

GOALS:

Students will understand the environmental consequences, particularly the effects on water, of a variety of household hazardous waste disposal methods and learn where persistent household hazardous wastes go when they are thrown out.

SCHOOL SUBJECT:

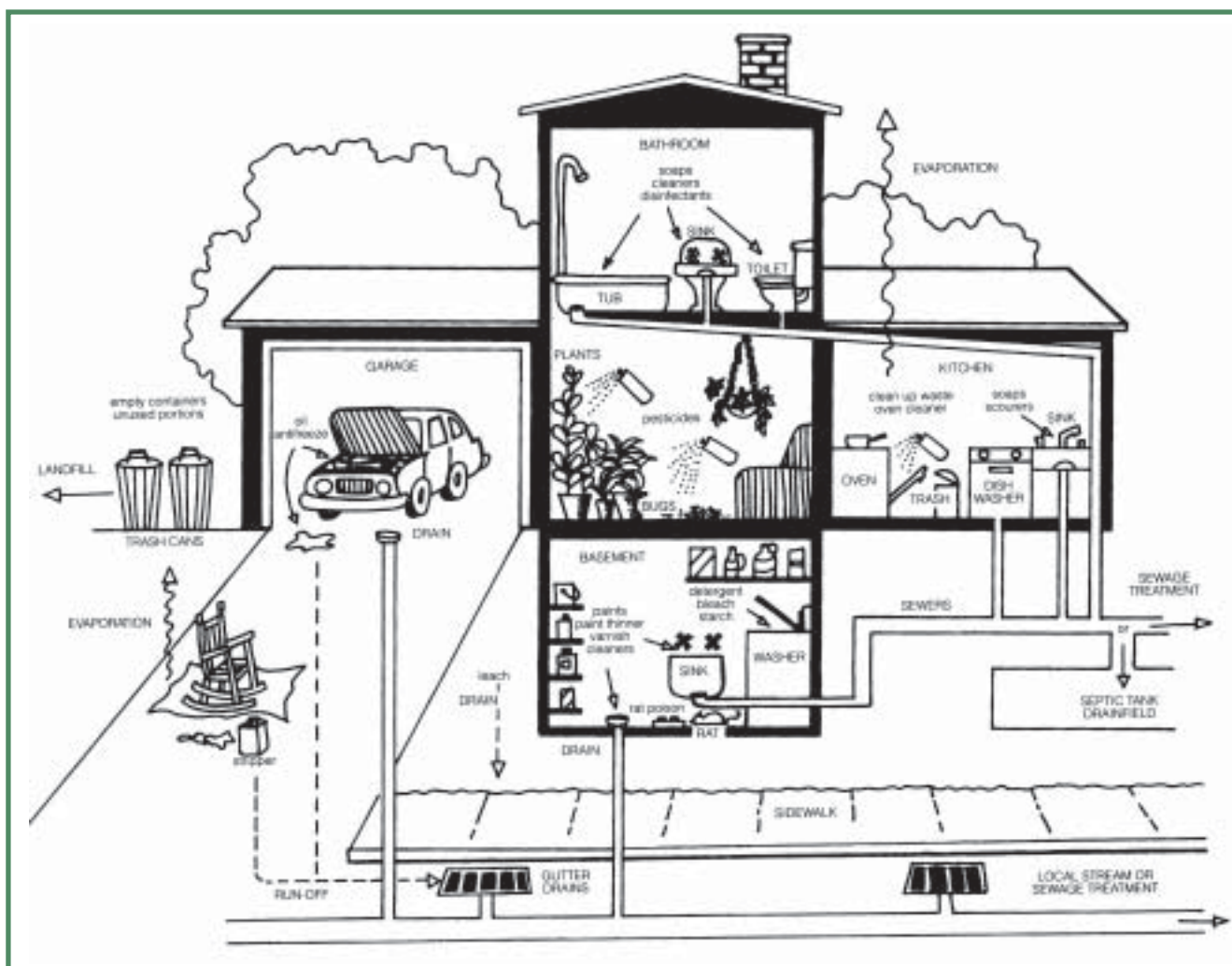
Science, Social Studies

Time:

3 – 4 class periods

Materials:

- Examples of commonly used household hazardous products, such as motor oil, pesticides, paint thinner, etc. (you might want to use the graphic at the right to discuss this topic without having students bring in actual HHW products)
- Protective gloves
- Overhead: "Routes to the Environment" chart



ROUTES TO THE ENVIRONMENT

■ BACKGROUND

Because the subject is so large this activity is primarily informational in nature. This lesson reviews some of the ways hazardous substances can enter our environment.

■ PROCEDURE

Think of one or two examples of some common types of household or school hazardous substances. Motor oil, pesticides and paint thinner are good examples of products that are known to be persistent and long lasting in the environment. Handle these products with care. You may wish to bring empty containers only. Restrict student handling of these products. Wearing gloves for protection will emphasize the hazardous nature of these products.

3. Talk about products that were brought to class.

Ask: What should we do with these products when we are through with them? What are the different ways we might dispose of them? (Recycle, flush down the drain, put in the garbage can, burn in the backyard, pour out on the ground or pavement.)

4. Tell students that some disposal options are no longer legally available. However, for the purposes of this activity the students should think about what happens to substances when they are disposed of in various ways. Discuss with students any disposal directions that are written on the product. For example, most motor oil containers suggest recycling.

5. Tell students they are now going to consider where wastes go. Show the overhead "Routes to the Environment." Point out to the class the various ways a chemical can travel through the environment from our homes.

6. Let students know about Household Hazardous Waste Collection. Several communities in California are now sponsoring household hazardous waste (HHW) collection programs. Many counties depend primarily on groundwater for drinking, and are concerned about safely collecting household hazardous wastes in order to keep them out of local landfills and out of drinking water.

During a household hazardous collection program, people can bring in, generally at no cost, household hazardous materials. In cooperation with private hazardous waste management companies, local, county and state workers record and pack hazards in drums for shipment.

Some of the material can eventually be rendered safe by hazardous waste management companies using various chemical, physical and/or biological techniques. Some can be recycled. Some must be shipped at a high cost, for disposal in a hazardous waste landfill or high temperature incinerator.

If you participate in a HHW program and take your household hazardous waste to a collection site, your waste will be safely handled. It will be transported for treatment, recycling, reclamation, long term storage or disposal.

Adapted from *A-Way with Waste*, 1990 and *Sleuth*, 1982