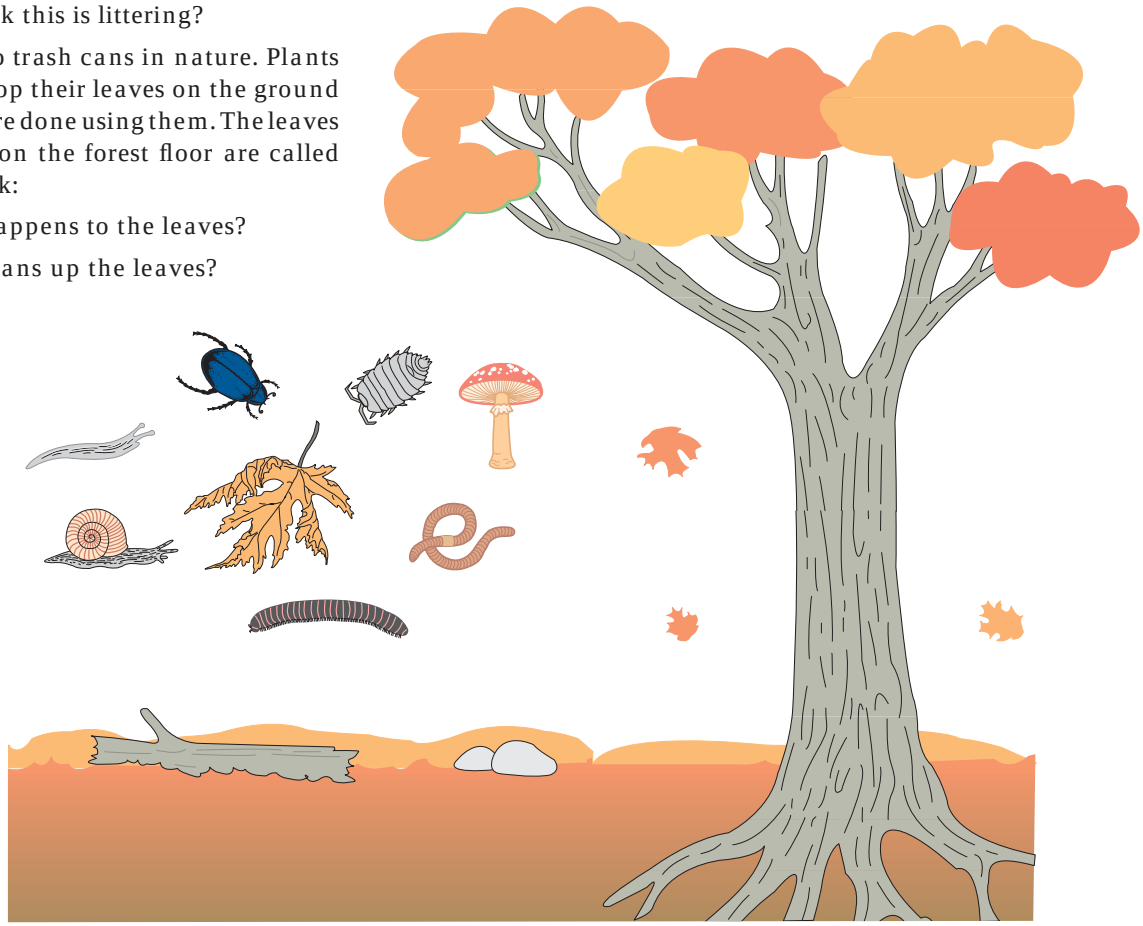
   Where does the tree throw its unwanted leaves?

   Do you think this is littering?

c. There are no trash cans in nature. Plants and trees drop their leaves on the ground when they are done using them. The leaves that collect on the forest floor are called *leaf litter*. Ask:
   - What happens to the leaves?
   - Who cleans up the leaves?

d. Fortunately, nature has its own clean-up crew to take care of the leaf litter. They are called "nature's recyclers." What would the world be like if nature didn't have a clean-up crew? Nature's recyclers have a very important job. They take the leaves from plants and trees and break them up into teeny-weeny pieces called nutrients which they put back into the soil. Ask:
   - What are nutrients?
   - Has anyone ever heard that word before?

e. Nutrients are like vitamins. Plants and trees need air, water, sunlight and nutrients in order to grow big and strong, just like children need air, water and food to grow big and strong. Nutrients are found in living and dead things. They are so small we cannot even see them. Nature's recyclers take the nutrients out of dead plants and leaves and put them back into the soil to be used again. Ask:
   - Do you want to meet some of nature's recyclers?



f. We'll have to dig into the ground, turn over rocks and roll over logs to find them. Nature's recyclers like to live and work where it is dark and moist. Ask:

- Can you help me find them? (Pretend with children to dig in the ground, turn over a rock or roll over a log.)

LOOK, WE FOUND SOME! (Bring out the cut-outs of nature's recyclers.)

This is a mushroom. It's a plant that is not green. It grows on the ground or on trees, rocks and logs. Its "roots" (known as mycelia) break down leaf litter and suck out the good nutrients to put back into the soil. Mushrooms help keep the woods clean.

This is a slug and this is a snail. What's the difference between a slug and a snail? How are they the same? (They're almost the same except a slug doesn't have a shell.) Their job is to clean the floors of gardens, lawns, forests and lakes. Ask: Do you know what the snail uses its shell for? Have you ever felt a snail or slug?

Here is a creature you might know. Who can tell me what it is? This is a worm. Worms dig tunnels through the ground and around tree roots. They also chew up leaf litter as they dig through the ground. Ask: Can anyone show me how worms wiggle through the ground?

Here is a beetle. It has a very hard shell and sharp pinchers to cut leaves. It chomps apart the leaves that fall to the ground. Ask: What color is this beetle? (Sometimes beetles are reddish-brown or green.)

This is a sow bug. It likes to hide in dark places. You can find it almost anywhere, including in your garden and at the park. It munches on leaf litter, too.

This is a millipede. It crunches up dead plants to keep the ground neat. It likes to hide and can move very quickly. You would, too, if you had all those legs! Ask: Can you count how many legs it has? (Not necessarily a thousand.)

These are just some of nature's recyclers. They work very hard to clean up the leaf litter that the plants and trees drop on the ground. As slugs, worms, beetles, sow bugs and millipedes munch, crunch, chomp and chew through the leaf litter, they break the leaves into tiny pieces. Have your children make crunching and munching sounds. Nature's recyclers "poop" out what they can't digest. Their "poop" is the remains of leaves and contains nutrients.

g. Now the tiny leaf pieces or nutrients can be put back into the soil. (Pretend to do so.) The plants and trees will use the nutrients again. Remember, nutrients are food the tree needs to make new wood, strong branches and new leaves. In the spring, nutrients are sucked out of the soil by the tree's roots and pulled up through the trunk. They travel through the branches and out to the end of the twigs where new leaves are made. Ask:

- Do you want to meet some of nature's recyclers?
- Can you pretend your fingers are roots and you are sucking up the nutrients from the soil?

h. Without nature's recyclers, leaf litter would not be cleaned up. What a mess we would have! And without nature's recyclers, no nutrients would be put back into the soil. Ask:

- Do you think trees can live without nutrients?
- What if there were no nature's recyclers to put nutrients back into the soil?
- What do you think would happen to all of the plants and trees?

i. So you can see that nature recycles things that it doesn't need or want anymore. Nature's recyclers take leaf litter and break it down, changing it into nutrients that can be used again. We should be like nature's recyclers, too. We can recycle and reuse many things that people make. By recycling, we use things like paper, glass, metal and plastic over and over again. We also can help keep the earth clean by picking up our own litter and putting trash only where it belongs. Wee Recyclers and nature's recyclers can work together.

Going Beyond:

- Go on a hike to look for nature's recyclers outdoors. See the activity, "In Search of Nature's Recyclers."
- Print and copy the poem, "Nature Recycles" for each child to take home and share with family members. (Poem found in the Wee Recyclers Online Resources.)
- Study nature's recyclers inside by collecting some forest floor litter and placing it over soil in a terrarium. Keep the leaves damp but not too wet. Place a screen over the terrarium and watch for nature's recyclers.
- Bring in and show children leaves in different stages of decomposition.
- Set up a vermicomposting bin in the classroom. For instructions, visit the EEK! Environmental Education for Kids web site, www.dnr.wi.gov/eek and keyword search "composting with worms."

Sing and Play

Sing For Recycling

Goal:

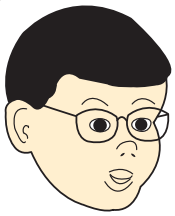
To have these catchy tunes stick in children's minds so they will think about recycling at home, school and play.

Background:

Singing is a fun way to reinforce the things you have been learning about with recycling. Learning a new song is easy when you already know the tune and can act out the lyrics. Make musical instruments (see "Wee Recyclers Band") and play along as you sing.

"The Bottle is Recycled"

(Sing to the tune of "Hi Ho the Dairy-O.")



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"

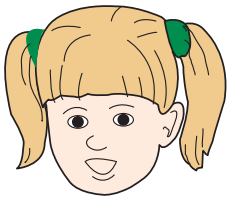
"Clean Up All the Litter"

(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!

"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.

"Recycling Is the Way"



(Sing to the tune of "Jingle Bells.")
Recycling is the way,
To handle trash today,
No more landfill here,
There is a better way.
Just separate your trash,
In boxes oh-so neat,
Plastic, paper, metal, glass
Recycling can't be beat.

Chorus:
Save your glass, save your paper, save your metal, too!
Show you neighbors that you care – it's the thing to do.
(repeat)

"Wee Recyclers Rap"

Wee Recyclers is our name
Recyclin' is our game.
Stackin' our newspapers black and white,
Wrappin' them up and tiein' them tight.
Aluminum cans you get with pop,
Crushin' them flat with just one stomp.
Magnets stickin' to cans of tin,
Watch out for that very sharp rim.
Recyclin' glass is really keen,
All different colors like brown, clear and green.
Broken bottles can cut; they're sharp.
When handling glass, take care – be smart!
Bottles made from molded plastic,
Rinsin' and squishin', that's fantastic!
The numbers tell you what to do,
Look on the bottom for a one or two.
Recycling rap is at its end,
Recycle, too and be earth's friend!

Action ideas: Sway your body and clap your hands to a rap beat. Pretend to do all of the actions described in each of the verses.

"Five Little Bottles"

(Sing with hand movements.)
5 little bottles sitting in a row,
1 was recycled, then there were 4.
4 little bottles sitting in a row,
1 was recycled, then there were 3.
3 little bottles . . .
2 little bottles . . .
1 little bottle sitting in a row,
It was recycled and then there were none to be thrown away.

"I'm A Can"

(Sing with hand movements and to the tune of "Baby Shark.")
I'm a can, (Make a circle with your arms in front of your chest)
Do-do-do-do-do-do
(Repeat 3 times)
I'm a can!
Drink me up, (Lean back as if you are the can and someone is 'drinking' you)
Gulp, gulp, gulp, gulp, gulp, gulp
(Repeat 3 times)
Drink me up!
Squish me down! (Wiggle back and forth, getting closer to the floor each time)
D o-do-do-do-do-do
(Repeat 3 times)
Squish me down!
RECYCLE! (slowly stand back up and make yourself into a 'new' can)
D o-do-do-do-do-do
(Repeat 3 times)
RECYCLE!
Repeat the whole song again, showing how the recycle cycle can occur over and over again. Explain that the song continues each time the children put a can in the recycling bin. It can be the song that never ends!

"Going on a Trash Hunt"

(To the tune of Going on a Bear Hunt.)
(children repeat each line)
REPEAT EACH PHRASE... slap thighs throughout.
Goin' on a litter hunt (repeat)
I'm not afraid (repeat)
Got a real good friend (children hug each other during this part...repeat)
By my side (repeat)
Oh, Oh (repeat)
What do I see? (repeat)
Oh look! It's some tall grass! (repeat)
Can't go over it (repeat)
Can't go under it (repeat)
Can't go around it (repeat)
Got to go through it (repeat and make motions with arms like you are clearing a way thru grass)
Goin on a litter hunt (repeat)
I'm not afraid (repeat)
Got a real good friend (repeat with hugs)
By my side.(repeat)
Oh, Oh! (repeat)
What do I see? (repeat)
Oh look! It's a tall tree.(repeat)
Can't go over it (repeat)
Can't go under it (repeat)
Can't go through it (repeat)
Got to climb up it (Repeat and pretend to climb up the tree)
Goin on a litter hunt (repeat)
I'm not afraid (repeat)
Got a real good friend (repeat with hugs)
By my side.(repeat)
Oh, Oh! (repeat)
What do I see? (repeat)
Oh look! It's a wide river. (repeat)
Can't go over it (repeat)
Can't go under it (repeat)

Can't go through it (repeat)
Got to swim across it. (Repeat and pretend to swim)
Goin on a litter hunt (repeat)
I'm not afraid (repeat)
Got a real good friend (repeat with hugs)
By my side.(repeat)
Oh, Oh! (repeat)
What do I see? (repeat)
Oh look! A deep, dark cave. (repeat)
Can't go over it (repeat)
Can't go under it (repeat)
Can't go through it (repeat)
Got to go in it. (repeat and close eyes as you pretend to enter the cave)
Oh,oh! It's dark in here. (repeat)
I feel something (repeat)
It feels pretty smooth! (repeat)
It seems really squished! (repeat)
It's litter!! (Pull out a plastic bottle or other type of litter from behind your chair; children love to scream this part)
(At this point, increase the speed of your thigh slapping and swim back through the river, back up and down the tree, back through the tall grass, till you get safely back to a garbage can or recycling bin to place the litter inside.)
I'm not afraid! (Repeat)

Wee Recyclers Band

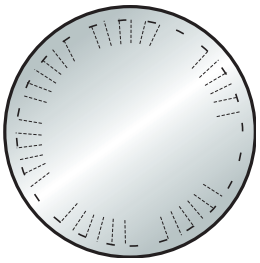
Goals:

- 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.

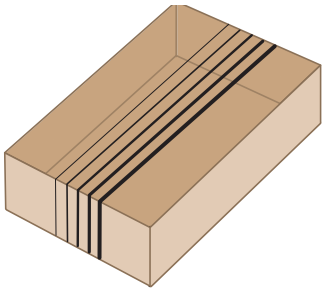
Crayons

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

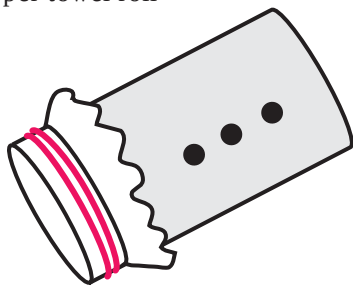
Rubber band

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.

Going Beyond:

- Use these instruments to accompany the songs in the “Sing for Recycling” section.
- Talk about the materials that were used to make these instruments.
- Have your children think of other instruments that can be made from reusable items. For example, put thimbles on your fingers and strum across an old washboard, hit two spoons together, or partially fill several glass bottles with water and tap the bottles gently with a metal spoon to make various sounds.

Wee Games & Toys

Recycle Memory Game

Goals:

- To recall position of playing cards and practice matching identical cards.

Materials:

Large flat playing surface

Recycle Memory Game cards*

* Found in Wee Recyclers Online Resources, http://dnr.wi.gov/eek/teacher/weerecyclers.htm

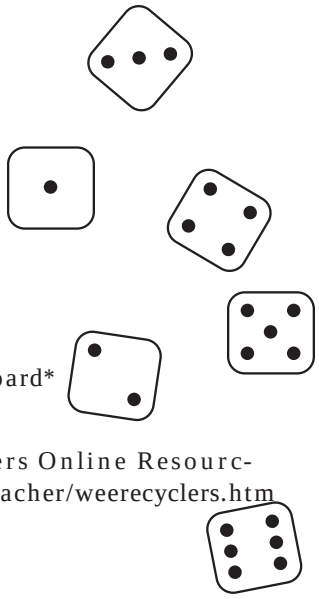
Preparation:

- Before cutting cards apart, reinforce the paper with cardboard (an old cereal box would also work) or a small piece of poster board and laminate or cover with clear contact paper.

How to Play the Game:

The number of cards used may be adjusted to the age of the players. The game is played by spreading the cards out on a flat surface face down. No cards should be overlapping. Children take turns turning over two cards at a time. The object is to turn over a matching pair. When a player turns over a matching pair, the player takes the matching cards and puts them in a pile in front of him/her. If the pair of cards does not match, then the cards are returned face down in the same positions. Children must try to remember the position of the cards they need in order to make a match. The game ends when all the cards are matched and picked up.

Recycle Sort Game



Goals:

- To match pictures of recyclable items.
- To practice number identification.

Materials:

One playing die

Recycle Sort Game game board*

Recycle Sort Game cards*

* Found in Wee Recyclers Online Resources, http://dnr.wi.gov/eek/teacher/weerecyclers.htm

Preparation:

- Print out game board and playing cards.
- Cut apart the playing cards. Reinforce and laminate the cards and game board if desired.
- Number of players: two to five

How to Play the Game:

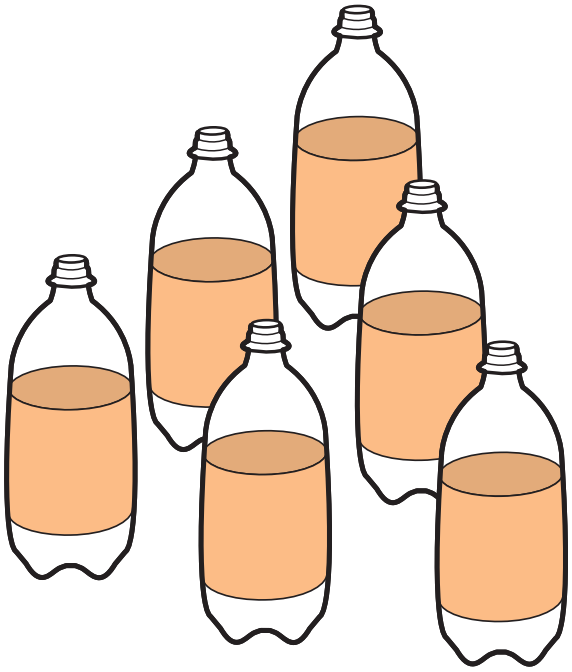
Shuffle cards and deal them out to all players. Players will take turns rolling die. The number rolled matches a number and an item on the gameboard. If the player has a matching card in his/her hand, the player places it on the corresponding recycle box on the game board. If the player does not have the indicated card, he/she must pass. Players continue to take turns rolling a number and discarding from their hand onto the recycle boxes. The game ends when all players have laid down the cards in their hands.

Variations: If children are learning to recognize numbers (instead of numbers of dots on a die), three or four sets of cards numbered 1-6 can be made. Instead of rolling a die, children can then pick a numbered card at the beginning of their turn. Or if children are learning to recognize spelling of numbers, cards can be made with the numbers spelled out.

Action Games and Toys

Goal:

To help children develop coordination and fine motor skills while playing with toys made from reusable items.



Wee Bowling

Materials:

Plastic two-liter soda bottles or half-gallon milk bottles

Rubber ball

Procedure:

1. Let the children decide how to set-up the bottles and determine a line behind which to stand.
2. Children should take turns rolling the ball at the bottles to see how many they can knock down.

Bat and Ball

Materials:

Several sheets of newspaper

Balloon

Tape

Procedure:

1. Roll together several sheets of newspaper to form a bat. Secure loose ends with tape.
2. Blow up the balloon to use as a ball.
3. Use the paper bat to keep the balloon floating in the air.

Cap Toss

Materials:

5-20 plastic caps (from plastic soda, milk, juice, bottles and jars)

Paper grocery bag

Meter-stick or long piece of string to make a line to stand behind

Procedure:

1. Stand an open paper bag on the floor and fold down the top. Place a book in the bottom of the bag to keep it from falling over.
2. Make a line on the floor a few feet from the bag. Everyone must stand behind this line when tossing the caps.
3. Toss one cap at a time. See how many you can get into the bag.
4. When all the caps have been thrown, count how many you got into the bag.
5. Gather the caps and try again. Make a chart to keep track of how many make it into the bag.

Resources

Books

The following list is meant to provide resources for learning more about recycling, composting and waste reduction. These books are available at your local bookstore or online. This list is by no means exclusive, and simply serves as a starting point for resources to build and enhance education efforts focusing on recycling and waste reduction.

- Nature's Art Box. 2003. Laura C. Martin. Storey Publishing, North Adams, MA.
- Recycled Crafts Box. 2003. Laura C. Martin. Storey Publishing, North Adams, MA.
- The Adventures of a Plastic Bottle: A Story About Recycling (Little Green Books). 2009. Alison Inches. Little Simon, New York, NY.
- Composting: Decomposition (Do It Yourself). 2008. Buffy Silverman. Heinemann Library, Chicago, IL.
- Garbage and Recycling (Young Discoverers: Environmental Facts and Experiments) 2002. Rosie Harlow. King Fisher, Boston, MA.
- Michael Recycle. 2008. Ellie Bethel. Worthwhile Books, San Diego, CA.
- My Bag and Me! 2008. Karen Farmer. Penton Kids Press, Carlsbad, CA.
- My Big Green Teacher: Recycling (It's Easy Being Green). 2008. Michelle Y. Glennon. GDG Publishing, LLC, Atlanta, GA.
- Recycle!: A Handbook for Kids. 1992. Gail Gibbons. Hachette Book Group USA, New York, NY.
- Recycle Every Day! 2003. Nancy Elizabeth Wallace. Marshall Cavendish Corporation, Tarrytown, NY.
- Reusing and Recycling (Help the Environment). 2008. Charlotte Guillain. Heinemann Library, Chicago, IL.
- Smash! Mash! Crash!: There Goes the Trash! 2006. Barbara Odanaka. Margaret K. McElderry Books, New York, NY.
- The Three R's: Reuse, Reduce, Recycle. 2006. Nuria Roca. Barron's Educational Series, Inc., Barcelona, Spain.
- Trash And Recycling (Usborne Beginners: Information for Young Readers: Level 2). 2006. Stephanie Turnbell. Usborne Publishing, Ltd., Saffron Hill, London.
- The Wartville Wizard. 1993. Don Madden. Aladdin Paperbacks, New York, NY.
- Waste and Recycling (Precious Earth). 2004. Jen Green. Chrysalis Books Group, North Mankato, MN.
- Where Does the Garbage Go?: Revised Edition (Let's-Read-and-Find-Out Science 2). 1994. Paul Showers. HarperCollins Children's Books, New York, NY.
- Why Should I Recycle? (Why Should I?). 2002. Jen Green. Hodder Wayland, Great Britain.

Environmental Education Curriculum Materials

- EEK!. DNR's website for kids. http://www.dnr.wi.gov/eek/
- Keepin' It in the Loop (Grades K-3) 2007. Pub# EI-2004, 2007. Wisconsin DNR, PO Box 7921, Madison, WI 53707. http://dnr.wi.gov/org/caer/ce/eek/teacher/pdf/K-3_RecycleGuide_full.pdf
- Keepin' It in the Loop (Grades 4-8) 2007. Pub# EI-2003, 2007. Wisconsin DNR, PO Box 7921, Madison, WI 53707 http://dnr.wi.gov/org/caer/ce/eek/teacher/pdf/4-8_RecycleGuide_full.pdf
- Nature's Recyclers Study Guide. 1990. Wisconsin DNR, Wisconsin DNR, PO Box 7921, Madison, WI 53707 http://dnr.wi.gov/org/aw/wm/publications/recycle/publie043.pdf
- Project WILD/Project Learning Tree/ Project WET
  Wisconsin Department of Natural Resources
  PO Box 7921, Madison, WI 53707
  (608) 264-6280
  http://dnr.wi.gov/education/pltwildwet/
- Waste and Recycling Educational Materials (all ages), U.S. Environmental Protection Agency, Ariel Rios Building, 1200 Pennsylvania Avenue N.W., Washington, DC 20460. http://www.epa.gov/epawaste/education/index.htm

  and

  Recycle City: http://www.epa.gov/recyclecity/

- Wisconsin Association of Environmental Education
  University of Wisconsin Stevens Point
  8 Nelson Hall
  Stevens Point, WI 54481
  (715) 346-2796
  http://www.uwsp.edu/cnr/waee/

Composting

- Home Composting – The Complete Composter. 2005. Publ # EI-2003 2006, Education and Information, Wisconsin DNR, PO Box 7921, Madison, WI 53707. http://dnr.wi.gov/org/aw/wm/publications/recycle/PUBWA182-05.pdf
- Home Composting: Reap A Heap of Benefits. 2001. Publ. WA-072, Waste Management, Wisconsin DNR, PO Box 7921, Madison, WI 53707. http://dnr.wi.gov/org/aw/wm/publications/recycle/publsw072.pdf
- Yard Care: Do Your Share. 2001. Publ.WA-073. Waste Management, Wisconsin DNR, PO Box 7921, Madison, WI 53707. http://dnr.wi.gov/org/aw/wm/publications/anewpub/WA073.pdf

Recycling Organizations and Resources

- Associated Recyclers of Wisconsin, http://www.arow-online.org/
- Keep America Beautiful, http://www.kab.org
- Earth 911, http://www.earth911.com
- Recycle More Wisconsin, http://recyclemorewisconsin.org/
- Wisconsin BESMART, http://www.besmart.org/
- Recycling Education and Outreach Coordinator
  Bureau of Education and Information
  Wisconsin Department of Natural Resources
  PO Box 7921,
  Madison, WI 53707
  (608) 264-9258
- Recycling Program Coordinator
  Bureau of Waste and Materials Management
  Wisconsin Department of Natural Resources
  PO Box 7921,
  Madison, WI 53707
  (608) 267-7550
- University of Wisconsin-Extension,
  Solid and Hazardous Waste Education Center (SHWEC)
  Lowell Hall, 610 Langdon St., Rm. 529
  Madison, WI 53703.
  http://www3.uwm.edu/Dept/shwec/

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