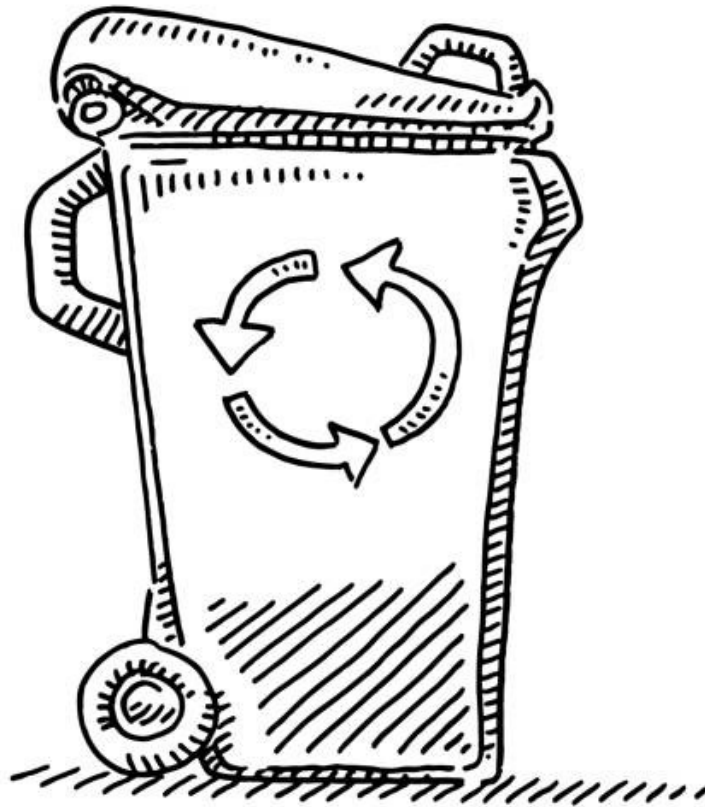


4-H

Recycling

Grades 6-8



4-H Recycling Project

No State Fair Exhibit

Each year, in all levels, the 4-H'er must complete a different recycled article or poster and at least 2 activities for their notebook from the county manual.

Exhibit will be judged by the following guidelines:

Exhibit (75%)

- **Originality of 4-H Exhibit**
- **Choice of Materials (subject of poster)**
- **Workmanship**
- **Usefulness (include in poster)**
- **Creativity of Project/Poster**
- **Information Card Attached**

Notebook (25%)

- **This Manual** (three hole punch)
- **This year and all previous year's work**
- **2 Activities from the manual** in your notebook. You are encouraged to add personal and additional supporting materials, such as photographs, news articles, etc. for each activity.
- **A completed record sheet** for each year in project
- **A description of your recycled project.** You are encouraged to add personal and additional supporting materials, such as photographs, news articles, etc.

ACTIVITIES

1. **HOME RECYCLING CENTER**
2. **HANDMADE PAPER**
3. **BOTTLE BUTTERFLIES**
4. **PACKAGING PRE-CYCLING**
5. **CLOTHING**
6. **INDIANA E-WASTE**

WHY RECYCLE?

Recycling saves landfill space and energy, thus reducing acid rain, global warming and air pollution.

- Recycling aluminum uses 95 percent less energy than producing aluminum products from raw materials.
- Recycling paper uses 60 percent less energy than manufacturing paper from virgin timber.
- Recycling a glass jar saves enough energy to light a 100 watt light bulb for four hours

Recycling conserves valuable natural resources

- 75,000 trees are used for the Sunday edition of the New York Times each week, yet only 30 percent of newspapers are recycled in the United States.
- Recycling metals minimizes the need for mining new minerals and decreases damage to the wilderness.

HOW TO RECYCLE

- Separate cans, bottles, and newspapers
 Glass: Remove lids from bottles and jars and rinse out well. (Some recycling centers ask that you separate glass by color)
 Cans: Remove labels and rinse well. (Most recycling centers ask that you separate aluminum from other metals)
 Newspaper: Tie newspapers into bundles or put them in a paper bag.

- Contact your local or state recycling division to find out if your community has a curbside recycling program. If so, put out your recyclables the night before the scheduled pickup. If no curbside pickup exists, take your cans, bottles, and papers to the nearest drop off site.

Purchase and consume according to the 4 R's:

**Reduce, Reuse, Reject and Recycle
Learn the 4 R's**

<p>REDUCE – the amount of waste we produce.</p> <ul style="list-style-type: none"> ▪ Buy only what you need ▪ Look for the recycle symbol, or the works made from recycled material ▪ Choose boxes with gray interior (recycled paperboard) ▪ Buy economy size or bulk when possible. Saves money and reduces packaging ▪ Avoid disposable products ▪ Bring your own bags when you go shopping 	<p>REUSE – as much as possible.</p> <ul style="list-style-type: none"> ▪ Use products that are made to be used many times such as cloth diapers, cloth napkins, towels, rags, sponges, dishes and silverware, rechargeable batteries ▪ Use the blank back sides of paper to take notes and do scratch work ▪ Mend clothes and repair broken appliances ▪ Look into purchasing used goods at second hand stores and junk yards to eliminate unnecessary production
<p>REJECT – over packaging and products hazardous to the environment.</p> <ul style="list-style-type: none"> ▪ Over-packaged goods ▪ Non-recyclable packaging ▪ Non-recyclable containers ▪ Aerosol containers ▪ Disposable products 	<p>RECYCLE- the recyclables</p> <ul style="list-style-type: none"> ▪ Recycling begins in the store where we choose products packaged in recycled and/or recyclable materials, such as: Glass, Paperboard, Aluminum, Steel, Some plastics ▪ Learn where to take your recyclables. Glass, paper and aluminum are the 3 most easily recycled types of packaging. If recycling centers in your area accept plastic soda bottles (PET) and steel cans, also include them in your recyclable packing list.

RECYCLING

Recycling is frequently in the news. We are told that it is the responsible thing to do.

Recycling conserves natural resources, saves energy and reduces the amount of trash going to landfills. Conserving our natural resources doesn't mean not using them, it means using them wisely and sparingly. Recycling involves collecting reusable materials that have been thrown away, processing and distributing them for reuse. In most cases it takes less energy to prepare materials for reuse than to produce new items. Natural resources, such as trees, water, metal ores and oil are conserved through recycling. Materials from these natural resources are recycled and used again. Almost everything can be recycled in some way. Major groupings include paper, aluminum, glass, organic materials and plastics.

To make it easier on recycling centers, they appreciate separating recyclables before arrival. This is easily done in bags or boxes. The following is information for Hamilton County .

Recycling Drop Off Area

The Hamilton County Household Hazardous Waste Center collects all types of household consumer products that are generally considered hazardous or environmentally unsafe to dispose of improperly. Material collected at the center will be recycled, disposed of in a safe manner or be available for reuse in the free swap shop. Other services at the center include recycling containers for glass, plastic, metal, cardboard, and grass clippings. Hamilton County residents only non-business must have driver's license or property tax statement that shows you live in Hamilton County

The Hamilton County Hazardous Waste Center, 1717 Pleasant St., Noblesville, IN 46060

What are the hours of the Hamilton County Hazardous Waste Center?

What days are they closed?

Directions:

The Household Hazardous Waste Center is located immediately west of the Hamilton County Extension and 4H Fair Grounds on Pleasant Street.

Materials Accepted

Mixed containers: Glass bottles & Jars, aluminum & steel cans, and Plastics 1-7
Mixed Paper: Newspaper, magazines, shopping catalogs, office and school paper, mail
Cardboard: clean and flattened. (No cardboard coated with wax, tin or plastic)

Unacceptable Materials

Styrofoam and Packing Peanuts
Trash or garbage

What Is Accepted

Household Paint Products

- o Latex paint
- o Oil-based paints, stains and varnishes
- o Mineral spirits
- o Paint thinner/stripper/turpentine

Automotive Products

- o Used motor oil and filters (maximum 20 gallon)
- o Antifreeze
- o Batteries (car, motorcycle, lawn mower)
- o Brake fluid/transmission fluid
- o Waxes/cleaners/polishes
- o Tires (auto & light truck limit 5)

Household Aerosols Cans(empty or full)

- o Spray paint, primers, paint strippers
- o Carburetor cleaners
- o Wasp spray/bug spray
- o Water repellents

Fuels

- o Kerosene/lamp oil
- o Gasoline
- o Lighter fluid

Household Pesticides/Herbicides

- o Garden Products
- o Fertilizers
- o weed killers
- o Fungicides
- o Pesticides

Household Cleaners

- o soaps and shampoos
- o Bathroom/kitchen cleaners
- o Oven cleaners
- o Toilet/drain cleaners

Acids and Bases

- o Muriatic acid
- o Battery acid
- o TSP

Household Electronics - all kinds

- o Monitors
- o Computers/laptops
- o Keyboards/mice
- o Printers/fax machine
- o Televisions
- o Microwave
- o DVD/VCR Players
- o Phones/cell phones

Mercury

- o Thermometers
- o Thermostats
- o Liquid

Household Batteries

- o Alkaline batteries
- o Rechargeable
- o Lithium/Ni-Cd/Ni-Mh
- o Button cell (watches, calculators, hearing aids)

Swimming Pool Chemicals

- o Chlorine/bromine
- o Shock
- o pH reducer
- o pH increaser

Beauty Aids

- o Hair spray
- o Perfume/cologne
- o Nail polish/remover

Fluorescent Lamps(regular, incandescent light bulbs are not locally recyclable)

- o Compacts
- o 2-8 ft. tubes

Household Adhesives

- o Caulks
- o Glues

Freon Appliances

o Lye

Propane Cylinders

- o one-pound cylinders
- o 20-pound tanks (for gas grills)

Fire Extinguishers

- o Household fire extinguishers

Household Photo Chemicals

- o Developer
- o Fixer
- o Stop Bath

o Refrigerators/freezers (must be cleaned out)

- o Dehumidifiers
- o Window air conditioners

Miscellaneous

- o Cooking oil
- o Crack filler
- o Driveway sealer
- o Inkjet printer cartridges
- o Roof coating

WHAT'S NOT ACCEPTED AT THE H.H.W. CENTER

Hamilton County Household Hazardous Waste Center Cannot Accept Waste from Business, Commercial, Industrial, or Agricultural Sources.

Unacceptable Items

- Ammunition
- Explosives
- Any household hazardous waste in commercial or work vehicles
- Any hazardous waste from out of County residents
- Any household hazardous waste over 20 gallons or 100 pounds per household
- Non-propane Cylinders
- Old Medications
- Radioactive waste (including smoke detectors)
- Unidentifiable materials

ACTIVITY 1 – HOME RECYCLING CENTER

Plan your own home recycling center

Use the 1/2" = 1 foot grid and symbols to plan a recycling center in your home.

Items Needed:

Pencil, Glue, Scissors, Measuring stick, tape

Step 1: Make a list of the things you are going to recycle and write them here	
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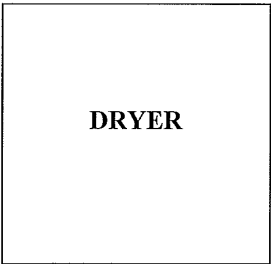
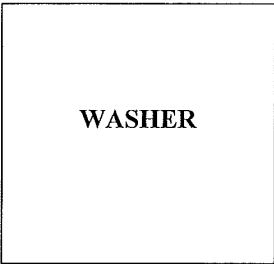
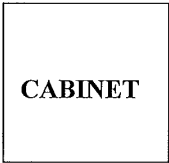
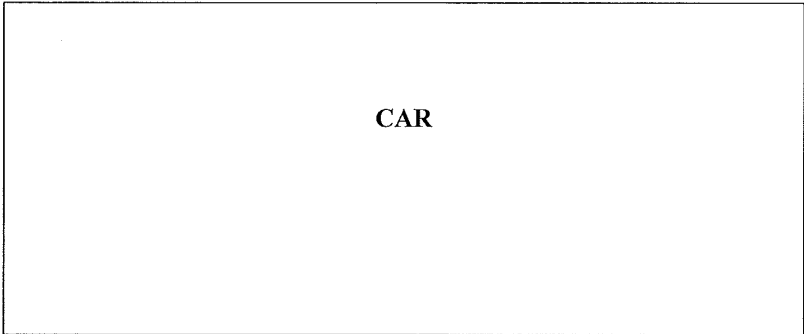
Step 2 – Think fo a room at home where you could get permission to set up a recycling center (garage, basement, mudroom utility room, etc.). Remember, it should be close to the place where cans, bottles and newspapers are used in the first place.

Use the grid on the following page to make a floor plan for the “recycling room”. You may need help from an adult to measure the room. Your “recycling room” may be smaller or larger than a 12 ft x 12 ft room. Each 1/2” on the paper is equal to one foot on the real floor. The family car or washing machine may be located in your “recycling room”. You can cut out the “drafting object” and arrange them on the floor plan until everything fits. Remember to include a container for each of things you listed in Step 1. Then you can tape or paste the objects onto the graph. (You could make an even nicer model of the room by pasting the grid to the bottom of a shoebox and using blocks and toys to show the room where your recycling center will be set up).

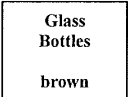
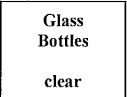
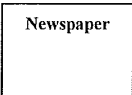
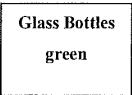
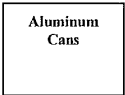
Step 3 – Show your plans at home. Do your parents or brothers and sisters have any ideas to improve your plans? _____ Can you make your plans work for real? _____. What changes in your original plans did you have to make to get your “recycling center” started? Explain below.

DRAFTING OBJECTS (Scale: 1/2 inch = 1 foot)

Here are a few objects to cut out and use in your floor plan. Create other objects to fit the particular room that you are using. Remember to keep to scale. For example, if your family car measures 10 feet by 5 feet, it would measure 5 inches by 2 1/2 inches on the floor plan; 10 x 1/2 inch = 5 inches. 5 x 1/2 inch = 2 1/2 inches. After playing with the floor plan, paste the objects onto the graph. Now put it into reality!



Recycling Containers:



PAPER

Newsprint

Old newspapers account for about 8 percent of America's total waste stream. An average household produces about 360 pounds of newsprint per year almost 1 pound per day!

Old newspapers can be converted into new newsprint through dinking processes. Using chemicals and detergents, the ink is separated from newspaper fibers. A slushier turns other old paper into pulp, and the detergents dissolve the ink and carry it away. Next, screens remove contaminants like bits of tape and dirt. The remaining pulp is bleached and mixed with additional pulp from wood chips to strengthen it.

The watery mixture is poured onto a continuously moving belt screen that allows excess moisture to drain through. By the time the mixture reaches the end of the belt, it's solid enough to be lifted off and fed through steam heated rollers. This removes the water and flattens the paper into a continuous sheet. The paper machine produces finished newsprint at a rate of 3,000 feet per hour.

Other materials can also be made from old newspapers, including cellulose insulation, boxboard, cat litter, roofing felts, toweling, packing material, egg cartons, animal bedding, and mulch.

Old newspapers are easy to package for recycling. Separate any glossy, shiny paper, such as ad inserts and magazine sections. Keep the newspapers clean and dry, bundled in stacks between 8 to 12 inches thick. Tie them securely with twine or place them in a brown paper grocery bags. A 12 in. bundle weighs about 25 pounds; a loosely packed grocery bag weighs about 18 pounds.

Old Corrugated Containers

Old corrugated containers (OCC) include paperboard or cardboard, and are primarily generated by commercial and retail establishments. Many grocers, department stores, appliance outlets, wholesalers and manufacturers recycle OCC due to its high volume; ease of separation and substantial waste reduction benefits.

Paperboard, often referred to as cardboard, is made from all waste paper grades, but primarily from OCC and old newspapers. Familiar paperboard products are corrugated boxes, tubes, cereal boxes, writing tablet backings and construction products.

Break down and flatten all boxes, then tie into secure bundles for pick up or delivery. Don't include any corrugated materials that have a wax coating.

Office Papers

A third grade of paper encompasses the fine grades of paper used in offices including white ledger and computer paper. These papers have vast potential for reuse, including newsprint, toweling, writing paper and tissue.

The EPA estimates that 90 percent of all office waste by weight is waste paper. However, most of the high grade paper that is recycled does not come from offices. It comes from cuttings and trimmings collected by converting/printing plants.

Bundle together, the following paper grades bring premium prices:

White writing, white copier, and white computer paper

The following items are considered contaminants in this category and should not be mixed with other office paper:

Envelopes, carbon paper or other sensitized paper, blueprint paper, film, photographs, cellophane tape, glue, metal stickers, spiral binders, fasteners (staples are fine), newspapers, cardboard, magazines, books, any colored paper, file folders, lunch bags, wax paper, smoking materials, paper cups.

Mixed Paper

Mixed paper is the lowest grade of waste paper, consisting of unsorted household and commercial paper, magazines and various packaging wastes. They can include paper of different color stocks.

Magazines are not always accepted by some recycling centers. They contain contaminants such as glues that must be trimmed and discarded before processing. Relatively few recycling centers have the capabilities to effectively trim magazines.

Some types of paper cannot be bundled with mixed paper. These include such non-recyclables as carbon paper, stickers and other glued paper, such as Post-It notes. Brown paper bags and Kraft paper should be bundled with OCC.

Waxed containers such as produce boxes and milk cartons cannot be recycled, and should not be included with other mixed paper.

ACTIVITY 2 – OLD NEWS NEW PAPER

Materials

Newspaper

Warm water in pot or bowl

Beater, mixer or blender

Screen

Powdered or liquid laundry starch (optional)

Food coloring (optional)

Aluminum or Tin can (optional)

Apple, potato or orange peeler, carrot tops, flowers, glitter (optional)

1. Tear the newspaper into small pieces and place it in the warm water. Let these soak for 10 minutes to half an hour.
2. If you are using starch (which makes the paper strong), add 2 tablespoons of it to the bowl or pot.
3. Scoop the paper into a blender half full of warm water. If you are using a mixer or blender, use 2 cups of water to 2 cups of paper. The paper at this state is called slurry. It is more water than paper!
4. Blend or mix at moderate speed until you no longer see individual pieces of paper.
5. Set screen over a bucket of basin (do not do this over a sink because it could clog the drain). Pour the slurry over the screen
6. If you so desire, you can help squeeze out the water by rolling over the paper with aluminum or tin can.
7. Turn the screen face down onto newspaper. Gently peel off the screen. There's your own recycled paper! Don't try to lift it until it's dry (several hours).
8. You can experiment by using different types of paper; adding food coloring (at step four); or by adding little bits of vegetable matter, glitter, or ribbon into step 3.
9. After your paper dries you can write on it, cut it up or do whatever you want with it. Try to make some very thin paper (facial tissue torn up) or some very thick and heavy paper (cardboard).
10. Place 4 samples of your paper that you made in your notebook. Tell what you did to make them each different.

PLASTICS

Think of all the plastic products you use each day. Plastic is everywhere and in many different forms and types. There are at least 49 different types of plastic that we use in this country. Recycling technology is slowly catching up with this number, but currently only a few types of plastic can be recycled easily. Since the majority of plastics will not decompose naturally (current research has produced some corn and soy-based plastics that are biodegradable), it is very important that we learn to recycle the plastics we use.

One major problem with recycling plastics is the correct separation of different types. To help meet this need, the Society of Plastics Industry came up with a numbering system. The numbers range from 1 to 7 and are enclosed in a triangle by three arrows. The symbol can usually be found embossed on the bottom of a plastic container. The lower the number, the more recyclable the material. The most recyclable are 1's and 2's. The type of plastic found in two liter bottles is a 1 and plastic milk jugs are 2's. The least recyclable of all are the 7's which are usually multi-layered materials like those found in squeezable ketchup bottles. An Indiana law went into effect in January 1990 requiring this numbering system on all plastics in the state.

Recycling plastic is very important, but there are other things we can do to reduce the amount of plastic going into our landfills. Even plastic that is recycled can only be reused and recycled very few times, especially if it is a more difficult type to recycle. Then it becomes non-recyclable, and probably goes into a landfill. Future technology may change this. To help decrease this, you should choose lower numbered plastic products whenever possible. An even better choice would be to choose glass packaging (for food items, etc.). Glass containers can be recycled over and over again. If you do not want to give up the convenience of your squeeze bottles or other plastic items, keep the ones you have and refill them. You will be able to purchase your products in glass containers and still have the convenience of plastic.

ACTIVITY 3 – BOTTLE BUTTERFLIES

Learn how to make beautiful, realistic butterflies from old plastic bottles. The curve of the bottle will make the wings of the butterfly look realistic and by using acrylic paint, you can make any kind of butterfly you want; real or whimsical!

You will need:

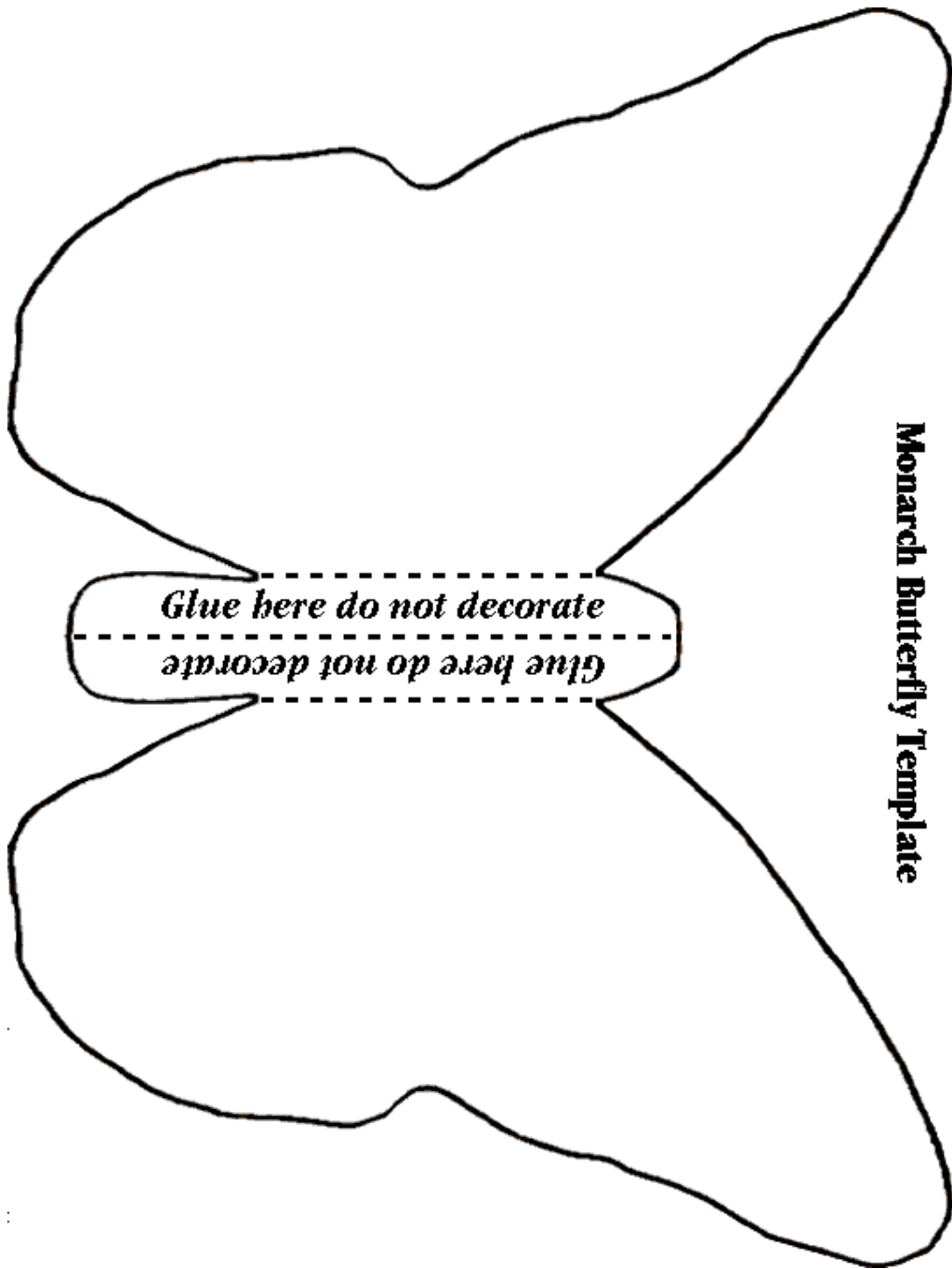
- 2-liter pop bottle (1 for each butterfly)
- scissors
- thumbtacks
- piece of wood or cork board
- a simple butterfly outline
- glitter glue
- stained glass paint for clear bottles
- acrylic for colored bottles
- suction cups
- hot glue and glue gun or superglue
- thin craft wire (for antenna- optional)



Steps:

1. Rinse the bottle and let it dry completely before starting this project.
2. Remove any labels.
3. Cut the top and bottom off the bottle as well as cutting through where the glue of the label was so you are left with a strip of plastic that rolls up. The easiest way to do this is to start by making a puncture in the bottle near the top. If you can't puncture the bottle with the scissors you can use a knife. Try not to crunch up the bottle too much you will want the middle piece to be as smooth as possible. May need parents to help with this part.
4. Pin the strip of plastic bottle and pattern to the wood or cork board with the thumbtacks. When you pin it make sure that it is pinned such that the bottle would curve toward the wood if unpinned. Make sure you pin it securely so that when you begin to outline the patten that everything will stay in place so your outline won't get messed up.
5. Outline the butterfly with glitter glue. Let glue dry really well.
6. Using the stained glass paint or acrylic paints you can paint your butterfly. You can use any color(s) you want. If your butterfly has sections you can put a different color of paint in each section or if you left it one section you can have fun creating "tie-dye" effects with your colors using toothpicks. Be creative, use as many or as few colors as you want.
7. Now it's time to cut the excess plastic away so all that is left is your butterfly. Cut as close to the glitter glue as you can and try to cut smoothly. Try to round or trim any sharp corners so you don't scratch yourself later.
8. Bend the wings by folding them close to the body so that they curve up and then back. You can position them anyway you like. Feel free to experiment until you find an arrangement that you like, but you may not want to fold/bend very hard until you know exactly where you want that crease to be.
9. Attach the suction cup to the back of the butterfly using either the hot glue or superglue. You will want to position the suction cup so that it is near the top or "head" of your butterfly. If you want instead of using a suction cup you could also try attaching a magnet instead or string several together for a mobile.
10. Show picture of butterfly in your notebook.





Monarch Butterfly Template

EASIER TO RECYCLE



PETE

Soft drink bottles
Oven safe trays



HDPE

Milk jugs
Heavy duty trash bags



V

Credit cards
Garden hoses
Food wrap
Cooking oil bottles



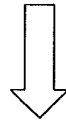
LDPE

Diaper backing
Milk jug lids



PP

Straws
Dairy tubs



PS

Fast food packaging
Plastic silverware
Compact disc (CD) cases



Layered multi-material: Squeezable
containers



HARDER TO RECYCLE

GLASS

COLLECTION

Glass is collected and taken to a processor.

SORTED

Glass is sorted by color, cleaned and broken.

CRUSHED

Glass is crushed into tiny pieces called cullet.

MIXED

Cullet is mixed with silica sand, soda ash and limestone.

MELTED

The mixture is melted to a molten state in a furnace.

MOULDED

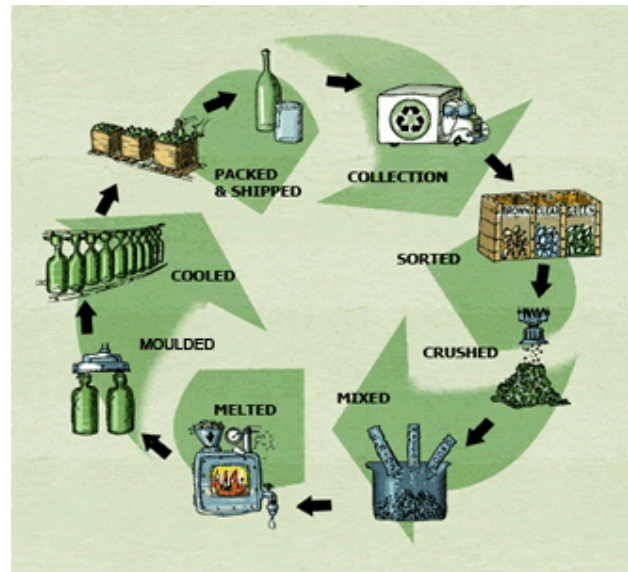
The molten glass is poured into molds.

COOLED

The glass is cooled slowly to increase its strength.

PACKED & SHIPPED

New glass containers are filled and returned to the shelf for resale.



Glass recycling “closes the loop,” turning recycled glass containers into new bottles and jars. Glass goes through a series of steps before it becomes new products.

Glass Collection - Haulers collect glass from consumers and take it to materials recovery facilities.

Consumers place recyclables in curbside bins or at glass drop-off collection sites, or return glass bottles through a container deposit program. Glass is more valuable if it’s kept color separated, but in many curbside programs all recyclables are collected mixed. Haulers typically take these mixed recyclables to a materials recovery facility (MRF) where the recyclables are sorted by commodity type. Recovered glass is then sent to a cullet processor for further sorting and cleaning. Recovered glass might also be sent from the MRF directly to a business for a use other than manufacture into a new glass bottle.

At drop-off sites, clear, brown and green glass may be collected in separate containers and collected separately from other recyclables. Before being made in to new glass containers, recycled glass must be separated by color. The color of glass containers is created by adding a coloring agent that cannot be removed. This means that colored glass, such as green and brown glass, are required to produce new green and brown glass, respectively. So, sorting makes the recycled glass more valuable to the end market. Deposit programs also yield high-quality container glass. Recycled glass collected at these locations will typically go directly to a cullet processor.

Glass Processing - Cullet processors clean and sort glass to make cullet that is sold to manufacturers.

At the cullet processor, the recovered glass first goes through a process of removing contaminants, such as ceramics and other non-container glass, metals, gravel and other dirt. Glass is then sorted by color, and it is sized so that it meets specifications to be “furnace-ready” cullet. The finished cullet is then sold to

container manufacturers to be made into new glass bottles and jars or in some cases fiberglass. Glass that does not meet glass manufacturer specifications may be used for a secondary application or product.

Glass Bottle Manufacturing - Manufacturers use recovered glass to make new glass products.

Glass bottles are made from readily-available domestic materials, including sand, soda ash, limestone and “cullet” – the industry term for furnace-ready recycled glass. Recycled glass, or cullet, can make up to 70 percent of the raw material mix for new glass containers. These materials are mixed, or “batched,” heated to a temperature of 2600 to 2800 degrees Fahrenheit and molded into the desired shape.

Using recycled glass in the manufacture of new glass containers reduces emissions and consumption of raw materials, extends the life of plant equipment, such as furnaces, and saves energy. A glass container can go from a recycling bin to a store shelf in as little as 30 days.

Glass Recycling Facts:

- 80: Percentage of glass that is estimated to be recycled into new containers.
- 3.0 million: Amount, in tons, of glass that was recovered for recycling in 2009 according to the U.S. EPA.
- 80: Approximate percentage of glass beverage containers in California that gets recycled, mostly due to bottle bills that encourage recycling by offering refunds for glass bottles.
- 30: Length, in minutes, that the energy from recycling one glass bottle can power a computer.
- Fifty: Percentage of recycled material that glass manufacturers plan to use in the production of new glass bottles by the end of 2013. This step will save enough energy to power 45,000 households for a year, and 181,550 tons of waste from landfills each month.
- 20: Amount, in tons, of color-sorted glass that a typical glass processing facility can recycle per hour.





PRE-CYCLE

When you pre-cycle you choose to buy products that are friendly to the environment.

- Bring reusable shopping bags to the store with you
- Buy large quantities. This uses less packaging
- Buy products with the least amount of packaging. Items in multiple containers waste resources
- Buy products packaged in recycled packaging
- Don't buy disposable items
- Buy less paper napkins or paper towels – or none at all. Use cloth
- Read labels for ingredients. Stay away from harmful chemicals
- Buy long life items (batteries and light bulbs). This saves on packaging
- Don't purchase Styrofoam packaging on meats and such. This takes too long to break down in landfills
- Buy items packaged in cardboard, aluminum, steel, glass or plastic containers stamped 1 or 2. These plastics are easier to recycle.

If you want to be a “true recycler” it is also important to buy goods that are made from packaged in in recycled materials when possible.

Recycling symbols to look for:

Recycling Symbol	Recycled Symbol
 <p>This is the most common form of the symbol and is found on products like plastics, paper, metals and other material that can be recycled. It's also seen, in many different styles, on recycling containers, at recycling centers, and anywhere there's an accent on smart use of materials and products.</p>	 <p>A circle around three arrows means the product is made of recycled material; it's usually found on paper and cardboard. How much recycled material the product contains is sometimes indicated by a percentage inside the arrows. In other cases, black arrows on a white background indicate that the product is made of a combination of new and recycled content, and white on black means it's 100% recycled.</p>

ACTIVITY 4 – PACKAGING PRE-CYCLED

When you are shopping, think of packaging as part of the product, you get what you pay for. If the packaging is designed to be thrown away immediately, all you're getting for your money is cleverly-designed garbage.

Packaging makes up about 1/3 of what Americans throw away. Pre-cycling is a very important part of any recycling effort.

Activity: The next time you go to the grocery store, take a digital camera along. Walk all through the store, select 10 items to take pictures of, then list the items below and complete the chart by placing an "x" in each box that applies to each item.

Item Descriptions:

1.	6.
2.	7.
3.	8.
4.	9.
5.	10.

Item #	1	2	3	4	5	6	7	8	9	10
Is the packaging colorful?										
Is the package wrapped in clear plastic										
Is the product boxed?										
Is the product in glass?										
Color of glass										
How many layers of packaging does the product appear to have?										
Does the product have either type of recycling symbol?										

Why do we need packaging on the products we buy?

List 4 examples of common packaging materials:

1.
2.
3.
4.

What type of packaging do you prefer and why?

Clothing

Americans throw away 68 pounds of clothes on average each year, and we only buy 10 pounds of recycled clothes annually.

The materials used to make our attire are often environmentally toxic and require significant amounts of energy and water during the manufacturing process. If you are going to buy new clothes, why not buy those made out of sustainable materials? There are now companies that sell gear made out of crops that require less pesticides and water, such as:

Sustainable cotton

Hemp

Bamboo

Of course, buying recycled clothes has an even smaller environmental footprint. The 12 to 15 percent of people who shopped at consignment and thrift stores in 2006 saved 2.5 billion pounds of clothes from re-entering the waste stream.

How Clothes are Recycled

Sell your clothes online. E-commerce sites like eBay allow you to sell them at the price of your choice or watch as people bid madly back and forth to get their hands on your old shoes and vintage jeans.

Go to your local consignment store. Places like Plato's Closet will give you cash or store credit in exchange for the clothes they buy from you. Other consignment shops will give you a cut of the profit they make on your old gear.

Donate your clothes. Goodwill and Salvation Army are in almost every state and offer tax forms you can file for incentives. You can also look in your neighborhood for clothing collection boxes for local charities.

Other Tips About Clothing

Be smart about washing the clothes you now own. 80 percent of the energy our clothes consume is used when we wash them. Roughly 26 billion gallons of water are used each day in the U.S., 4.5 billion of which go to operate washing machines. Dry your clothes on the line and wash them only when necessary.

When you do wash your clothes, wash them in cold water. Washing clothes in cold water can cut CO2 emissions by 100 pounds and save you up to \$64 per year on your energy bill.

You can also line-dry your clothes in the spring and summer instead of using the dryer. This will keep 700 pounds of carbon dioxide from making their way into the environment.

ACTIVITY 5 - CLOTHING

Pick 1 of the following:

Closet Madness

- Go through your closet and make 3 piles.

Pile 1 - Clothes that Fit & Are In Style & Currently Wearing
Pile 2: Clothes that have holes or are in need of repair
Pile 3: Clothes that no longer fit or you no longer wear

- Take a picture of all 3 piles one you have your items sorted.
- Now what do we do next with each pile

Pile 1: Arrange them neatly back in your closet
Pile 2: Look at them with a parent - What can you do to fix them – apply patch, sew on a button, mend, and make into a new item (bag, rug, mittens, and quilts).
Pile 3: Clean and fold items and take them to the local resale shop (Plato’s) to see what they will buy from you or try to sell them to friend or on-line. Whatever does not sell donate them to a good cause.

Fashion Statement

- Get your camera and go to Goodwill. Put together a fashionable outfit. Include pictures in notebook.

Write a brief statement on your outfit.

Why did you pick out what you did.

Where you would wear it? _____ How much would it cost? _____



E-Waste

In the US, we scrap about 400 million units per year of consumer electronics, according to recycling industry experts. Rapid advances in technology mean that electronic products are becoming obsolete more quickly. This, coupled with explosive sales in consumer electronics, means that more products are being disposed, even if they still work

The EPA estimates that in 2007, the US generated over 3 million TONS of e-waste. But only 13.6% of that was collected for recycling. The other 86.4% went to landfills and incinerators, despite the fact that hazardous chemicals in them can leach out of landfills into groundwater and streams, or that burning the plastics in electronics can emit dioxin.

If properly disposed of, e-waste is not hazardous. According to the United States Environmental Protection Agency, e-waste is an issue of resource conservation. In short, electronics contain many re-usable and valuable raw materials.

However, if improperly disposed of or illegally dumped, electronics can pose a serious risk to the environment.

How Can we Make Sure were doing our part!



Don't Throw old electronics in the trash!	Don't put your old electronic products or batteries in the trash (even if it's legal in your state). The toxics inside these products don't belong in the landfill.
Donate for reuse if possible	If your product can be reused, donate it to a reputable reuse organization, that won't export it unless it's fully functional.
Find a responsible recycler in your state	If your product is too old or too broken to donate, you should recycle it. Beware of fake recycling
Manufacturer Take Back	Many electronics companies have voluntary take back programs, where they will recycle your old products for free. Some offer trade-in value or money back for your products.
Cell Phone Recycling	Cell phone recycling is very easy, since you can mail them back (for free) to some recyclers. Many organizations will also take them.

Make sure however that you remove your data: There are many tools available for erasing the data from your computer and cell phone.

ACTIVITY 6 - INDIANA E-WASTE

Effective July 1, 2009, the Indiana Legislature enacted the Indiana Electronic Waste Program (IC 13-20.5). The purpose of the program is to reduce the amount of electronic waste being sent to Indiana landfills and ensure that hazardous substances found in electronic waste are being managed in an appropriate and environmentally responsible manner.

Indiana Electronic Waste Program Fact Sheet

The program holds manufacturers of computers monitors, laptops, and televisions responsible for collecting and recycling sixty percent (60%) by weight of the computers monitors, laptops, and televisions they manufacturer and sell to Indiana households. Manufacturers are able to work with any collectors and recyclers that are enrolled with Indiana's e-waste program to meet their 60% by weight recycling goal.

Indiana's Electronic Waste (or E-Waste) Program involves roles for manufacturers, collectors, recyclers, retailers, and Indiana households, public schools, and small businesses



Beginning in 2011, Indiana covered entities are prohibited from disposing of e-waste in with their standard trash collection.

OK so where can we dispose of our e-waste from our homes? Please list at least 5 places we can take our e-waste to in our county – include name, address, phone number and hours.

Have you ever visited any of these places?

Do you plan on taking any electronics to them? If so insert picture of you doing this in your notebook.