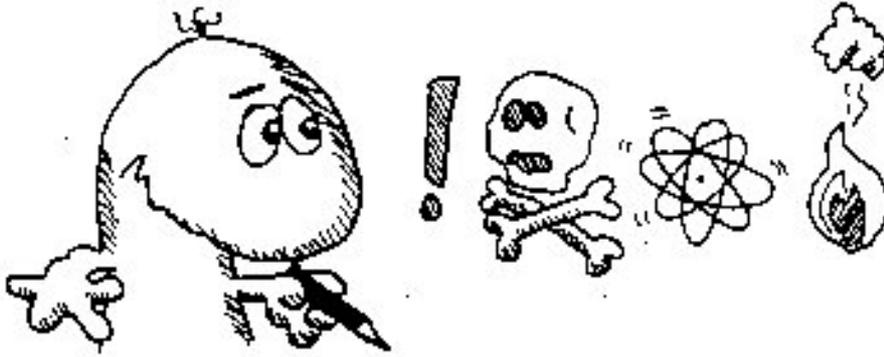


HAZARDOUS WASTE

What is Hazardous Waste?
What is Ozone Depletion?



OBJECTIVE:

Students will learn what hazardous products are and will be able to recognise common household examples.

BACKGROUND INFORMATION:

Many of the products found in and around your home, work or classroom such as cleaners, paint, and pesticides can be hazardous waste. Hazardous means there is a chance of being injured or harmed when the product is being used, stored or disposed. Hazardous products can cause harm to people, animals and the environment. The characteristics of hazardous materials are flammable, reactive, corrosive and toxic.

A few examples of household hazardous products include:

batteries	flea powder	nail polish
bleach	furniture polish	oven cleaner
mothballs	disinfectants	paint

Hazardous products must be handled and disposed of carefully. Improper disposal of hazardous waste can cause harm to the environment by pollution in rivers, lakes and the sea. Always store hazardous chemical products in their original containers so that handling and disposal instructions on labels can be followed.

Store in properly closed containers and in well ventilated places where children and pets cannot reach.

Always try to use the products completely or see if other people can use all of the contents of these hazardous household products.

Other products are ozone depleting. These include CFC's, halons, methyl, chloroform and carbon tetrachloride.

CFC's were developed in 1928 as refrigerants. They are also used as blowing agents in the manufacture of plastic foam products, as propellants in aerosol sprays, as solvents in a variety of cleaning processes and in refrigeration and air conditioning units.

Development of substitutes for CFC's is progressing rapidly e.g. hydrocarbons for propellants, ammonia for refrigeration.

International agreements agreed to phase out:

All CFC's	100% by 2000
Three listed halons	100% by 2000
Methyl chloroform	100% by 2005
Carbon tetrachloride	100% by 2000

Class Plan (Levels 1 and 2 - 3 and 4)

1. Ask students to have their parents help them find five things around the house that could be harmful to themselves or to the earth. (Stress that the children should not handle these items.)
2. Discuss what the students found in their own homes.
3. Discuss the different characteristics of household hazardous products:
 - ❖ Flammable: Can easily catch on fire e.g. paint, hairspray, nail polish
 - ❖ Reactive: Can catch on fire, explode or give off dangerous fumes when exposed to water or air e.g. oven cleaner, ammonia mixed with bleach.
 - ❖ Corrosive: Can burn the eyes and skin or eat away containers e.g. toilet cleaner, bleach, radiator cleaner.

- ❖ **Toxic:** Can make you sick immediately or over a period of time e.g. floor cleaner, window cleaner, antifreeze.
 - ❖ **Ozone Depletive:** These products are persistent in the atmosphere long enough to be transported into the stratosphere where UV radiation breaks them down and hence they destroy the ozone. Depletion of the ozone increases the amount of harmful UV radiation able to reach earth which affects phytoplankton, the base of the food chain, crop production, increases skin cancers and cataracts of the eyes.
4. Students can design a warning sticker to put on all household hazardous waste products in their homes. Use words like danger, caution, or handle with care. Have the students make about 10 stickers.

Materials:

- ▶▶ Paper and felts / crayons.

SAFE SUBSTITUTES TO USE AT HOME

Aerosol Sprays

Use non-aerosol, pump-type sprays.

Ant Control

Sprinkle tartaric acid in front of the ants path. Ants will not cross over the path.

Bug Spray

Place screens on windows and doors. Try

Chemical Fertilisers

Compost - mulch.

Detergents

For dishes use baking soda and liquid soap.

For laundry use borax, washing soda or liquid soap.

Drain Openers

Pour boiling water down the drain.

Flea Repellent

Feed pets brewers yeast, vitamin B or garlic tablets (not a lot).

Furniture Polish

Mix lemon juice and vegetable oil.

Mix vegetable oil and white vinegar.



Glass and Window Cleaners

Use cornstarch and water.

Use lemon juice and dry with a soft cloth.

Rug Cleaner

For spills clean with sparkling soda and clean cloth.

Scouring Powders

Use baking soda with a damp cloth.

Snail / Slug Bait

Place a layer of broken eggshells around plants. Snails and slugs will not cross this path.