



Environmental Survey



1. If you recycle newspaper, used computer paper, and some junk mail, add 10 pts.
2. If you picked up litter in the past week, add 5pts. If you littered in any way. Subtract 20 pts.
3. If you drove your car (or had someone drive you) to destination fewer than two blocks away in the last week, subtract 20 pts.
4. If you planted one or more trees in the past year, add 10 pts.
5. If you have taken your children to a natural setting, such as the woods, a stream or mountain trails in the last month, add 10 pts.
6. If you recycle aluminum cans and aluminum foil, add 10pts.
7. If you burn or bag your leaves or grass clippings, subtract 10 pts. If you compost, mulch, or leave your leaves or grass alone to decompose, add 5 pts.
8. If you have a compost pile, add 10pts.
9. If you have a family vegetable garden, add 5 pts.
10. If you have forgotten to turn off a light, television, or radio in an empty room today, subtract 10 pts.
11. If you have purchased a product packaged in a foam container in the past week (that includes food from some fast food restaurants), subtract 5 pts.
12. If you use both sides of a piece of paper before throwing it away, add 5 pts.
13. If you recycle glass and plastic, add 10 pts.
14. If you have volunteered your time for an environmental cause in the past year (such as paper drive, trash pick-up, etc.), add 10 pts.

***How did your family score????**

90 points or above: Indeed you are a friendly family of the Earth?
80 to 89 points: You are a concerned family and doing OK.
70 to 79 points: Your family needs to make a plan and try harder.
Below 69: Your family is contributing to the problem.



ACTIVITIES AND PROCEDURES



- ❖ Outline
- ❖ Group Number
- ❖ Name of City
- ❖ Population of City
- ❖ State the laws of your city that will help your citizens be “ecologically” responsible
- ❖ Describe the power source that your citizens use for heat
- ❖ Draw a picture of that power source
- ❖ Describe the method that your citizens use for waste disposal
- ❖ Draw a bird’s eye view of your “ecologically sound” city
- ❖ Use a legend in the corner to define industries, homes, etc.
- ❖ Field trips to water purification plants. Field trips to city offices to discuss master plan of the city.
- ❖ Development of a master plan that can have a positive ecological effect upon the city
- ❖ Each group will design and build a model of their ecologically sound city by using their master plan. They will then share the model with class and justify their master plan.



Environmental Experiments and Activities Activity One



What would happen if a bottle didn't have its warning label on it? Let's explore what might happen:



- ❖ 4 glasses
- ❖ Marking pen

- *masking tape
- *1/2 cup vinegar (clear)
- *1/2 cup water
- *1/2 cup apple juice
- *1/2 cup pine cleaner
- *teaspoon baking soda
- *paper towels

Let's Use These items:

- In groups prepare all the props that you would need. One group member will leave the room.
- Label the glasses 1-4 or A-D.
- Pour vinegar into glass 1, water into glass 2, apple juice into glass 3, and pine cleaner into glass 4. Make sure you put away the original containers so they are not visible.
- Ask the group member to come back into the room. The group member will stand at least five feet from the four glasses.
- Ask the group member to tell you what is in each glass. Or ask them which liquid they would drink.
- If the group member guesses the correct liquid, congratulations are in order. But remember this was probably a lucky guess.
- If they guess the incorrect liquid, tell them what they would be drinking!



This experiment shows how important it is to label liquids and other hazardous materials - better yet, keep them in the original containers with the original labels.

You can also demonstrate what would happen if you assume clear liquid is water.


1. Add the baking soda to the water. It should dissolve easily.
2. Add the baking soda to the vinegar. It will cause a reaction.



Environmental Experiments and Activities Activity Two



We find Household Hazardous Materials (HHM) in specific locations in our homes (garage, laundry, kitchen). They fall within several broad categories associated with their use (auto supplies, detergents, cleaners). Because more people are becoming environmentally aware, we can find alternative products within these categories that are not harmful. The only way to determine which products are and which products are not harmful is to read the label. Let's conduct an inventory of the household hazardous materials in your home. Let's also try to determine if the material is a waste (HHW) or still in use.



Let's Use These Items:

- ❖ a household hazardous materials list
- ❖ a piece of paper (at least 8" by 11")
- ❖ pencil or pen
- ❖ ruler

- Draw a simple floor plan of your house. A floor plan is simply a drawing of each room looking down on the house - just as if you ripped off the roof and looked down into the house from a height.
- Here's a floor plan of a house in a neighborhood. Most of the hazardous materials are kept in the rooms in which they are used.

GARAGE Motor oil Oil-based paint Waste motor oil Thinner Waste thinner	LIVING ROOM None		BATHROOM 1 Toilet bowl cleaner	BEDROOM 3 None
STUDY Hobby chemicals	DINING ROOM None	KITCHEN Ammonia Waste lye Drain opener Furniture polish	BEDROOM 1 None	BEDROOM 2 Fingernail polish remover Medications Hairspray Batteries
				BATHROOM 2 None

- Go to each room and look in closets, drawers, and cupboards, on the floor and shelves for containers holding items that might be HHM or HHW.
- Read the labels to determine if the contents are hazardous. Your HHM list can help you identify potential hazardous materials.
- Write the products in each room on your floor plan.
- Without opening the containers, can you tell if the product is material or waste? Write an "m" or a "w" on the floor plan next to the item. If it is okay with your



A LIST FOR YOU - COMMON HOUSEHOLD HAZARDOUS MATERIALS



TOXIC

Insect sprays
Mothballs
Antifreeze
Used motor oil
Weed killers
Wood preservatives
Batteries
Fertilizers
Rodent bait
Ant traps
Insect foggers
Fungicides
Herbicides
Pesticides
Flea collars

CORROSIVE

Oven cleaners
Drain cleaners
Muriatic acid
Photographic fixer
Floor stripper
Rug shampoo
Caustic soda
Ammonia
Ammonium hydroxide
Lye
Silver polishing cream
Sodium hydroxide
Navel jelly
Hydrochloric acid
Rust remover
Ph reducers/increasers
Sulfonic acid
Aluminum jelly
Phosphoric acid
Trisodium phospho

FLAMMABLE

Brake Fluid
Carburetor cleaner
Chlorinated Solvents
Gasoline
Kerosene
Lacquer paint
Paint thinner
Sealer
Solvents
Oil-based paints
Finger nail polish remover

REACTIVE/OXIDIZER

Bleach
Pool chlorine
Hydrogen peroxide
Calcium hypochlorite
Potassium nitrate
Stump remover
Sodium hypochlorite
Potassium permanganate
Bromine