Household Hazard

Lesson 1 Plan

INTRODUCTION

The lesson plans encourage students to investigate household hazardous wastes. At our household, a variety of chemicals are used which is hazardous in nature if not handled properly during its use and disposal. The risk of environmental pollution and negative health impacts from these types of material is very high. Improper disposal like burning of waste in household fires or stoves exposes individuals especially young children to dioxin emissions.

The lesson plan helps children in indentifying such hazards.

Eco-Schools Steps: Environmental review, Curriculum linkages, Inform and Involve

Curriculum Linkage: Science/ Environmental Studies/Social Science

Objective:

Students will be able to

- identify the products used in homes can be hazardous in nature.
- list and classify household hazardous wastes.

Time required/ Duration:

- **Classroom Session 1:** 90 minutes

Resources Required:

- Hazardous waste products and labels.
- Resource 1 Hazardous waste symbols reference chart - to understand and interpret reading of labels.
- Resource 2 (Hazardous waste table).
- Some real products with the hazardous labels for use by the teacher as part of demonstration as well as evaluation.
- Magnifying glass - might be handy to read labels with very small text.

Eco-Schools

9-12 Years

4 QUALITY EDUCATION

11 SUSTAINABLE CITIES AND COMMUNITIES

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

Activity

Classroom session 1

- Start with a discussion introducing students to the different types of products consumed at home for various requirements including cleaning, personal care, pest control to name a few and mention that a range of products with different constituents are available in the market for these functions.
- Demonstrate to students the different products packaging/labels.
- Ask students to read the labels of some of the hazardous products.
- Lead the discussion to help students identify the potential hazards and appropriate care needs to be taken while handling and disposing them.
- Divide students into groups, give them the different labels to discuss.
- Facilitate student discussions to identify and recalls text and visuals that indicate hazardous nature like words (danger/ poisonous/ etc); symbols (corrosive, flammable) on the labels of the different products.
- Ask students to read the warning instructions on these labels and classify their findings in the Hazardous waste table.
- Ask each group to make a presentation of their findings to the class.

Evaluation:

Ask students to share their thoughts on how the use of hazardous material can be reduced.

Resource 1

Hazardous waste symbols reference chart - Understanding hazard symbols

Hazard symbols are on the labels of many products in and around your home and garage, like cooking spray, cleaning products, paint thinners, drain cleaners and windshield washer fluid.
Hazard symbols have three parts:

1. the picture
2. the frame
3. the caution (signal) words underneath the image

1. Hazard symbol pictures
The picture tells you the type of danger:

EXPLOSIVE
The container can explode if heated or punctured. Flying pieces of metal or plastic from the container can cause serious injury, especially to your eyes.

CORROSIVE
The product can burn your skin or eyes. If swallowed/ingested, it can damage your throat and stomach.

FLAMMABLE
The product or its fumes will catch fire easily if it is near heat, flames, or sparks. Rags used with this product may begin to burn on their own.

POISON
If you swallow, lick, or in some cases, breathe in or touch the chemical, you could become very sick or die.

2. Hazard symbol frames
The shape of the frame around the hazard symbol tells you what part of the product is dangerous:

If it's a triangle, it means the container is dangerous.

If it's an octagon, it means the contents are dangerous.

3. Signal words
The signal word(s) underneath the hazard symbol explain the degree of risk:
Symbol -

Signal word - DANGER EXPLOSIVE
Signal words:

- CAUTION means temporary injury may result. Death may occur with extreme exposure.
- DANGER means may cause temporary or permanent injury, or death.
- EXTREME DANGER means exposure to very low amounts may cause death or serious injury.

(Source: https://www.canada.ca/en/health-canada/services/home-safety/household-chemical-safety.html)