




























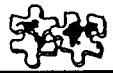


FIRST GRADE

<u>TITLE</u>	<u>MAJOR TOPIC</u>	<u>PAGE NO.</u>	<u>SUBJECT AREAS COVERED</u>
<i>What's A Cycle</i>	3 R's	1.1	 
<i>The Banana Peel Blues</i>	3 R's	1.4	  
<i>What's Recyclable?</i>	3 R's	1.7	
<i>Renuzit - Part A</i>	3 R's	1.8	
<i>Renuzit - Part B</i>	3 R's	1.9	  
<i>Trash To Treasure</i>	3 R's	1.11	  
<i>Barter Day</i>	3 R's	1.12	 
<i>Old Toys</i>	NATURAL RESOURCES	1.17	  
<i>Bag Lunch</i>	PACKAGING	1.18	 
<i>The Turtle's Mishap: A Puppet Show</i>	WASTE DISPOSAL	1.19	  
<i>NoWhere Is Away</i>	WASTE DISPOSAL	1.25	   
<i>It's Hot In Here!</i>	WASTE DISPOSAL	1.29	 



What's A Cycle?

Grade Level : 1

Subjects:

Science 2.1, 2.2, 2.7
Social Studies 8.5

Time:

one class period

Setting:

classroom

Materials:

chart paper, old magazines, glue, scissors, posterboard, recycling logo, "Save! Sort! Recycle!" worksheet, "cans" made from cardboard or tagboard

Skills:

classifying, observing, predicting

Vocabulary:

cycle
recycle

Source:

Action for a Cleaner Tomorrow
South Carolina Dept. of Health and Environmental Control

Summary: The children will brainstorm the cycles they know about (day/night, butterfly, tree, seasons). They will choose a cycle to illustrate. It could even be a picture of their day.

Objective: The children will become aware of cycles to help them understand recycling.

Background: Through recycling, the amount of solid waste produced can be greatly reduced. See "Recycle Cycle" sheet in appendix.

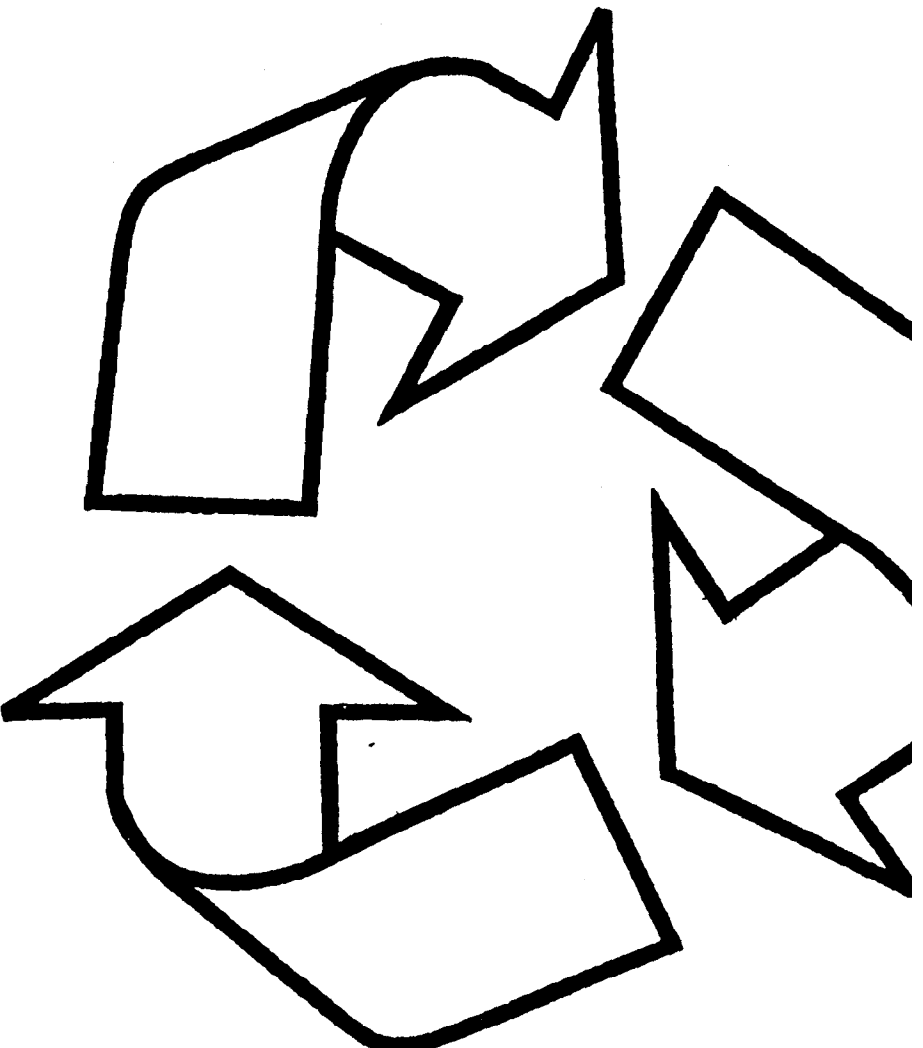
Leading Question: What's a cycle?

Procedure:

1. Brainstorm different cycles the children know about.
2. How is a cycle like a wheel?
3. Introduce the term recycle - Ask the children what they think it means.
4. Ask if they reuse and recycle things at their home. For example: a toilet paper roll becomes a holder for an extension cord. Ask: Do you buy toilet paper with recycled content? What about your cereal boxes? Are they gray? If they are, then they are made from recycled paper.

What Now?

1. Color the recycling logo. Copy on backside of already used paper, if possible.
2. Cut out pictures from old magazines of things that can be recycled. Use these pictures for the activity, "What's Recyclable?"
3. Make copies of the "Save! Sort! Recycle!" worksheet for each child. Have the children color the pictures, cut them out, and glue them on the appropriate can - reuse or recycle.
4. Laminate the worksheet and do this as a whole group activity.
5. Have students make a "How to Recycle" book to take home. These books can be made from the bottoms of brown grocery bags.
6. Share the "Save! Sort! Recycle!" activity with the class. You may want to laminate the worksheet for permanent use.



Recycle

SAVE! SORT! RECYCLE!

Color the recyclable items on this page. Then cut them out and paste them onto the proper recycling "cans."
(Option: Have students divide real items shown on the handout into appropriately labeled boxes.)





The Banana Peel Blues

Grade Level : 1

Subjects:

Communication Skills
2.1
Science 3.5, 4.2
The Arts 1.3

Time:

three thirty-minute class periods

Setting:

classroom

Materials:

wormbox materials
(directions are on page 2.5)
Song - "The Banana Peel Blues" - page 1.5,
recipe for compost pile cake - page 1.6

Skills:

sequencing, cause and effect

Vocabulary:

vermicompost
humus
microbes
castings

Source:

AVR Teacher's Resource Guide
Association of Vermont Recyclers.

Summary: The children will learn the art of composting through the song "The Banana Peel Blues."

Objective: The children will learn how to set up a wormbox including kinds of organic waste that are appropriate for the wormbox. They will understand the cycle of vermicomposting. Students will also see how composting works to decompose organic matter in contrast to vermicomposting.

Background: Learning to manage solid waste is essential if we are going to continue to depend on landfills to handle the garbage that cannot be recycled or reused. Vermicomposting is one alternative to organic waste disposal. It is different from composting because it uses worms (red worms) which eat the dirt in the compost and enrich the soil through their castings. A compost pile produces heat from microbes decomposing organic material. For the classroom, a contained wormbox pile works best. You may want to have both a wormbox for vermicomposting and a box for regular composting.

Leading Question: What is vermicomposting?

Procedure:

1. Sing "The Banana Peel Blues" to the tune "Take Me Out To The Ballgame" with the children. (See page 1.5)
2. Discuss the sequence of events leading up to the production of humus.
3. Make a chart of things that can be vermicomposted (no meat or dairy products).
4. Discuss what kinds of things are needed to help the food scraps, etc. break down and make new soil (air, water, worms, microbes).
5. Discuss one of the following questions on subsequent days.
 - a. Why is a food grinder or blender helpful?
 - b. What do microbes do?
 - c. How does the production of humus start the cycle of soil over again?
6. Put the song on sentence strips. Scramble the strips up and let the children take turns putting the song in order

What Now?

1. Set up a wormbox at school.
2. Send directions for a wormbox home with each child so that home vermicomposting can begin.
3. Begin to collect appropriate vermicomposting materials for the wormbox. If you set up a compost pile as well, choose different groups of children to add food scraps from lunch to the compost pile.
4. Make a compost pile cake (see attached recipe)

Banana Peel Blues

Take me out to the compost;

Take me out to the heap.

Grind me up in a food grinder;

I don't care if I'm chopped in to bits,

'Cause it's root root root for the microbes;

If they don't live it's a shame.

For it's 2, 4, 6 weeks I'm out to the old garden.

It's Fun To Make A Compost Pile Cake!

As an extension activity, have students bring in ingredients and help prepare A Compost Pile Cake.

Ingredients:

- 3 1/2 cups Milk
- 1/2 cup Margarine
- 12 ounces Prepared Whipped Cream topping
- 8 ounces Cream Cheese
- 1 cup Powdered Sugar
- one 20 ounce package of Chocolate, Vanilla Cream-filled Sandwich Cookies
(crushed to simulate dirt)
- two 3.4 ounce packages of Vanilla Instant Pudding
- six Gummy Worms (any flavor will do)
- 1 cup chopped nuts (pecans or walnuts)
- 1 cup chopped maraschino cherries
- 1 cup coconut (you may want to use green food coloring to simulate grass clippings)

How to prepare:

1. In a large bowl mix margarine and cream cheese until soft, add powdered sugar (to taste) and mix well.
2. In another large bowl, mix well the milk, pudding mix, and whipped cream.
3. Combine these two bowls and mix well.
4. In a large clear container such as a large glass salad or punch bowl, place Gummy worms along the side of the bowl.
5. In the large clear bowl, alternate layers of crushed cookies (reserve about one cup), pudding mixture, nuts, coconut, and cherries. Finish with a layer of cookies on top.

Note: For effect, serve the Compost Cake to the class using a garden spade or small shovel.

Feel free to adapt the recipe to meet your own tastes and dietary requirements.



What's Recyclable?

Grade Level : 1

Subject:

Science 2.2, 4.31

Time:

two class periods

Setting:

classroom

Materials:

posterboard, magnets, scissors, glue, pictures saved from "What's A Cycle" activity

Skills:

classifying, observing, communicating

Vocabulary:

recyclable
aluminum

Source:

Watauga County
Recycling Curriculum
Committee

Summary: The children will discuss their pictures from "What's A Cycle" and create a collage with them.

Background: Most everything can be recycled in some way. Some materials are more easily recycled than others and some can be recycled but are not collected in our area. North Carolina prohibits disposal of various materials in landfills, including aluminum cans.

Leading Question: What things can be recycled?

Procedure:

1. Different items are recycled in different areas. These include the following: newspaper, plastic milk jugs, (#2HDPE) cardboard, cereal boxes, glass (clear, brown, or green), cans (aluminum and bi-metal), and clear plastic drink bottles (#1 PET). Find out what is recycled in your area.
2. Each child will look for pictures in old magazines of things that can be recycled or use the "saved" pictures from the "What's A Cycle" activity.
3. The children will explain to the class why these items can be recycled and will then put them in a collage of recyclable materials.

What Now?

1. Center activities. Have children separate aluminum cans from bi-metal cans using a magnet. Note other differences between the two types of cans.
2. Have each child make a *How to Recycle* book to take home. Be sure to use paper that has already been used once for this activity. For example - the books could be made out of brown grocery bags or from paper which has only been used on one side. Include in the book things that can be recycled and how they must be prepared for recycling.
3. Set up a recycling center in your classroom.
4. Make some paper using construction paper scraps. Mix ingredients according to the directions from "Everything Old is New Again" activity. Using open-type cookie-cutters, pour the pulp into the mold. Let the children gently press the excess water out of the pulp. Add more pulp as needed to make a sturdy, stand-up character. This activity can be integrated into a particular unit of study, such as the rainforest, dinosaurs, plants, etc.



Renuzit

Grade Level : 1

Part A

Subject:

Science 2.2, 2.7

Time:

one class period

Setting:

classroom

Materials:

clean trash collected
from children's homes,
3 boxes labeled "reuse,"
"reduce," and "recycle"

Skills:

classifying, predicting,
problem solving,
advertising

Vocabulary:

reduce
reuse
recycle
trash
solid waste

Source:

All "Trashed" Out,
Illinois Department of
Energy and Natural
Resources

Summary: The children will bring in "clean" trash. They will classify the trash into piles of reduce, reuse, and recycle. Allow time for the children to give an explanation as to why they chose to put the trash in the pile they did.

Objective: The children will be able to determine which items of trash can be reduced, reused, or recycled.

Background: The average North Carolina citizen throws away 5.6 pounds of garbage a day. Most of what is thrown away could be recycled.

Leading Question: What kinds of things do you throw away that could be reused or recycled? Could you stop using some things altogether?

Procedure:

1. Have children bring in some "clean" solid waste.
2. Collect the solid waste in a corner of the room.
3. When you get ready to work with this activity, seat the children around the pile of solid waste. Have each child choose some trash to classify. After all pieces have been classified and put in the appropriate box - reduce, reuse, recycle - set the stage for next activity by asking: How can we reduce, reuse, and recycle this trash?

What Now?

1. Discuss the use of natural resources in the production of the items collected in the above procedure. What impact has this production had on the environment?
2. Ask students to tell about their favorite animal. Has the production of the solid waste items been harmful to these animals? How?



Renuzit

Grade Level : 1

Part B**Subjects:**

Science 2.2
Social Studies 8.5
The Arts 2.3

Time:

one or two class periods

Setting:

classroom

Materials:

bottoms of brown paper grocery bags, one per child; tape, stapler, glue, or hot glue gun; yarn; hole punch; large-eyed needles
"Johnny" by Marci Ridlon
"Yesterday's Paper" by Mabel Watts

Skills:

problem solving, critical thinking, classifying

Vocabulary:

earth quilt

Source:

Watauga County
Recycling Curriculum
Committee

Summary: The children will create an earth quilt using trash and showing ways to reuse, reduce, or recycle that trash.

Objective: The children will realize that becoming responsible shoppers and consumers can greatly reduce the amount of trash in their lives and in the landfill.

Background: Many old landfills are near capacity and many have had to close because of leachate contaminating groundwater.

Leading Question: What are some ways we can get rid of this trash without taking it to the landfill?

Procedure:

1. Read the poems "Johnny" by Marci Ridlon and "Yesterday's Paper" by Mabel Watts to the children.
2. Discuss the different ways "junk" has been used in these poems.
3. Prepare a "quilt" using the bottoms of a paper grocery bag. Secure the pieces together with strong masking tape. Tape the back as well or yarn the pieces together. To do this, pre-punch the holes along the sides and ends of the bag. With help, the children can then sew them together.
4. During an art center time, each child will choose a piece of trash and figure out another use for it. They will attach the trash to their panel leaving space to draw or write the new uses of the trash. The child writes on the pane: reduce, reuse, or recycle. Use the clean solid-waste collected for Part A of this lesson.

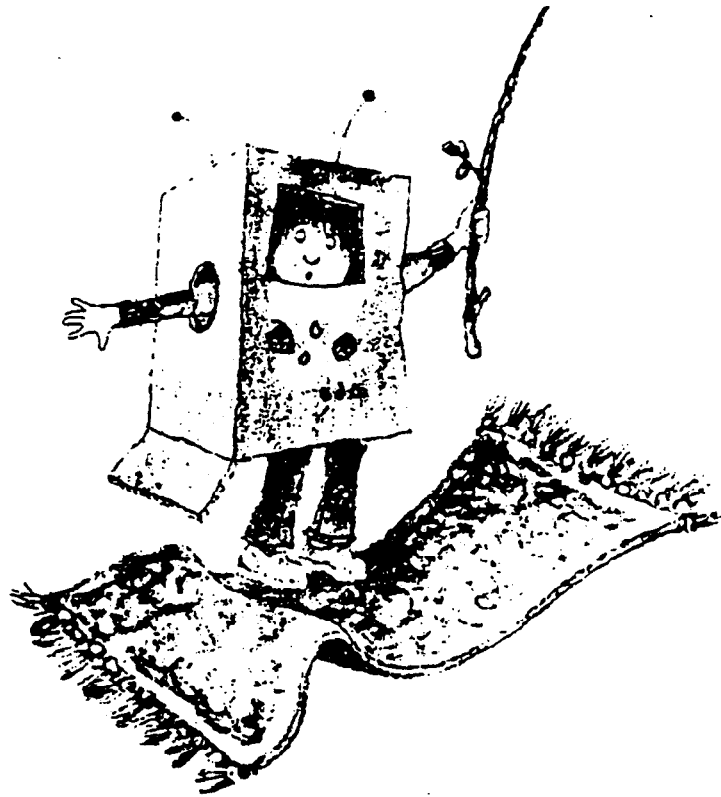
What Now?

1. Plan art activities around student's ideas for reuse of solid waste items and incorporate these projects for use in the curriculum throughout the year.
2. Have students discuss the reuse of materials with parents and grandparents, then report this to the class.

Renuzit - Part B (continued)

JOHNNY

To Johnny a box
 is a house
 or a car
 or a ship
 or a train
 or a horse.
 A stick
 is a sword
 or a spear
 or a cane,
 and a carpet
 is magic,
 of course.

Marci Ridlon

Yesterday's Paper

Yesterday's paper makes a hat,
 Or a boat,
 Or a plane,
 Or a playhouse mat.

Yesterday's paper makes things
 Like that-
 And a very fine tent
 For a sleeping cat.

Mabel Watts



Trash To Treasure

Grade Level : 1

Subjects:

Science 2.2

Communication Skills

2.1, 2.2

Math 4.8, 4.9

Time:

two class periods or
more if needed

Setting:

classroom

Materials:

clean garbage

Skills:

classifying, counting
money

Vocabulary:

reuse

recycle

Source:

Watauga County

Recycling Curriculum

Committee

Summary: The children will bring in some "clean" garbage. They will design new items from the "garbage" brought in and have a trash to treasure sale featuring their new designs.

Objective: The children will begin to think of ways to reduce, reuse, and recycle.

Background: Most of what we use gets thrown away as soon as we are finished with it. Most trash ends up in landfills where it takes up space. Many times these items could be reused to reduce the waste stream from our schools and communities.

Leading Question: What can we do with all this garbage?

Procedure:

1. Collect clean garbage for several days. Stack it in a corner of the classroom.
2. Observe the pile as it grows, referring to it as the landfill.
3. A few days before the junk sale, separate the garbage according to reusable and recyclable items.
4. Let each child pick an item and create a new use for the item or create a new item.
5. Make posters about pollution as a separate activity.

What Now?

1. Let each child share his/her information.
2. Begin advertising for the junk sale day.
3. Set up for the sale. Be sure to price each item or sell everything for one price for convenience.
4. Invite the grades in your area to the sale.
5. With the earned money, buy a tree or a birdhouse - or both!
6. Encourage the children to look for ways they can reduce and reuse at home.



Barter Day

Grade Level : 1

Subjects:

Social Studies 8.5, 9.3
Communication Skills
2.1, 2.2

Time:

one class period for
introduction and card
game, one afternoon for
Bartering Day

Setting:

classroom, library, gym,
or cafeteria for Barter-
ing Day

Materials:

cards for game - prepare
cards using the attached
sheet. Back the cards
with tagboard and
laminare

Skills:

classifying

Vocabulary:

trash or treasure
finite
natural resource
barter

Source:

Let's Put Waste in Place
Learning Kit, Kathy
Klein.

Summary: The children will host a "Barter Day" for the purpose of trading toys and other items with each other. To learn about bartering, they will play a card game similar to *Go Fish*.

Objective: The children will learn that through bartering, fewer things will end up in the landfill. Natural resources will be preserved, and money will be saved.

Background: In our "throwaway" society the first thing most of us think of when something is broken or no longer suits us, is get rid of it, toss it, throw it away. As a result, our natural resources are dwindling and landfills are becoming more expensive. Bartering has always been a viable option to money for "buying" things. Many cultures still use forms of bartering to get what they need and/or want.

Leading Question: How can we get something for almost nothing? What are some ways to protect our finite resources?

Procedure:

1. Open discussion with leading question. "How can we get something for nothing or almost nothing?"
2. Introduce the term "bartering." Explain how the early settlers didn't have much money but still needed basic things in order to live. They traded with their neighbors and other settlers to get the things they needed or wanted. These might include services as well as goods.
3. Divide the class into groups of five or six children each. Give each group a deck of bartering cards. One child acts as the dealer, dealing each child five cards. The remainder of the deck is placed in the center of the circle and becomes the "Go Trade" stack. The children take turns asking any other child in the group for a particular item. If the child has the item, he/she must give it up. If not, the child bartering must draw from the "Go Trade" deck. The first person to match all his/her items is the winner.
4. Discuss the kinds of things we might "barter" today. List some ways bartering could help the environment.

What Now?

1. Plan a Bartering Day with your class or with other classes at your school.
2. Brainstorm items that could be bartered.
3. Get parental permission for children to barter objects they bring in.
4. Classify items into the natural resource group from which they are made.
5. Hold the Bartering Day.
6. Take leftover items to a local thrift store or Santa's Toy Box.
7. Have students suggest items for barter. Fill in the blank spaces on bartering cards with student suggestions.

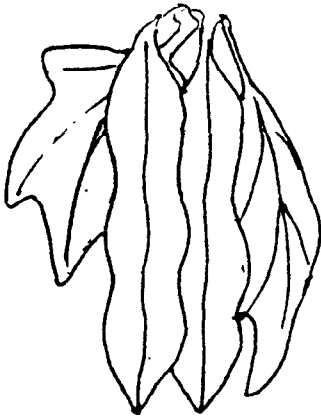
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Barter Day

BARTERING CARDS

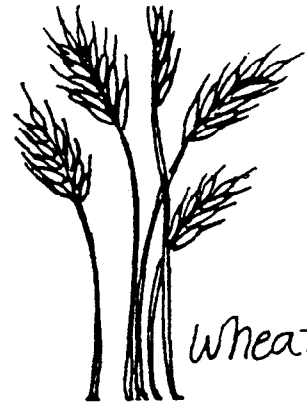
Divide the class into groups of four or five children. Each group has a deck of bartering cards. One child acts as the dealer and deals out five cards to each child. The remaining cards are stacked in the middle of the group and used as trading cards. The children take turns asking any other child in the group for a particular item. If the child has the item, he/she must give it up. If not, the bartering person must draw from the trade stack. The person with the most matches is the winner.

Note: Make two sets of cards for each deck.



Beans

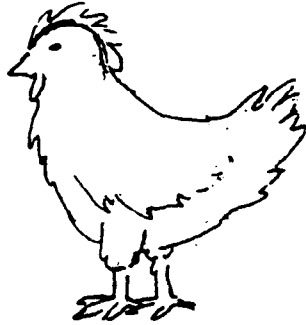
Doll



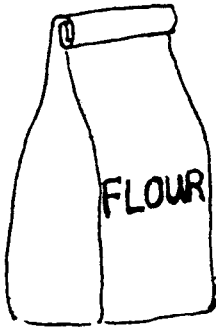
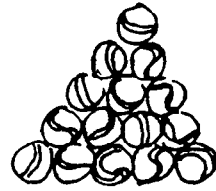
Wheat



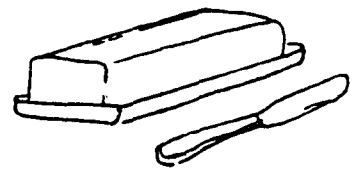
Paper



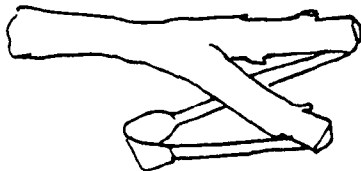
Marbles



Butter



Slingshot



Dress



shirt



Peas

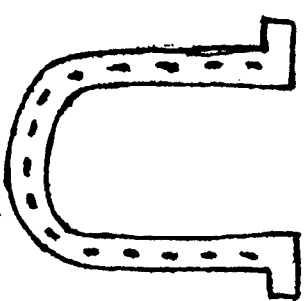
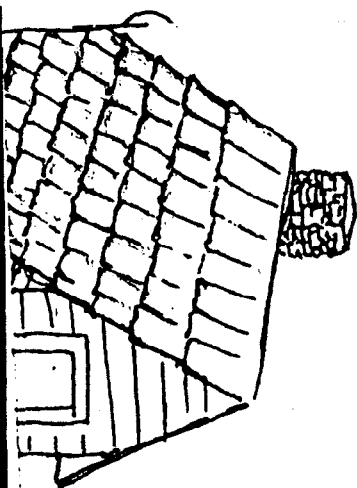


Honey

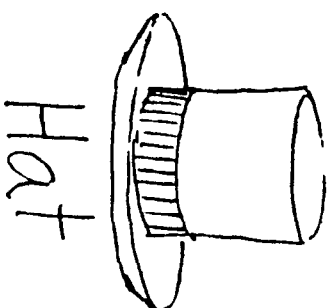


Apples

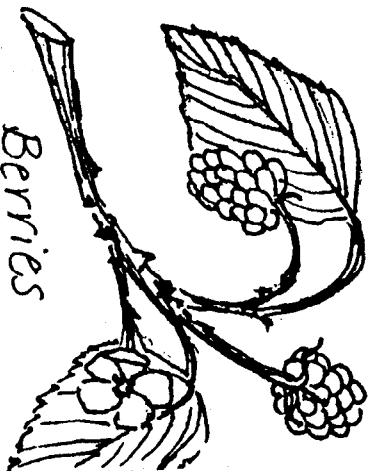
Shingles



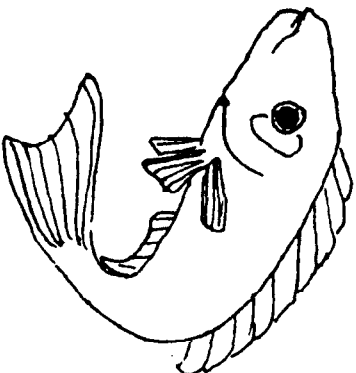
Horseshoes



Hat



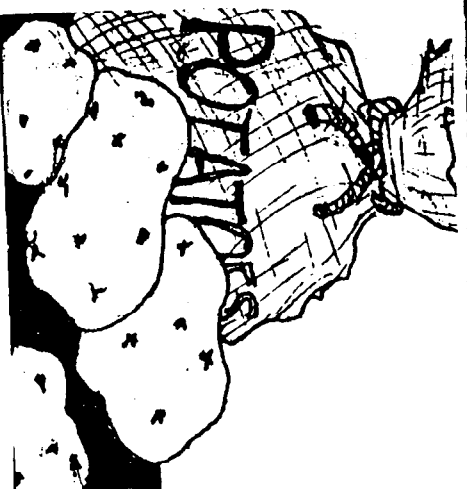
Berries



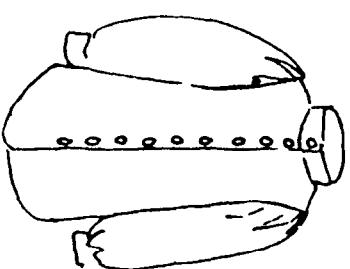
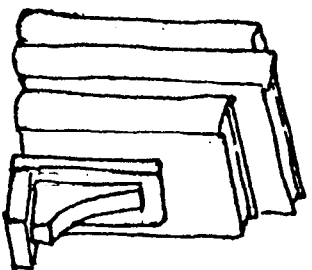
Fish



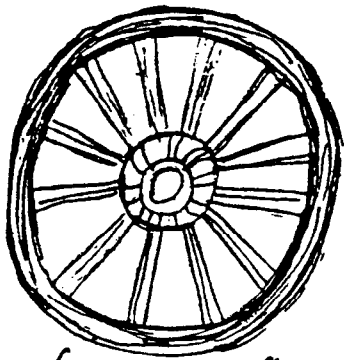
Pig



Books

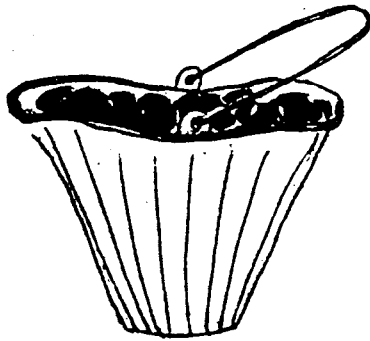


shirt

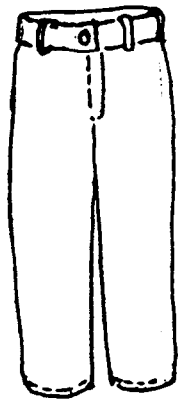


Wagon Wheel

Coal



Horse



Pants



NATURAL RESOURCES



Old Toys

Grade Level : 1

Subjects:

Communication Skills

2.3

Social Studies 8.5

Science 2.2, 4.2

Time:

one class period

outside class interview-
ing

one class follow-up

Setting:

classroom

Materials:pictures or examples of
antique toys, children's
favorite toys**Skills:**comparing, communi-
cating, describing,
observing, classifying**Vocabulary:**plastic
natural materials**Source:***AVR Teacher's Resource
Guide*
Association of Vermont
Recyclers.

Summary: Children will compare toys from the past with their toys now noticing the kinds of materials used to make the older toys as compared to the materials used to make the newer toys.

Objective: The children will learn that toys made from natural materials tend to last longer than those made from today's human-made or synthetic materials. Since natural materials such as wood and plant fibers are biodegradable, they are not as harmful to the environment.

Background: Through the years, toys have changed in the way that they are manufactured and in the materials. The plastic toys of today have a greater impact on our environment than the older toys made from natural materials because plastic toys are not as durable.

Leading Question: What is your favorite toy?

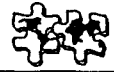
Procedure:

1. Have children bring in toys that are broken and might be thrown out. Ask: What is this toy made of? How long did it last? How could you make this toy last longer? Can these broken toys be fixed or made into new toys?
2. Discuss the way older toys were made and the materials they were made from. How are the older toys different from toys today?
3. How do toys from other cultures compare with our toys today?
4. Develop some interview questions the children can use to interview an older member of their family or community.
For example:
 1. What was your favorite toy when you were little?
 2. How many toys did you have?
 3. What were they made of?
 4. Who made them?
 5. What happened to the toy if it broke?
 6. How are toys today different from those you had?
 7. Do you still have any old toys?
 8. Can I bring one to school?
5. Have children draw some toys that would be "environmentally friendly" and write how or why each toy would help the environment.

What Now?

1. Visit a nursing home so the children can spend some time interviewing the elderly about toys.
2. Invite grandparents to come in for interview sessions.
3. Make simple cornhusk dolls.
4. Get on the Internet and interview students from around the world.
5. Check out the book *Good As New* by Barbara Douglass (available at most county libraries).

PACKAGING



Bag Lunch

Grade Level : 1

Subjects:

Science 2.2, 4.2
Social Studies 4.2, 8.5

Time:

one class period

Setting:

classroom

Materials:

a bag lunch for each child prepared by the cafeteria staff, a packaging journal for each child

Skills:

classifying

Vocabulary:

packaging
excessive

Sources:

Action for a Cleaner Environment
South Carolina Dept. of Health and Environmental Control

Watauga County
Recycling Curriculum
Committee

Summary: The children will classify the remains of a bag lunch to determine what leftovers can be recycled and what packaging can be reduced.

Objective: The children will learn that a lunch can be packed without using excess packaging, or with only reusable packaging to create a "trash-free" lunch.

Background: Excess packaging - packaging beyond safety and fresh standards - contributes unnecessarily to the solid waste stream.

Leading Question: What packaging is necessary?

Procedure:

1. The children will eat a lunch, in the classroom if possible, which has been prepared by the cafeteria staff.
2. After eating their lunch, have children separate the leftovers into packaging materials and food scraps.
3. Examine the packaging materials. Decide which ones are necessary for freshness and/or safety. Sort these materials according to necessary/not necessary packaging.
4. Discuss the unnecessary packaging and brainstorm some alternatives to this packaging.
5. Separate the food scraps, putting the appropriate ones into the wormbox for vermicomposting or put the scraps in a compost bin.
6. Discuss ways to encourage students to reduce leftover food by taking smaller portions.
7. Have each child make a list or draw a picture of things in his/her lunch that were packaged excessively.
8. Have each child make a new list or draw a picture of a better way to package these items.
9. Discuss ways to pack a lunch so it is "waste free."

What Now?

1. Go to the grocery store with your parents. Take a close look at the way things are packaged. Record your findings in a special journal for packaging.
2. Share your findings with the class.
3. Make a family decision to shop more responsibly.
4. Consider starting an "offer vs. serve" program at your school. (See appendix for more information.)

WASTE DISPOSAL



The Turtle's Mishap: A Puppet Show

Grade Level : 1

Subjects:

The Arts 1.1
Science 2.2, 2.7, 2.6
Social Studies 3.3, 8.5

Time:

2 sessions - 30 minutes

Setting:

classroom

Materials:

stick puppets for play characters, examples of marine debris such as: sandwich bags, milk jugs, dental floss, foam cups, plastic six-pack rings, aluminum cans

Skills:

inferring, predicting

Vocabulary:

marine debris
trash
entangled

Source:

Earth Child - Kathryn Sheehan and Mary Waidner; Council Oak Books; Tulsa, OK.

Summary: Marine debris has become such a problem that each fall, organized beach, lake, and river sweeps are held to clean up the litter in and around these bodies of water. The objective of these activities is to make life a little safer for the animals that live in these habitats and humans who use them for livelihood and recreation.

Objective: The children will learn the importance of keeping our waters free from litter because of the potential harm to marine and human life.

Background: Trash which hits the water is known as marine debris. Many marine animals die each year as a result of humans' garbage. Beach/river sweeps have become annual events in North Carolina.

Leading Question: What happens to the plastic litter we throw into the rivers and oceans?

Procedure:

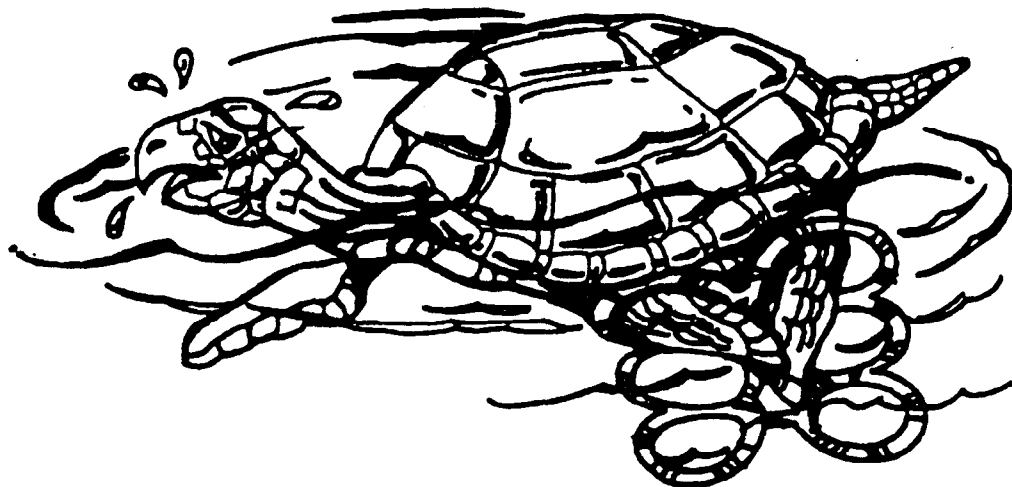
1. Have the students design stick puppets of a turtle, fish, sea bird, octopus, seal, and lobster from something that could be reused (brown bags, Styrofoam trays, paper plates, etc.).
2. Create an underwater scene for the stage.
3. Read the story "The Turtle's Mishap" or "A Penguin In Trouble."

What Now?

1. Show video - "The Death of a Whale." (Environmental Media, P.O. Box 1016, Chapel Hill, NC 27514. FAX: 919-942-8785. Price: \$9.95 plus S&H for NC teachers)
2. Participate in North Carolina's Big Sweep. For information, call (919) 828-6686.
3. Take a garbage/trash bag to the beach or lake or river and clean up.
4. "Help! I Can't Get It Off!" activity.

Ask: What is it like to become entangled in debris and unable to free yourself? Take a rubber band and loop it around your thumb, stretch it over the back of your hand (not the palm), then loop it around your little finger. Pretend that you are a sea creature that has become entangled in some marine debris. Without using your other hand, any other part of your body, or object, try to free yourself from the rubber band. You can move your hand in any fashion and use the fingers on the entangled hand.

The Turtle's Mishap: A Puppet Show



Cast of Characters: Sea Turtle, Fish, Cormorant (sea bird with dark feathers and webbed feet), Octopus, Seal, and Lobster.

As the curtain opens, a sea turtle is swimming around in circles. On one side of his body, make it obvious that his flippers are entangled in a plastic six-pack ring. They are so tangled, they cannot move. His other flippers, though, are free and are paddling back and forth. Because of this, he is only able to swim in a circle.

Turtle: Help! Please, help. My flippers are stuck. *(He continues to struggle and swim in circles. Then along swims a fish and he stops to watch the turtle.)*

Fish: What a strange thing to do. Why are you swimming in circles?

Turtle: Oh, please Mr. Fish, can you help me? My flippers are stuck and I can't get them free. *(Have the fish try to help the turtle by pulling on the plastic ring with his mouth.)*

Fish: Oh, you really are stuck! Tell me, how did this happen?

Turtle: I was swimming along and I just didn't see this plastic ring floating in the water. Before I knew what had happened, it was looped around my flipper. I tried to get it off, but then I got my back one stuck too.

Fish: I remember when something like this happened to me. I was poking my head in the rocks on the bottom looking for food, and all of a sudden it was

stuck in an old, rusty tin can. It took me quite a while before I was finally able to shake it off. *(Looking behind him and rushing off, he says:)* Woops, I've got to run or I'll be somebody's dinner. Good luck!

(A cormorant, a dark sea bird that swims underwater to catch fish, swims by and is perplexed by the circling turtle.)

Cormorant: You'll never get anywhere going around in circles like that.

Turtle: Maybe you can help. My flippers are stuck in this plastic ring. With your pointed beak, I'll bet you could get a good grip on it.

Cormorant: I'd be happy to try. *(So the cormorant tugs and pulls on the ring, but is unable to free it.)*

Cormorant: I'm sorry, I can't budge it! You know, this reminds me of something that happened just last week. I was paddling on the surface when all of a sudden my legs were tangled in some fishing line. As I was trying to get free, it must have caught on something and I was pulled underwater. I could have drowned, but I was lucky enough to get out of that tangled mess just in time. Speaking of that, I need to go catch a breath. I'm sorry I couldn't help. *(The cormorant swims off, leaving the turtle alone. He continues to struggle and swim in a circle. After a time, along swims an octopus.)*

Octopus: Is this a new dance or something?

Turtle: No, it's not a dance. I'm going around in circles because my flippers are stuck in this plastic ring. Say, you have a lot of strong legs. could you help me by pulling it off?

Octopus: Let me see what I can do.
(So the octopus tries many different ways to pull the ring off, but his efforts are unsuccessful.)

Octopus: This trash is really a problem. There have been many times I thought I was picking up a clam, only to discover it was the top of a jar or a hunk of glass.
(Along swims a seal.)

Seal: What's going on here? Are you two fighting?

Octopus: No, not at all. I'm trying to pull this plastic ring off Turtle's flippers. Would you care to help?

Seal: I'd be happy to.
(So the two of them tug at the ring, but it doesn't come free.)

Turtle: Ouch! It is so tight, my flippers are really beginning to hurt. Is there something else we can try?

Seal: Once I got caught in an old fishing net. I chewed and chewed until I cut it enough to break free. But this ring is much thicker, I don't think I could chew through it.

Octopus: That gives me an idea, I might know someone who could help.
(The octopus swims off to search for his friend and returns with a lobster.)

Octopus: See, here's the turtle I was telling you about. Do you think you could use your claws and cut through that plastic ring?

Lobster: I'm not sure, but let me try.
(The lobster cuts the plastic ring with his claws and the turtle is free.)

Turtle: Oh, thank you so much. I was beginning to think I would have to swim around in circles for the rest of my life.
(The cormorant and fish return.)

Fish: I just came back to see if you were all right.

Cormorant: I see you got free of the plastic ring. You were lucky this time!

Turtle: I know ... thanks to Lobster. I'll try to be more careful. But sometimes it's impossible to see the trash, especially those plastic rings or bags. Sometimes I wonder if humans think our ocean is just a big garbage can!

Seal: Everybody, listen. What's that noise?
(A faint rumbling sound can be heard and then it gets louder. All of the creatures watch as a motor boat passes overhead. As it goes by, a bunch of trash is thrown overboard and rains down on the animals.)

Turtle (gravely): I just wish they'd stop and think!
(All of the creatures nod in agreement and then the curtain closes)

From: Earth Child - Kathryn Sheehan and Mary Waidner.
Council Oak Books, Tulsa.

Just Do It

Next time you're at the lake, river or beach, take a trash bag and bring back all of your trash for proper disposal ... and recycling.

A Penguin in Trouble
Adapted by Lynn Coulthard

Cast of Characters: Penguin, Whale, Scua, Petrel, Seal, and scientist

A penguin is flipping around on the ice. His feet are entangled in a plastic six-pack ring.

Penguin: Help! Please, help. My feet are stuck. *(He continues to struggle and roll around on the ice. Then along swims a whale, and he stops to watch.)*

Whale: What a strange thing to do. Why are you rolling around on the ice?

Penguin: Oh, please Mr. Whale, can you help me? My feet are stuck and I can't get them free. *(The whale tries to help the penguin by pulling on the plastic ring with his teeth.)*

Whale: Oh, you really are stuck! How did this happen?

Penguin: I was swimming along and I just didn't see this plastic ring floating in the water. Before I knew what had happened, it was looped around one of my feet, then when I tried to get it loose, I got the other one stuck.

Whale: That happened to me once, too. Of course I didn't get my feet stuck, I got my head caught in an old fishing net. By breaching and leaping, I finally got it off. *(Looking behind him and swimming off, he says:)* Woops, I've got to go, I see my dinner over there. Good Luck!

(A Scua flies low overhead and seeing the penguin on the ice comes in for a landing.)

Scua: What are you doing? I thought penguins were swimmers not rollers.

Penguin: I am a swimmer but my feet are stuck in this plastic ring and I can't do anything but roll. Can you help with your beak?

Scua: I'll try. *(So the scua pulls and tugs with his beak but isn't able to free the penguin.)*

Scua: I'm sorry. I can't get it to budge. This reminds me of a time when I was fishing and thought I saw a fish swimming close to the surface of the water. Easy dinner for me, I thought. Well, it wasn't a fish at all, it was a plastic baggie. It got looped over my beak. Talk about a frightening thing. I almost suffocated before I got it off. Got to go, now. Bye, and I hope you're free soon. *(The Scua flies off.)*

- Petrel: Penguin, are you dancing or what?
- Penguin: I wish it was a new dance. Can't you see I'm trapped in this plastic ring? Maybe you could help.
- Petrel: Let me see what I can do. *(The Petrel tries, but he isn't able to help.)*
- Petrel: This trash is really a problem. I can't believe the humans are actually coming all this way to destroy our land and sea. *(Along comes a seal.)*
- Seal: What's going on here. Stop that fighting!
- Petrel: We're not fighting. Penguin is trapped, and I'm trying to help him. Would you like to help, too?
- Seal: I'll do my best. *(Seal chews on the ring, but isn't able to chew through it.)*
- Penguin: Ouch! You're hurting me! It's getting tighter.
- Seal: I know just how you feel, Penguin. I got one of these things hung on my nose once. A friend of mine was able to chew through it, but this one is much thicker.
- Petrel: That gives me an idea. I might be able to get you some help if I can just find him.
- Others Together: Find who? *(But the Petrel flies off without answering.)*

The Petrel soon returns with a visiting scientist.

- Petrel: This is my friend. He's been feeding me scraps from his lunch. I think he can help you.
- Scientist: This is awful! When will humans learn? I can cut that thing off for you. *(The scientist gently cuts the ring and frees the penguin.)*
- Penguin: Oh, thank you so much. I was beginning to think I would have to roll around the rest of my life.

The Whale and Scua return.

- Whale: So you're free at last.
- Scua: Who helped you? This human? I'm glad some humans care.
- Penguin: I was lucky this time. I'm going to have to be more careful when I take a dive, that's for sure. As long as humans think this sea is nothing but a big garbage can, no one is safe.
- Seal: Everybody listen. What's that noise? *(A faint rumbling sound can be heard)*

1.24

and then it gets louder. All of the creatures watch as a helicopter flies over head. As it goes over, a bunch of trash is tossed out of the cockpit and rains down on the ice.)

Penguin: I just wish they'd stop and think!

Scientist: Me, too.

Adapted from The Turtle's Mishap

WASTE DISPOSAL



NoWhere Is Away

Grade Level : 1

Subjects:

Communication Skills
4.3
Science 2.1, 2.4, 2.7
Social Studies 4.2
The Arts 4.10

Time:

one forty minute class
period or two twenty
minute sessions

Setting:

classroom

Materials:

words to the song "My
Garbage Floats Over the
Ocean," poems: "Dirty
Water Blues" and
"Everywhere is Some-
where"
litter material: fruit
peelings, glass, paper,
etc.

Skills:

conserving, observing,
preserving, communi-
cating, predicting

Vocabulary:

litter
garbage
ocean

Source:

*Action For a Cleaner
Tomorrow*
South Carolina Depart-
ment of Health and
Environmental Control

Summary: Children will create a lake full of litter, learn a song and some poems, and discuss what happens to our garbage.

Objective: Students will understand that through poetry and song there is no place that will make garbage disappear.

Background: Many people think that because the ocean is so vast, dumping garbage into it will not hurt anything or anyone. As a result of this all-too-common practice, our oceans are becoming dangerously polluted, affecting not only the marine life, but humans who depend on that marine life for their livelihood or recreation.

Leading Question: What happens to the things we throw away?

Procedure:

1. Review the vocabulary with the children using magazine pictures of garbage and litter.
2. Recite the poems "Dirty Water Blues" and "Everywhere is Somewhere." Ask the children what they have seen in our rivers and creeks. Make a chart of the things they mention. Review the sequence of trash when it is flushed down the drain using the poem "Everywhere is Somewhere."
3. Sing "My Garbage Floats Over the Ocean" to the tune of "My Bonnie Lies Over the Ocean."
4. Create some litter in a glass-jar lake. Observe the "lake" for two weeks. Discuss the condition of the lake - What happened to the water? What happened to the litter? Would you want to swim in water like that? What might happen to the plants and animals that live there? Is the ocean big enough to absorb all this garbage?
5. Discuss the issue of garbage barges looking for a place to go. Discuss the problem of medical needles washing up on shore.

What Now?

1. Participate in North Carolina's Big Sweep of its waterways. For information phone (919) 828-6686.
2. Collect money or raise money toward the purchase of litter receptacles to be placed at popular fishing and recreation spots.
3. Investigate the possibility of starting a stencil program to label storm drains. For example, "This drain empties into _____ Lake or River."

My Garbage Floats Over The Ocean

(Tune: My Bonnie Lies Over The Ocean)

My Garbage Floats over the ocean.

My garbage floats over the sea.

My garbage floats over the ocean.

My garbage comes back to me.

Come back, come back, come back my garbage to me...

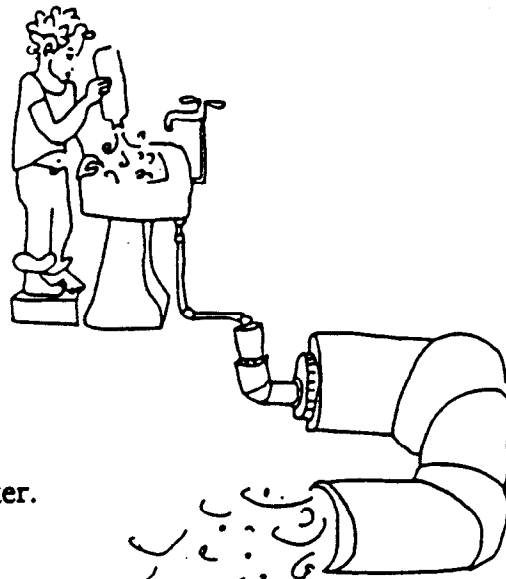
"NoWhere Is Away"

Name: _____

Date: _____

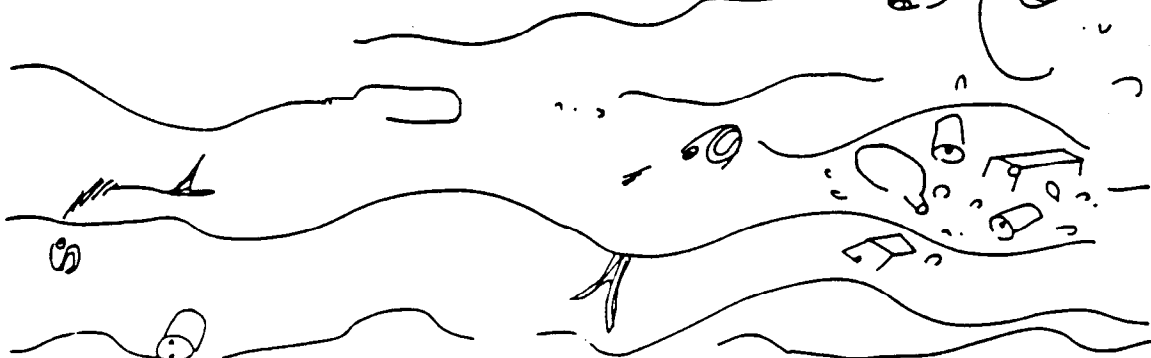
Everywhere Is Somewhere

When you rinse garbage down the drain of a sink,
or flush trash down the toilet,
it does not go away;
it goes somewhere.
Sewage and waste go into big pipes.
The pipes go into the river;
The river runs into a bigger river.
The big river flows to the sea.



Far, far away
in the middle of the ocean,
garbage and trash float on the sea water.
Pollution does not float away;
it floats somewhere.
And it will stay there,
floating and sinking under the sun,
for years and years.

When you rinse something down the drain,
it does not go away --
it goes somewhere.
In the water, everywhere is somewhere.



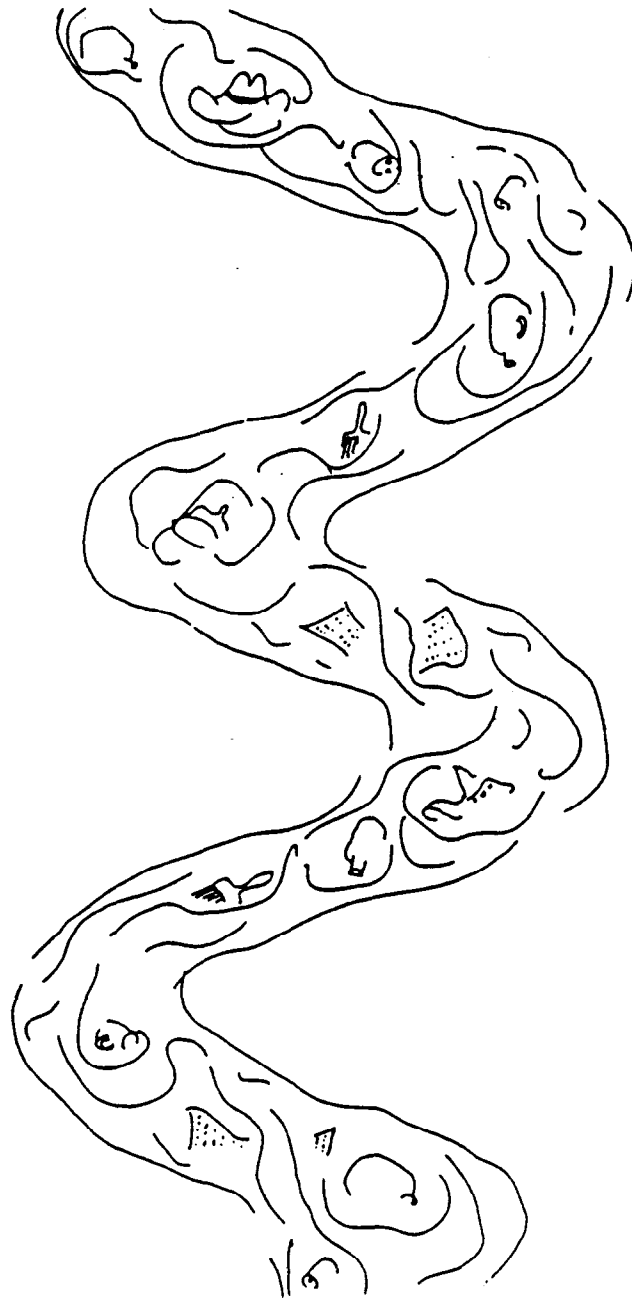
"No Where Is Away"

Name:

Date:

The Dirty Water Blues

Pure water gurgles
and splashes along
until pollution
flows into the song:
oil
tar,
paint,
dye,
mud and muck
come splashing by.
Cans,
jars,
bottles,
cars.
Old shoes, old news--
that's the dirty water blues.
Sweet, fresh water
rolls away from this song,
while dirt and pollution
keep flowing along
and along,
and along...



WASTE DISPOSAL



It's Hot In Here!

Grade Level : 1

Subjects:

Science 2.2
Social Studies 8.5

Time:

thirty to forty minutes

Setting:

classroom

Materials:

clean garbage that can be recycled or reused,
colored paper strips
labeled a specific type of garbage, string, signs
labeled *Reduce*, *Reuse*,
and *Recycle*

Skills:

observing, predicting,
inferring, classifying

Vocabulary:

biodegradable

Source:

Watauga County
Recycling Curriculum
Committee

Summary: Students will represent different kinds of garbage, making a human landfill.

Objective: Through this activity, students will become aware of the many things we needlessly throw away.

Background: The average North Carolina citizen disposes of 5.6 pounds of garbage per day. Landfills are necessary and expensive to build. Some counties may use their landfills as a "host" site and, as a result, the landfill becomes a source of revenue for the county. Landfills are not designed to promote decomposition. For your own information, investigate the issues surrounding the landfill in your county.

Leading Question: What else can this garbage be?

Procedure:

1. Give each child a colored paper strip indicating a particular item of trash. Actual items such as plastic containers, small glass jars, etc. can be used.
2. As the students get their strip, they take their place in the landfill. Mark off with string a designated area in the room for the landfill.
3. When the landfill is full, let the children discuss how they are feeling (hot, cramped, etc.).
4. Ask if they think they can biodegrade. What do they need to biodegrade? (Air, water, microbes, and food equal to nitrogen and carbon.)
5. Let each child suggest an alternative to being tossed in the landfill.
6. As each suggestion is given, the child can move to a new site - Reduce, Reuse, or Recycle. Discuss the items left in the landfill. Can they biodegrade now? If not, why? The items that can be reduced can go to a special spot and disappear.

What Now?

1. Start a mini-recycling center in the classroom or a swap-shop to reuse items.
2. Encourage children to start a recycling program in their own homes.
3. Sing - "Garbage" by Tom Chapin on Chapin's cassette, "*Mother Earth*." (Available at most record shops.)