

# K–3 Module

## Unit 5

### Proper Management of Household Hazardous Waste

#### Lesson 1

#### Poisons That Look Like Food

#### Lesson 2

#### Safety's House

#### Lesson 3

#### Proper Disposal of Household Hazardous Waste

*It was a good and comprehensive unit that also involved students to integrate science with language arts and reading—and in our particular school, it helped with ESL development.*

— Mario Chang, second-grade teacher, Mission Education Center, San Francisco Unified School District

*This module is very important for young children. This is an excellent hands-on way to get the point of poisons in the home across to them.*

— Anne Harris, second-grade teacher, Jefferson Elementary School, Cloverdale Unified School District

*I thought this was a really great unit. It is important information that kids need to have, and the lessons are excellent and definitely meet that goal.*

— Beth O'Neal, kindergarten and first-grade teacher, Marguerite Hahn Elementary School, Cotati-Rohnert Park Unified School District

## K-3 MODULE

# Unit 5: Proper Management of Household Hazardous Waste

## Overview

### UNIT 5'S CONCEPT

Some household products are hazardous, meaning that they can cause harm to living things, including people. Household hazardous waste must be handled, stored, and disposed of in a safe and appropriate manner.

### LESSON 1: POISONS THAT LOOK LIKE FOOD

**Lesson's concept:** Household hazardous products should not be handled by children. Some household hazardous products can sometimes be mistaken for food and should be kept away from children.

In Lesson 1 students will:

- Make a list of hazardous household products that must not be touched, smelled, or eaten.
- Observe how unsafe products can look like products that are safe to eat.
- Sing a song about the importance of seeking the advice of an adult before eating something.
- Be presented with several scenarios concerning household hazardous products and discuss what they should do.

### LESSON 2: SAFETY'S HOUSE

**Lesson's concept:** Household hazardous products usually have warning labels on their containers and should be kept out of reach of children.

In Lesson 2 students will:

- Look at magazine pictures of household products and identify those that may be hazardous.
- Classify labels from different household hazardous products according to the warnings that are printed on the products' labels.
- Identify, on an overhead transparency, household hazardous products that should be placed on a high shelf away from children's reach.

- Examine labels on containers to identify any words that mean that the contents are hazardous.
- Cut out pictures of various products and glue the pictures of hazardous products on the illustration of the top shelf on the student's page and glue the pictures of nonhazardous products on the illustration of the lower shelf.

### LESSON 3: PROPER DISPOSAL OF HOUSEHOLD HAZARDOUS WASTE

**Lesson's concept:** Many household products are hazardous both when they are used and when they are disposed of. They must be separated carefully from regular waste. Most household hazardous waste can be taken to a collection site, where some of the hazardous waste is recycled. Inappropriate disposal of household hazardous waste can harm the environment and people.

In Lesson 3 students will:

- Observe a variety of empty containers and some labels of household hazardous waste.
- Color and put together a coloring book about household hazardous waste.
- Play a relay game to learn appropriate disposal methods for various household products.
- Listen to a speaker from the local household hazardous waste management site and write a thank you letter to the speaker.
- Design posters that show the proper disposal of household hazardous waste.

# NOTES

# LESSON 1: Poisons That Look Like Food

**Note:** To prepare for Lesson 3 in Unit 5, begin collecting at least ten empty and rinsed out containers (after the contents have been used up or disposed of properly) with warning labels. You might be able to get some of these from a school custodian and some from your home. Be sure to rinse each container thoroughly and close it tightly. These containers can also be used in Lesson 2.

## LESSON'S CONCEPT

Household hazardous products should not be handled by children. Some household hazardous products can sometimes be mistaken for food and should be kept away from children.

### PURPOSE

Students will learn that some hazardous products appear safe to eat and might even look like items that they have eaten before. They will understand that they should never use or touch hazardous products or put things in their mouths without the permission of an adult.

### OVERVIEW

In this lesson students will:

- Make a list of hazardous household products that should not be touched, smelled, or eaten.
- Observe how unsafe products can look like products that are safe to eat.
- Sing a song about the importance of seeking the advice of an adult before eating something.
- Be presented with several scenarios concerning household hazardous products and discuss what they should do.

### CORRELATIONS TO CALIFORNIA'S CONTENT STANDARDS AND FRAMEWORKS AND TO BENCHMARKS FOR SCIENCE LITERACY

- Students classify products according to those that are safe and those that are not safe to eat, smell, or touch. Students learn about poisonous substances, including the fact that some look like food. They apply this knowledge to avoid products they do not recognize.
  - "Human beings can use the memory of their past experiences to make judg-

ments about new situations." (*Benchmarks for Science Literacy*, page 140)

- "Some things people take into their bodies from the environment can hurt them." (*Benchmarks for Science Literacy*, page 144)
- "Students collect information about objects and events in their environment." (*Mathematics Content Standards for California Public Schools, Kindergarten Through Grade Twelve*, page 3)
- Students "describe the properties of common objects." (*Science Content Standards, Grades K-12; Kindergarten; Investigation and Experimentation, Standard 4b*)
- Students describe in their journals some products that are safe to eat and those that should not be touched, smelled, or eaten because they can be poisonous.
  - Students "write brief expository descriptions of a real object, person, place, or event, using sensory details." (*English-Language Arts Content Standards for California Public Schools, Kindergarten Through Grade Twelve*, page 8)

### SCIENTIFIC THINKING PROCESSES

observing, communicating, comparing, classifying

### TIME

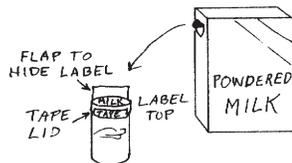
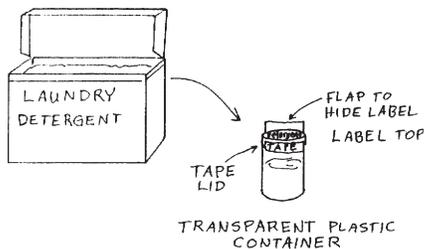
60 minutes to prepare for the lesson and 60 minutes to implement the lesson

### VOCABULARY

household hazardous products, poisons

## PREPARATION

1. Read the “Background Information for the Teacher” on page 208 in this lesson.
2. Obtain four or more of the household hazardous and, therefore, “not safe” products and their look-alike safe products listed in the “Table of Unsafe Products and Their Safe Look-Alikes.” Place the contents of each unsafe product and its safe look-alike in transparent plastic jars with screw-on lids. If possible, use clean used jars, like peanut butter jars. (Only one product should be in each jar.) For example, for unsafe products use laundry detergent, orange-colored liquid to represent disinfectant, and yellow-colored liquid to represent lemon furniture oil. For correspondingly safe look-alikes, use powdered milk, apple juice, and a lemon-flavored drink.
  - Cap the products tightly and tape the lid to “not safe” products as an added precaution.
  - Write the name of the product on a piece of tape on top of the jar, and place a piece of paper over the label so students can’t read it. (See illustration.)



3. Mix orange-colored water (e.g., use orange drink mix or food coloring) in a soda bottle. This will represent a cleaning product. Cap the bottle tightly. This will be used in the “Application” section of this lesson.
4. Arrange a display of some unsafe products before class begins. Have the safe look-alikes ready to show to students.
5. Prepare a letter to parents or guardians to

be used for the homework assignment. (See example of “Letter to Parents or Guardians” by Christina Lucas on page 210.)

6. Obtain the telephone number of the poison control center (contact your county’s health department). Write this number in the letter to parents or guardians. Also obtain the telephone number for information on household hazardous waste disposal (contact a solid waste disposal company, city or county department of public works, or other governmental agency in your community responsible for household hazardous waste). Ask both agencies for information packets; then photocopy appropriate sections for students. Distribute the poison control center’s information at the end of this lesson. Keep the household hazardous waste disposal information to give to students in Lesson 3.

**Note:** Representatives from health agencies and poison control centers may be available to speak to students.

## MATERIALS

- Butcher paper on which to write a list
- A display of four or more of the “not safe” and the “safe” products
- The unsafe and safe look-alike products in transparent plastic jars with lids
- Orange-colored water (e.g., from orange drink mix) in a sealed soda bottle
- Letter to parents or guardians

## PRE-ACTIVITY QUESTIONS

- A. Ask students what products they eat at home. *Cereal, cookies, bread, peanut butter and jelly, pizza, apples, cheese.*
- B. Explain to students that some products found in the home are safe to eat, smell, or touch, while other products are not safe to eat, smell, or touch. Many things that are not safe will make people very sick; they are called poisons.
  - Ask students what types of things they might have seen at home that might be poisons. List these on butcher paper. *Things under the sink in the kitchen, like cleaning stuff, bleach, medicines, bug spray,*

*floor wax, alcohol.* (Keep this list to add to later during this lesson and in Lesson 2.)

- Ask, “Should you ever touch, smell, or taste the products we just listed?” No. “Why not?” *Because they are poisonous.*
- Discuss why people might have poisonous products in their homes. *To help clean things; to make things beautiful, like painting a room; to help plants grow; because they need medicine which the doctor said is okay for them to take, but is not okay for someone else to take.*

Why you should never touch, smell, or taste poisonous products.

- *They can burn your skin.*
- *They can make you unconscious.*
- *You can die.*
- *They can give you brain damage.*
- *You can get really, really sick.*
- *Some can damage your organs inside.*
- *Some can cause birth defects.*
- *Some can burn your throat.*

Submitted by Kathy Jones’s second-grade class, Shasta Elementary School, Chico Unified School District.

Reasons why we might have poisonous products at home:

- *To kill black widow spiders and ants*
- *To shine floors*
- *To use when someone in the house is sick*
- *To take our temperature (mercury in thermometer)*
- *To clean wounds*

Submitted by Ted Schut’s first-grade class, Ripona Elementary School, Ripon Unified School District.

## PROCEDURE

- A.** Ask students to think of examples of poisonous things that can look like things that are safe to eat. *Mushrooms in nature and mushrooms at the store; pills that look like candy; rubbing alcohol and some alcoholic beverages that look like water.*

Examples of poisonous things that can look like food:

- *Some shampoos can look like pancake syrup.*
- *Laundry soap can look like powdered sugar.*
- *Cough drops and some vitamins can look like candy.*

Submitted by Anne Harris’s first-grade class, Jefferson Elementary School, Cloverdale Unified School District.

- B.** Tell students that they are going to learn how some unsafe products can look like products that are safe to eat. Show them the display of unsafe products in transparent plastic jars. (Keep the safe products out of sight.)

- Tell students you want them to look at the jars and guess what the products in these jars might be. Instruct students to file by and look at the display.

**Note:** Older students can describe in their journals what they see and what they think is in each container.

- When students have completed looking at the displays (and writing in their journals), point to the products, one at a time, and ask what they look like.
- Encourage students to expand their answers, such as, “It looks like dried milk.” “It looks like apple juice.” “It looks like a lemon drink.” “It is clear, it looks like water.” Accept all answers. If a student guesses the actual unsafe product, just accept this answer along with all the rest.

Responses from students’ journals concerning products that look safe to eat, to drink, or to be used in preparing foods:

- *It’s white, powdery stuff; it looks like flour or powdered sugar.*
- *It’s a clear liquid; it looks like water.*
- *It’s a yellow liquid; it looks like apple juice.*
- *It’s a yellow liquid; it looks like corn oil.*
- *They look like white spheres and are shiny; they look like sugar balls or marshmallow.*

Submitted by Jody Skidmore’s third-grade science class, North Cow Creek Elementary School, North Cow Creek Elementary School District.

- C. After all products have been discussed, tell students that the products are not what they appear.
- Tell students what each product really is and bring out its safe look-alike.
  - Ask, “How were you fooled by the unsafe products?” *They looked like food or drink.*
  - Have students identify exactly what characteristics led them to believe that the substance was a safe one (e.g., color, shape, container).
  - After discussing the safe and unsafe products, explain to students that you have carefully labeled the unsafe products in each jar so you would know what they are.
    - Show students the labels that you placed on top of the jars.
    - Tell students that now that this part of the lesson is over, you will place each of the unsafe products back in their original containers.
    - Ask students why this is important to do. Lead students to conclude that all household hazardous products should remain in their original containers so their owners will always know what is in the containers and can read any caution labels. (Students will learn how to read caution labels in Lesson 2.)

**Safety Note:** Be sure to put the unsafe products in a locked cupboard or on a high shelf where students cannot reach them.

- D. Remind students that because some unsafe products can look like something good to eat, it is important for them never to put anything in their mouths unless an adult gives them permission. Students should also understand that they should not smell or touch household hazardous products, because some can hurt them if they inhale the product or get some on their skin.
- E. Tell students they are going to learn a little song about what they should do before eating things they find on the street or somewhere in their homes. The song also teaches them not to touch any household hazardous product. (In Lesson 2 students

will learn how to tell whether a product is hazardous.)

- Ask students whether they know what they should do before eating or drinking something that was not given to them by an adult? *Yes, we must ask whether we could eat or drink it.*
- Lead students in singing the following song. (Older students can make up their own song.) The song can be written on the chalkboard for students to read.

### We Ask First

(Sung to the tune of “Three Blind Mice”)

We ask first,  
 We ask first,  
 What we may touch,  
 What we may eat,  
 Even though it might look so good,  
 We have to remember as wise children  
 should,  
 Not to touch or put things in our mouths,  
 ‘Till we ask first.

### DISCUSSION/QUESTIONS

Tell students they are going to play a game called “Just Suppose.” Share a scenario and have them say what they should do. Older students could record in their journals their answers for one or more of the scenarios.

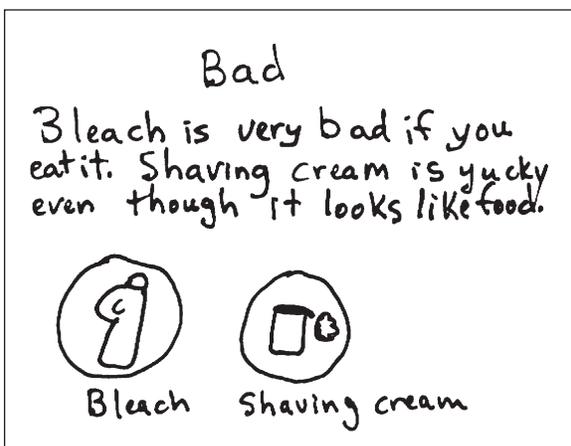
1. Just suppose you were playing with a friend and you saw him or her pick something up off the floor and put it in his or her mouth. What should you do? *Get an adult and tell him or her what happened. Ask an adult about it. Tell why. The thing on the floor could be poisonous.*
2. Just suppose you went into your garage after your mom or dad finished painting a cupboard and you saw an open soda bottle near an empty paint can. You were very thirsty and the soda bottle looked as if it was full. What should you do? *Do not drink it. Ask your mom or dad about it. Tell why you should not drink it. It could be poisonous.*
3. Just suppose you went into the bathroom of your home and found some tasty looking things in an opened container. You were hungry for some candy, and this looked like

the stuff you had last week. What should you do? *Do not eat it. Ask an adult about it. Tell why you should not eat it. It could be medicine that could be poisonous.*

4. Just suppose you were playing in the backyard with your baby brother and you saw him put something in his mouth. It looked like food, but you were not sure, and mom had just finished putting some poisons out to kill some garden bugs. What should you do? *Go tell your mom or dad or other adult. Tell why you should tell an adult. It could be poison that my baby brother ate.*



Submitted by Kathy Jones, second-grade teacher, Shasta Elementary School, Chico Unified School District.



Submitted by Kathy Jones, second-grade teacher, Shasta Elementary School, Chico Unified School District.

## APPLICATION

- A. Ask students to do the following:
- Describe or draw in their journals some products that are okay to eat and those that should not be touched, smelled, or eaten.
  - Share their journal entries.
- B. Show students a soda bottle of the orange liquid. Tell them that you found this in your garage.
- Ask students if it is okay to drink what's inside the bottle; after all, "It's in a soda bottle, so it must be safe to drink." *No, it is not okay to drink. It might be poisonous.*
  - Encourage students to describe why it might not be safe to drink. *How would you know that what is in the bottle is really soda? Someone could have used the bottle to put something else in that could be poisonous.*
  - Ask what students should do if they see a soda bottle with a liquid in it that is under the sink or in the garage? *Do not touch it. Ask your parents or guardians about it. Ask them to label what is in it and put it away on a top shelf. Ask:*
    - Where should poisonous items be kept? *On a high shelf or in a locked cabinet. (This topic will be addressed in Lesson 2.)*
    - What should I do with the liquid in the soda bottle? *If possible, pour it back in its original container; otherwise label it clearly. (You might need to lead students to answer this question correctly.)*

**Homework Assignment:** Ask students to ask their parents or guardians whether they noticed how some poisonous products (like certain cleaning supplies) can look like food or drinks. They should have their parents or guardians show them some poisonous products to avoid and to help them write down what foods some of these products look like. Send home with students a letter explaining the homework assignment to parents or guardians.

**Note:** See "Letter To Parents or Guardians" by Christina Lucas on page 210.

## House Poisons That look like food

Glue - frosting  
Brown paint - pudding  
Rat poison - Bread crumbs  
Pills - candy  
Weed Killer - Kool-aid  
Epsom salt - salt  
Shaving cream - whipped cream

Submitted by Kathy Jones, second-grade teacher, Shasta Elementary School, Chico Unified School District.

- C. Ask students to share their homework assignments. Then have students add to the list of unsafe products that the class generated in "Pre-Activity Questions."

### Unsafe Products:

antifreeze	oil-based paint
batteries	oven cleaner
bleach	paint thinner
carpet cleaner	roach spray
disinfectant	slug bait
laundry soap	window cleaner

Submitted by Christina Lucas, second- and third-grade teacher, Baywood Elementary School, San Luis Coastal Unified School District.

- D. If you were able to obtain information from your local poison control center, photocopy appropriate sections and send these home with students.
- E. Ask students to write a sentence or two in their journals about what they have learned in this lesson. They can also draw a picture. Have them share their journal entries in small groups. Check each student's writing.

### RESOURCE

*Toxics in My Home? You Bet!* Local Government Commission, 909 12th St., Sacramento, CA 95814; (916) 448-1198.

Describes hazardous products in a home.

## BACKGROUND INFORMATION FOR THE TEACHER

hazardous products. It is our responsibility to make certain that children, as well as pets, are not exposed to hazardous products.

Household hazardous products can sometimes be mistaken for food. How hazardous these materials are cannot be determined by sight, smell, or taste. Disinfectant can look like apple juice; radiator coolant is sweet to the taste and looks like mouthwash. These products are dangerous to people, domestic animals, pets, and wildlife.

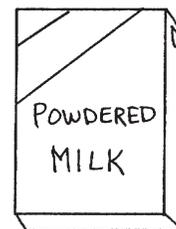
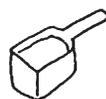
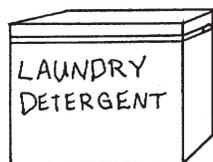
Students should be aware that some household hazardous products might look like food and that they should always ask an adult whether

they can eat something if they have any doubt about what the item is. Because people sometimes store household hazardous products in a labeled container that previously held food or drink (e.g., a gallon milk jug), children should be warned not to eat or drink anything they find in the garage or under the sink.

# TABLE OF UNSAFE PRODUCTS AND THEIR SAFE LOOK-ALIKES

Unsafe products	Their safe look-alikes
Ant and roach paste	Peanut butter
Bleach, drain opener, alcohol	Water
Disinfectant	Apple juice; orange drink
Laundry detergent	Powdered milk or powdered sugar
Lemon furniture oil/lemon ammonia	Lemon-flavored drink
White medicine in tube	Toothpaste (Use unfamiliar brand.)
Mothballs	Marshmallows (small size)
Moth crystals	Rock candy
Pills (colored)	Candy
Radiator flush	Canned soda (Use unfamiliar brand.)
Rat poison/squirrel bait	Oatmeal
Red furniture oil finisher	Cherry soda
Slug killer	Cereal
Windshield washer	Blue sports drink

K-3 Module  
Unit 5



# LETTER TO PARENTS OR GUARDIANS

by Christina Lucas

Dear Parent or Guardian,

We are studying about poisonous materials found in and around the home. We know that some poisons can look just like food, but are really dangerous substances. For example, powdered laundry detergent can look like powdered milk or sugar. We have been talking about not “exploring,” touching, smelling, or tasting the unknown material, but rather checking with an adult first! Please ask your child to “teach” you what he or she has learned at school these past two days.

The students have been asked to go on a “detective search” with an adult to identify hazardous items at home that they should avoid. Please join your child in this search and help him or her write such items found at home in the red “Hazardous Materials” journal.

Many people often store household hazardous substances in a container that previously held food or drink. The students are learning not to eat or drink anything they find in the garage or under the sink. They know that they should check with an adult whenever they find a questionable substance. An adult “knows what to do!” If you have hazardous products in a food container (e.g., milk jug), please consider clearly labeling the contents (for example, “antifreeze”) and then place the dangerous materials away from children’s reach.

Thank you for your continued interest and support!

Mrs. Lucas

For your reference, the telephone number for our San Luis Obispo poison control center is 1-800-876-4766 (24 hours).

Each year thousands of young children are poisoned accidentally. Many suffer serious injuries and some die from swallowing medicines, polishes, pesticides, drain cleaners, bleach, and other household

# LESSON 2: Safety's House

## LESSON'S CONCEPT

Household hazardous products usually have warning labels on their containers and should be kept out of reach of children.

### PURPOSE

Students will learn to (1) identify and name some common household products that are hazardous; (2) learn the location of some potentially hazardous and poisonous materials that may be found in and around the home; and (3) recognize that hazardous products should be kept out of reach of children.

### OVERVIEW

In this lesson students will:

- Look at magazine pictures of household products and identify some that could be hazardous.
- Classify labels from different household hazardous products according to the warnings that are printed on the product's label.
- Identify, on an overhead transparency, household hazardous products that should be placed on a high shelf away from children's reach.
- Examine labels on containers to identify any words that mean that the contents are hazardous.
- Cut out pictures of various products and glue the pictures of hazardous products on the illustration of the top shelf on the student's page and glue the pictures of nonhazardous products on the illustration of the lower shelf.

### CORRELATIONS TO CALIFORNIA'S CONTENT STANDARDS AND FRAMEWORKS AND TO BENCHMARKS FOR SCIENCE LITERACY

- Students use the sense of sight to read warning labels on containers. They become aware of the words on products' labels

that mean that the products are hazardous. Students describe in their journals some labels that indicate that a product is hazardous.

- "Senses can warn individuals about danger . . ." (*Benchmarks for Science Literacy*, page 136)
- "Students collect information about objects and events in their environment." (*Mathematics Content Standards for California Public Schools, Kindergarten Through Grade Twelve*, page 3)
- "Students know about letters, words, and sounds. They apply this knowledge to read simple sentences." (*English–Language Arts Content Standards for California Public Schools, Kindergarten Through Grade Twelve*, page 1)
- "Students identify the basic facts and ideas in what they have read, heard, or viewed." (*English–Language Arts Content Standards for California Public Schools, Kindergarten Through Grade Twelve*, page 2)
- "Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept . . . students will . . . communicate observations orally and in drawings." (*Science Content Standards, Grades K–12; Kindergarten; Investigation and Experimentation, Standard 4e*)

### SCIENTIFIC THINKING PROCESSES

observing, communicating, comparing, classifying

## TIME

45 minutes to prepare for the lesson and 90 minutes to implement the lesson

## VOCABULARY

hazardous products

Develop a word list appropriate for your students from the labels that you bring in. For example, caution, flammable, harmful, warning.

## PREPARATION

- \_\_\_ 1. Read the “Background Information for the Teacher” at the end of this lesson.
- \_\_\_ 2. Make a transparency of “Mr. Safety’s House” (page 216); “Label with a Hazardous Word” (page 217); and “Words on Labels That Mean Hazardous” (page 217).
- \_\_\_ 3. Duplicate the drawing of “Top and Bottom Shelves” (page 218) (or students could draw their own shelves in their journals) and the pictures of “Some Household Products” (page 219) for each student.
- \_\_\_ 4. Duplicate “List of Products” as a homework assignment for students (page 221).
- \_\_\_ 5. Obtain examples of labels from household hazardous products. Some examples of labels are provided at the end of this lesson (see “Some Product Labels” page 220).
- \_\_\_ 6. For the “Homework Assignment” on page 215, write a letter to parents or guardians (see example on page 222).

## MATERIALS

- \_\_\_ Magazine photos and/or colored newspaper advertisements of household products, including some that are hazardous (See “List of Products” for ideas.)
- \_\_\_ Examples of labels from household hazardous products
- \_\_\_ Transparency of “Mr. Safety’s House,” water soluble pen, overhead projector
- \_\_\_ Transparencies of “Label with a Hazardous Word” and “Words on Labels That Mean Hazardous”
- \_\_\_ For each pair of students: the drawing of “Top and Bottom Shelves” and the pictures of “Some Household Products”
- \_\_\_ Scissors, water-based glue, and colored crayons, markers, or pencils

- \_\_\_ For each student, “List of Products” to use as a homework assignment

## PRE-ACTIVITY QUESTIONS

- A. Tell students that since they have learned (in Lesson 1) how some unsafe products can look like safe products, they will now learn more about some products used around the home that may be hazardous and must be handled and stored carefully. Refer students to the list developed in Lesson 1 about types of things that they might have seen at home that they should not touch, smell, or taste.
- Explain that *hazardous* means dangerous and that hazardous substances are likely to cause harm to the environment or to humans.
  - Display pictures from magazines and newspapers of household hazardous products.

**Note:** Younger children might need to see some real containers with labels. Consider using the containers that you began collecting in Lesson 1 for use in Lesson 3.

- B. Have students look at the magazine pictures that you collected. Ask students:
- Which of these products have you actually seen?
  - What products would you not eat or drink? Allow five minutes for discussion. Encourage students to explain their reasons. (You might need to help students with their reasoning.)
    - *That’s medicine. Children should take a medication only if a grown-up gives it to them.*
    - *That’s bathroom cleaner. It is used to kill germs. We could get hurt if we eat or drink it.*
  - What products should you not touch?

Answers will vary; e.g., *ammonia, bleach, gasoline*. (Students should say that most poisonous products should not be touched.)

What products would you not eat or drink and why?

- *That's a bug killer that kills bugs; bugs are animals, and people are animals. So the bug killer could be poisonous to people.*
- *If you drink that drain cleaner, it will eat a hole in your stomach.*
- *If you spray window cleaner in your eyes, you could go blind or at least make your eyes hurt a lot.*
- *Even aspirin can kill you if you take a lot of it.*

Submitted by Ted Schut's first-grade class, Ripona Elementary School, Ripon Unified School District.

What products should you not touch and why?

- *Gasoline because it can burn your hands.*
- *Insect spray; the poison could go through your skin and you could get sick.*
- *Battery acid, because it can burn your skin.*
- *Bleach can burn your skin.*
- *Drain cleaner can burn your skin.*

Submitted by Jody Skidmore's third-grade science class, North Cow Creek Elementary School, North Cow Creek Elementary School District.

- C. Tell students that they will learn about reading warning labels to determine what products they should not touch.

## PROCEDURE

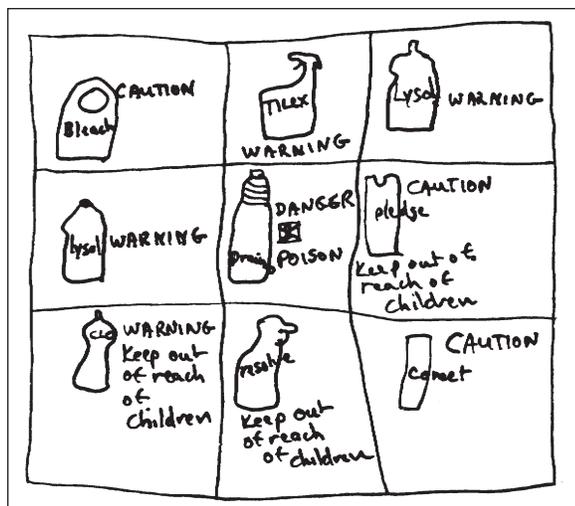
- A. Tell students that they will hear a story about Mr. Safety and will tour Mr. Safety's home. Narrate the following:

As Mr. Safety was cleaning the house one day, he noticed that someone left some products out that could hurt children if they ate, smelled, or touched them. So Mr. Safety decided that he would go through the whole house and pick up harmful products and put them on high shelves where children could not reach them and harm themselves.

- B. Show the transparency of "Mr. Safety's House."
1. Tell students that this is Mr. Safety's house and that they will all help Mr. Safety decide which items to pick up and put on higher shelves out of the reach of children.
  2. Explain to students that the bubble they see on the transparency means that the size of the product has been magnified so we can see it better.
  3. Direct students to look at and identify each room individually and ask, "What products in this room could hurt children if they are smelled, touched, or tasted?" If they do not know, help them out with hints such as, "What do your parents use to scrub the sink or bathtub?"
  4. Ask children what Mr. Safety should put up on a high shelf away from children's reach. (Students should be aware that some products are not hazardous if touched, such as bubble bath and laundry soap, but are hazardous if swallowed and, therefore, should be kept out of children's reach.) As students mention which products should be placed on a high shelf, put an X over that product. You will put an X over:
    - Bubble bath and cleanser in the bathroom
    - Pills in the bedroom
    - Cleanser and drain opener in the kitchen
    - Furniture polish in the living room
    - Paint, charcoal lighter, bug killer, and laundry soap in the garage
  5. Explain what the products do and some of the dangers of the products as you cross them out by placing an "X" over them. For example, drain opener unclogs drains, but it can burn the skin if touched; and the lungs, if inhaled. Oven sprays clean the oven, but they could harm the eyes if sprayed on them. Most household hazardous products are poisonous; therefore, they should never be swallowed. When all the potentially harmful products are crossed out, ask

the students if Mr. Safety has made the house safe for the children. *Yes.*

- C. Ask students what will help them in determining whether or not a product can be hazardous. *We can ask an adult; we can read the label.* Tell students that certain information must appear on labels of hazardous products, and these labels usually contain words that mean “hazardous.” Teach students the meaning of the skull and crossbones graphic on containers that indicates that the contents are poisonous.
1. Show students the transparency, “Label with a Hazardous Word.” Ask students to identify the word that means that the product may be hazardous.
  2. Distribute labels of household hazardous products to students. Ask students to identify and copy on a piece of paper the words that mean that the product may be hazardous. Students can also draw the containers. Students’ work can be displayed on a bulletin board. For younger students, you might need to write these words on the chalkboard or on a piece of butcher paper.



Submitted by Kathy Jones, second-grade teacher, Shasta Elementary School, Chico Unified School District.

3. Use the transparency, “Words on Labels That Mean Hazardous,” to show the following words:
  - Caution
  - Corrosive
  - Danger
  - Explosive

- Flammable
- Harmful if swallowed
- Ignitable
- Keep away from children and pets
- Poison
- Warning

4. Ask students to locate a label that corresponds to any of the words on the transparency, “Words on Labels That Mean Hazardous.”
5. Have students compare and match any words listed on the chalkboard or butcher paper to the words on the transparency.
6. For older students, ask students to classify and group the labels from different household hazardous products, based on the caution that is indicated on the product’s label. This can be done by creating a chart. For example, have students place all the labels with the word “corrosive” in one group; all the labels with the words “harmful if swallowed” in another group, and so on.

## DISCUSSION/QUESTIONS

Discuss with students:

- Where should you look first to find out whether a household product is potentially harmful? *On the label of the container.* If you are not sure, what should you do? *Ask a parent or other adult.*
- What words on a package’s label indicate that the product is dangerous? *Caution, harmful, keep out of reach of children, poison.*
- What should you do if you find someone eating or drinking something harmful or poisonous? *Get an adult; if no adult is around, call the poison control center or 911.*

## APPLICATION

- A. Tell the class that they will get some pictures of things that Mr. Safety needed to put away. Mr. Safety has two shelves to put things on. He wants to use the very high shelf for hazardous products that should be kept out of reach of children. The low shelf is for things that are safe for children.

**Note:** The following activity can also be assigned as homework.

1. Ask students to work in pairs. Pass out copies of “Top and Bottom Shelves” and “Some Household Products.” (Pictures of magazine and newspaper advertisements could also be used.) Tell students that they can cut out the pictures of products and tape or glue them on the appropriate shelf. Students can also color their pictures.
  - Emphasize that products placed on the high shelf are put out of the reach of children because they are potentially harmful.
  - Be sure to emphasize that, in real life, children should never pick up products that could be harmful, even to put them away. Only an adult should touch containers of potentially harmful products.
2. Check students’ work and discuss any hazardous products that students did not identify as hazardous. Then write the following words on the chalkboard:
  - caution
  - danger
  - warning

Ask students to write one of the words on each of the products on the top shelf. On small items, like pills, they can use a bubble to show a magnified label and write the word on the outside of the product (as in “Mr. Safety’s House”).

- B. Have students take their work home to share with their families.

**Homework Assignment:** Send the letter to parents’ or guardians’ homes with students. Ask parents to go through at least one room with their child and conduct a survey for hazardous products. **This homework assignment must be done with an adult.** As an optional activ-

ity, students can draw their own house and indicate where some household hazardous products are located.

**Note:** The example of the letter is located at the end of this lesson.

- C. Ask students to share their experiences of doing the homework assignment with their parents or guardians. A class chart can be designed, indicating each item, the room, and its location in the room.
- D. Ask students to write a sentence or two in their journals about what they have learned in this lesson. They can also draw a picture. Have them share their journal entries in small groups. Check each student’s writing.

## EXTENSIONS

Have students work in groups to make a collage from the labels of household hazardous products. One way to acquire the labels for the whole class is to photocopy some labels and cut out additional labels from magazines and newspapers.

**Project Idea:** Have students design “Hazard Stickers” to warn people that certain household products are hazardous.

## RESOURCES

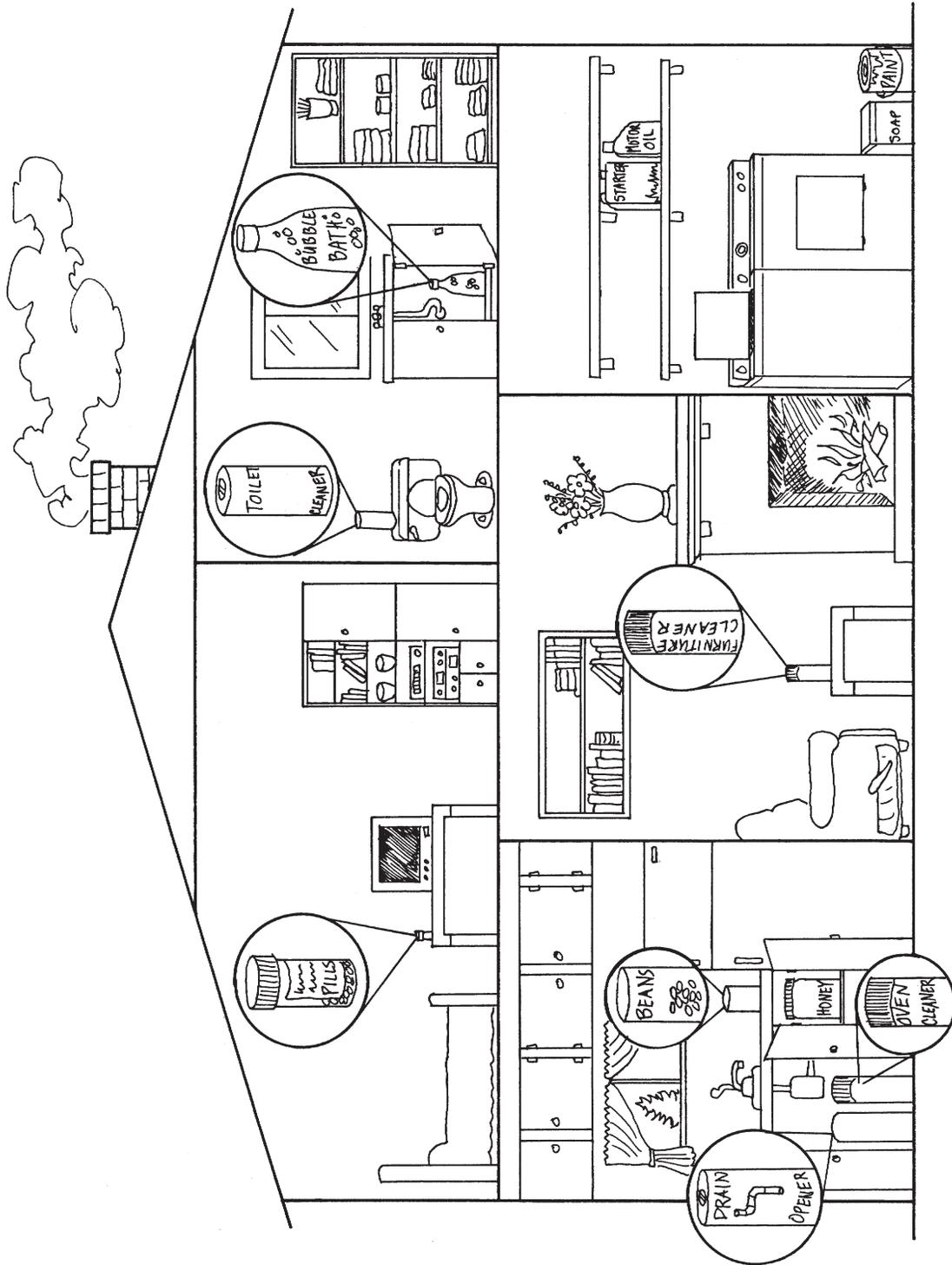
*The No Waste Anthology: A Teacher’s Guide to Environmental Activities K–12.* California Department of Health Services Toxic Substances Control Program, Education and Information Unit. No date. Can be obtained from the California Department of Health Services, P.O. Box 942732, Sacramento, CA 94234-7320; (916) 322-0476.

Contains some activities on household hazardous waste.

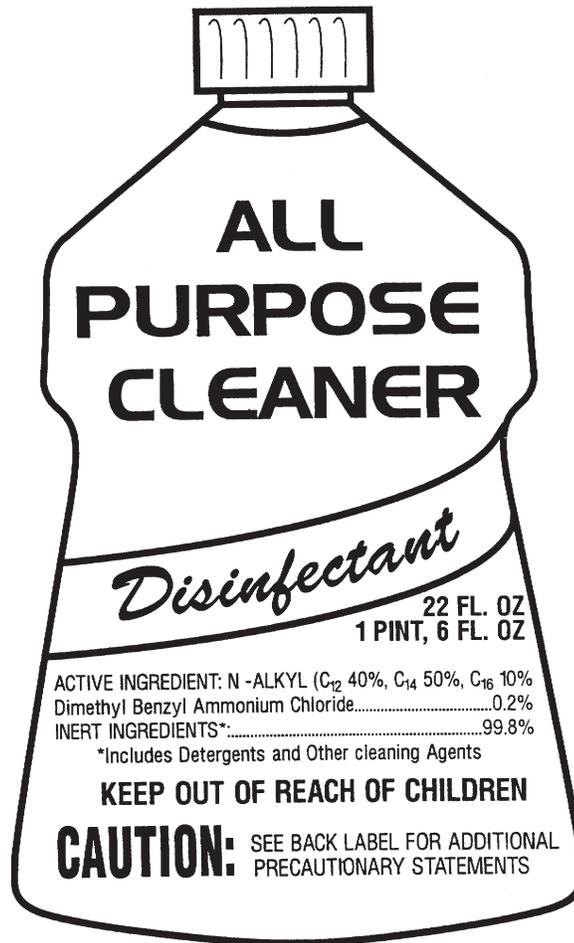
*Toxics in My Home? You Bet!* Local Government Commission, 909 12th St., Sacramento, CA 95814; (916) 448-1198.

Describes hazardous products in a home.

Transparency and Student's Page  
**MR. SAFETY'S HOUSE**



## LABEL WITH A HAZARDOUS WORD

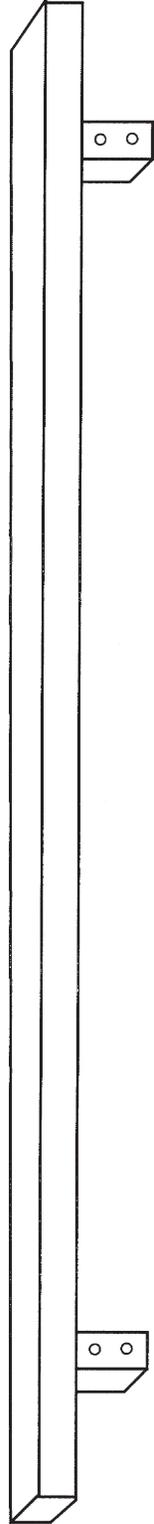
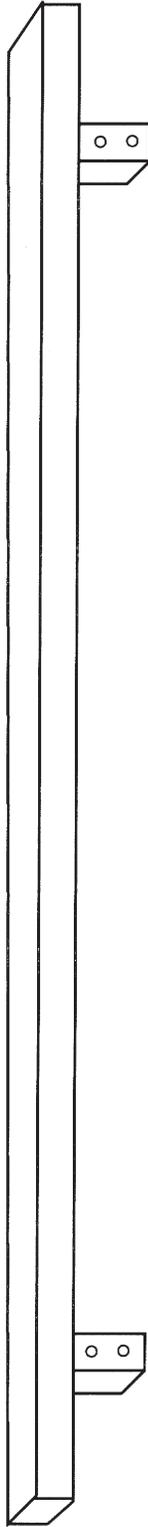


### WORDS ON LABELS THAT MEAN HAZARDOUS

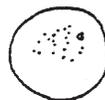
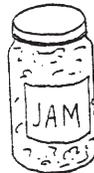
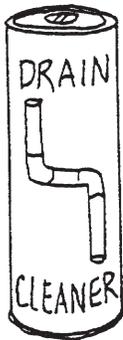
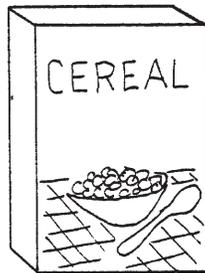
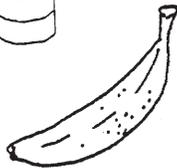
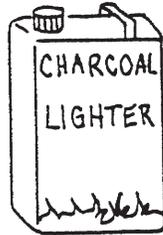
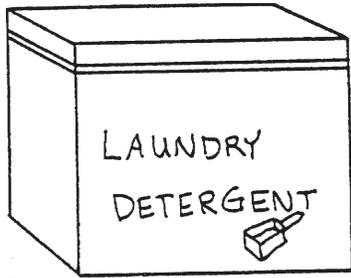
- Caution
- Corrosive
- Danger
- Explosive
- Flammable
- Keep away from children and pets
- Harmful if swallowed
- Ignitable
- Poison
- Warning

Student's Page

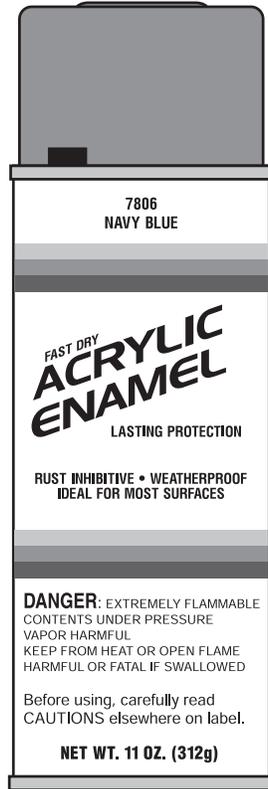
# TOP AND BOTTOM SHELVES



# SOME HOUSEHOLD PRODUCTS



Student's Page  
**SOME PRODUCT LABELS**



## LIST OF PRODUCTS

**Safety Caution:** The following must be done under the direct supervision of a parent or guardian.

Please select one or two rooms (such as bathroom and garage) in your house to survey for potentially hazardous products. Locate any of the following products in these rooms and mark “X” on the chart below. Next to any of the products listed below that you found, copy the words from the label that indicate that this product may be hazardous. See example. You need to complete only five of the listed items, but you can do more if you want to.

Product	Word or words that indicate this product is hazardous
<i>e.g., X Floor polish</i>	<i>Caution</i>
___ 1. Antifreeze	
___ 2. Battery	
___ 3. Bleach	
___ 4. Disinfectant cleaner	
___ 5. Drain opener	
___ 6. Enamel paint	
___ 7. Furniture polish	
___ 8. Laundry soap	
___ 9. Mice or rat poison	
___ 10. Motor oil	
___ 11. No-pest strip	
___ 12. Oil based paint	
___ 13. Oven cleaner	
___ 14. Paint thinner	
___ 15. Pet flea collar	
___ 16. Roach or ant spray	
___ 17. Room deodorizer	
___ 18. Scouring powder	
___ 19. Slug bait	
___ 20. Toilet bowl cleaner	
___ 21. Weed killer	
___ 22. Window cleaner	

(Use school's letterhead.)

Dear Parent or Guardian:

Please read the following information with your child:

We are studying about the potential danger to children if they smelled, touched, or tasted household hazardous products. (Household products are hazardous if not used properly. They usually have a label indicating: caution, keep out of reach of children and pets, warning, poison, etc.) In class we emphasized the importance for such products to be placed out of the reach of children. Please use the "List of Products" your child brought home to inventory products in at least one of your rooms. Write (or have your child write) on the survey form the word appearing on the product's container that indicates that this product might be hazardous. Please place potentially dangerous products on high shelves where children cannot reach them. Your child should be ready to report back to class some part of this experience.

As an optional activity, your child can draw your house and indicate where some household hazardous products are located.

Thank you,

---

## BACKGROUND INFORMATION FOR THE TEACHER

In order to accomplish a number of common household tasks efficiently and effectively with minimal effort, people in our society use many products which contain hazardous substances. A household product is hazardous if the label mentions words like "poison," "harmful if swallowed," "caution," "flammable," "warning," "danger," "pesticide," "keep away from heat

or open flames," or "keep away from children and pets." Younger children should be able to recognize the skull and crossbones symbol. The average home contains numerous products that are potentially hazardous if stored, handled, or used improperly. Children are often attracted to colorful bottles of home cleaners and other potentially hazardous products.

# LESSON 3: Proper Disposal of Household Hazardous Waste

## LESSON'S CONCEPT

Many household products are hazardous, both when they are used and when they are disposed of. They must be separated carefully from regular waste. Most household hazardous waste can be taken to a collection site, where some of the hazardous waste can be recycled. Inappropriate disposal of household hazardous waste can harm the environment and people.

### PURPOSE

Students will learn how household hazardous waste should be disposed of.

### OVERVIEW

In this lesson students will:

- Observe a variety of empty containers and some labels of household hazardous waste.
- Color and put together a coloring book about household hazardous waste.
- Play a relay game to learn appropriate disposal methods for various household products.
- Listen to a speaker from the local household hazardous waste management site and write a thank you letter to the speaker.
- Design posters that show the proper disposal of household hazardous waste.

### CORRELATIONS TO CALIFORNIA'S CONTENT STANDARDS AND FRAMEWORKS

- By listening to a speaker, students acquire information on how to properly manage household hazardous waste.
  - Students "retell, paraphrase, and explain what has been said by a speaker." (*English–Language Arts Content Standards for California Public Schools, Kindergarten Through Grade Twelve*, page 20)
  - Students "determine the purpose or purposes of listening (e.g., to get information, to solve problems, for enjoyment)." (*English–Language Arts Content Standards for California Public Schools,*

*Kindergarten Through Grade Twelve*, page 15)

- People "need to exercise judgment, care, and planning . . . in their practices of disposing of wastewater and materials." (*Science Framework*, page 125)
- Students "acquire information by listening, observing, using community resources, and reading various forms of literature and primary and secondary source materials." (*History–Social Science Framework*, page 26)
- Students read words concerning household hazardous waste, and they color a corresponding picture. They also write thank you letters to a speaker who visited their class.
  - "Students know about letters, words, and sounds. They apply this knowledge to read simple sentences." (*English–Language Arts Content Standards for California Public Schools, Kindergarten Through Grade Twelve*, page 1)
  - Students write "personal and formal letters, thank-you notes, and invitations . . . (that) include the date, proper salutation, body, closing, and signature." (*English–Language Arts Content Standards for California Public Schools, Kindergarten Through Grade Twelve*, page 18)
- Students make posters that show the proper disposal of household hazardous waste.
  - "Students create original artworks based on personal experiences or responses." (*Visual and Performing Arts*

*Framework*; Visual Art: Creative Expression Component, Goal 4, page 101)

- "Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept . . . students will . . . communicate observations orally and in drawings." (*Science Content Standards, Grades K–12*; Kindergarten; Investigation and Experimentation, Standard 4e)

## SCIENTIFIC THINKING PROCESSES

observing, communicating, ordering, comparing, classifying, relating

## TIME

60 minutes to prepare for the lesson and 90 minutes to implement the lesson.

## VOCABULARY

household hazardous waste, pollution  
(Select additional words that students are curious about in this lesson.)

## PREPARATION

1. Read the "Background Information for the Teacher" at the end of this lesson.
2. Identify agencies and organizations that deal with the proper disposal of hazardous household products. Call the local recycling center, household hazardous waste (HHW) coordinator, or health department to find out about disposal procedures and other related issues, including locations of local household hazardous waste collection sites. You can also "Earth's 911" at 1-800-CLEANUP or visit the Web site at [www.1800cleanup.org](http://www.1800cleanup.org) for information on household hazardous waste and referrals to local program coordinators.
3. Invite a speaker to talk about disposing waste safely and recycling household hazardous waste.
4. If you have obtained information packets concerning the disposal of household hazardous waste in your community, prepare copies for students to take home.
5. Duplicate sheets from "Safe House, Safe Me!" (pages 229–234) to provide one set for each group of six students (so that each student will have one sheet).
6. Do "a" and/or "b."
  - a. Collect ten containers from non-hazardous products (e.g., food and beverage containers, like cereal boxes, milk cartons, gallon plastic jugs). In half of these add water or paper to represent the presence of the product inside

the container.

If you haven't already done so, collect at least ten empty and rinsed out household hazardous product containers that have some type of warning labels. You might be able to get some of these from the school's custodian and some from your home.

- Obtain at least one one-gallon plastic water or milk jug. To that container, add water and label it "used oil."
  - Pour about a cup of water into half of the ten household hazardous waste containers. These will represent containers that still contain the original product.
  - For added safety, tape all lids on all containers.
  - Label half of the nonhazardous and hazardous product containers with "Team #1" and the other half with "Team #2."
- a. If you do not wish to gather the containers, you can use the cards printed in this lesson. Duplicate and cut apart two sets of the two pages of "Cards Representing Various Products" in this lesson (pages 235 and 236). Label the first set "Team #1" and the second set "Team #2."
7. Prepare the playing area. This area can be in the classroom or outside.

- Designate one area as the “Household Hazardous Waste (HHW) Collection Site” by placing a plastic tarp or sheet on the floor or ground.
- Within the HHW Collection Site, provide a box for HHW that can be recycled. Label this box “HHW for Recycling.” Also provide a box for HHW that can be reused. Label this box “HHW for Reusing.”
- Designate an area on the other side of the playing field or classroom as a “Regular (Nonhazardous) Household Waste Collection Site.”
- Within that site designate a box for reusing, a box recycling, and a box for a landfill. Label the boxes “Reuse,” “Recycle,” “To Landfill.”

## MATERIALS

- \_\_\_ At least ten containers from nonhazardous products (half containing some product simulated by using water or paper)
- \_\_\_ At least ten containers from household hazardous products with warning labels (half containing a cup of water)
- \_\_\_ One motor oil container with water and a label indicating “used oil”
- \_\_\_ If not using containers, you will need “Cards Representing Various Products.”
- \_\_\_ Copies of pages from “Safe House, Safe Me!” (a set for each group of six students)
- \_\_\_ Scissors
- \_\_\_ Colored pencils, crayons, or markers
- \_\_\_ Plastic tarp or sheet
- \_\_\_ Five boxes (or five hula hoops)

## PRE-ACTIVITY QUESTIONS

- A. Ask students:
- How do we usually handle our regular (nonhazardous) waste? *We recycle it; we reuse it; we throw it in the garbage can.*
  - What do reduce, reuse, and recycle have to do with trash? *Reducing how much you use so you won't have as much trash to throw away; reusing things, recycling things like aluminum cans.*
- B. With the pile of ten empty and rinsed out containers that have some type of warning labels placed in front of the students, lead a discussion:

- Each container has some type of warning information. Is this warning for the contents inside or for the container itself? *The contents inside.*
- If the container is totally empty, what can be done with it? *Maybe it can be recycled, or it will need to go to the trash can. We can also read the label to see whether it says anything about proper disposal of the empty container. We can look for the recycle symbol and plastic numbers.*
- How can we find out whether the empty container can be recycled? *Find out what our community recycles by calling someone who works for a garbage company.*
- When do people want to dispose of household hazardous waste? *When they no longer want it.*
- Could they give a household hazardous product in its original container to a neighbor to use; for example, toilet bowl cleaner? *Yes. Tell students that it is recommended that the entire contents in the container of a household hazardous product be used up. If a family no longer wants to use it and someone else wants to use it properly, then the family can give it to someone else.*
- If a family cannot give away a container that still has some household hazardous product in it (and since the family no longer wants it, and it is now considered household hazardous waste), what can the family do? *Don't know; take it to a special place; throw it away. If someone says to put it in the garbage can, tell students that it is against the law to put household hazardous waste, even if it is in a container, in the garbage can. If the container breaks or bursts when it is compacted, the product could injure the person who collects the garbage or someone working at the landfill. The container could also leak from the landfill into surrounding areas.*

## PROCEDURE

- A. Separate the class into groups of six students. Provide each group with a set of copied pages to color from the “Safe House, Safe Me!” coloring pages in this lesson.
- Provide colored pencils, crayons, or markers to students.
  - Ask that each student complete one page.
  - Once students have completed coloring, have each student read his or her page with the group.
  - Have each group compile its colored pages into a booklet, which can be stapled.
  - As a class, discuss what information we learned from the booklet.
  - Tell students that some household hazardous waste can be recycled. In our community these wastes include used motor oil, antifreeze, and batteries. (*Note:* Use the actual list from your community’s household hazardous waste facility.) These should never be poured out on the ground or in storm drains, because they can pollute the environment. They should never be thrown into the garbage can, because they can injure workers who collect garbage or work at the landfill and can also pollute the landfill.

*Note:* Consider allowing one student from each group to take home the booklet overnight to share with family members. Then the booklet will need to be brought back for another student to take home. If this set-up will not work for your students, then consider providing a set of pages from “Safe House, Safe Me!” especially pages 1, 2, 3, and 5 (these can be copied on both sides of the paper to conserve paper), for students to color at home.

*Note:* You will need to adjust the following game to the grade level of your students.

- B. If you have collected at least ten containers from nonhazardous products and ten empty and rinsed out containers (from hazardous products) that have some type of warning labels, do #1. If you did not gather the containers, do #2.
1. Make sure that you have poured about a cup of water into half of the ten empty

containers that have some type of warning labels. These will represent containers that still contain the original products. For added safety, tape all lids on all containers.

- Half of the nonhazardous containers should also have something in them, such as waste or paper to represent food.
  - Make sure that you have labeled half of the nonhazardous and hazardous product containers with “Team #1” and the other half with “Team #2.”
2. If you do not wish to gather the containers, you can use the “Cards Representing Various Products” printed in this lesson. You might want to have students color these.
    - Make sure that you have made two sets of cards with “Team #1” written on each one of one set of cards and “Team #2” written on each one on the other set of cards.
    - The cards can be laminated and kept to use with other classes.

*Note:* This game can be organized not as a relay but by using a point system based on accuracy. Place the disposal boxes close together and have students deposit their containers or cards in the appropriate disposal box. Give teams points for placing items in the correct disposal box. Another variation is to have the teacher ask for an item for a particular disposal box, and groups have to send someone with the item to the teacher. This can be played for points or for prizes.

- C. Lead students to the playing area, or point it out to them if the area is in the classroom.
1. Indicate the location of the simulated “Household Hazardous Waste (HHW) Collection Site.”
  2. Point out the box within the “HHW Collection Site” for household hazardous waste that can be reused and the box for household hazardous waste that can be recycled. Any household hazardous waste that cannot be reused or recycled should be placed in a pile on the tarp.
  3. Show students the “Regular (Nonhazardous) Household Waste Collection Site,” which should be on the other side of the playing field or classroom.

4. Point out the boxes for reusing, recycling, and the landfill within the “Regular (Nonhazardous) Household Waste Collection Site.”
- D. Tell students that the object of the game is for students to place their containers or cards in the appropriate area, based on what is accepted and recycled in their community.
- If using real containers, students will need to notice those that are empty and those that are not.
  - If using cards, ask students to assume that all containers contain some product for the first game. Then play a second round of the game and have students assume that all containers are empty.

**Safety Note:** Emphasize to students that they will pretend to be adults taking the household hazardous waste to a proper household hazardous waste collection site in their community. They should not touch these products at home unless approved by their parents or guardians.

- E. Separate students into two teams: Team #1 and Team #2.
- Give a set of containers or cards to each team.
  - Ask each team to distribute at least one container or card to each student.
  - Ask the two teams of students to stand in the middle between the “Household Hazardous Waste Collection Site” and the “Regular (Nonhazardous) Household Waste Collection Site.”

**Note:** Students might not know where various waste should go, so encourage them to guess. The labels might give them a clue. The discussion at the end of the game is important for students to learn where each waste should have gone.

- F. Play the game in a relay fashion, but without having students run.
- One student from each team will look at his or her container or card and walk to the appropriate disposal site, placing the container or card in the appropriate place.
  - These students walk back to their groups, and the next student in line deposits his or her container or card in the appropriate place.

- Emphasize to students that the goal is not speed, but accuracy.
- G. When the relay is over, have students look at each collection site and analyze its contents.
- Are all waste materials in their proper place? Was Team #1 or Team #2 more accurate? (If needed, students will need to refer to what materials are recycled in their community.)
  - Where should some of these items be placed? Ask students to take the items that were not placed in correct containers to the correct containers.
- H. If cards were used in the game, play the game with a second set of cards. If containers were used in the game, consider playing the game with cards.

**Note:** For additional information and activities on reducing, reusing, and recycling nonhazardous waste, see Unit 2 in the K–3 Module.

- I. If you plan to invite to the class a speaker from the household hazardous waste collection site, do the following:
- Determine with students the purpose(s) for listening to the speaker. *To get information.*
  - Develop a list of questions with students on what to ask the speaker. For example, what happens to the waste that is brought to a household hazardous waste collection center?
  - Have the speaker talk to students about the household hazardous waste recycling and disposal site in the community. Students should learn that the first way to deal with a household hazardous product is to use it all up. Then the container can be recycled or placed in the garbage can (depending on your community’s solid waste management opportunities and the directions, if any, on the container).
  - Show the speaker the actual containers of household hazardous waste that you have collected for this lesson and/or the cards printed in this lesson, and ask the speaker to help students determine the proper disposal for each type of waste.
  - After the speaker is gone, ask students to retell, paraphrase, or explain what was said by the speaker.

- Ask students to draw one thing that they learned from the speaker.
- Have students write thank-you letters to the speaker. Older students should include the date, proper salutation, body, closing, and signature on the thank-you letter. For younger students, combine the writings into one letter to send to the speaker. Some drawings could be included in the letter. For older students, consider sending most or all of their letters to the speaker.

**Note:** The school's custodian can also speak to the class about how he or she disposes of the containers for chemicals used to clean classrooms.

## DISCUSSION/QUESTIONS

- Ask students what the difference is between household hazardous products and household hazardous waste. *Household hazardous products are products that are used at home that could be poisonous or dangerous in other ways. Household hazardous waste is the product you no longer want.* Explain to students that household hazardous waste can also be a used product, such as used motor oil or used batteries. These can be recycled.
- Ask students how the game they played is similar to what happens in their community in terms of household hazardous waste collection.

## APPLICATION

- Discuss and, if necessary, teach students how their families can get rid of household hazardous wastes no longer needed in order to limit their harmful effects on the environment and other people. Share with them the information you have found out about household hazardous waste disposal in your community.
- Provide a handout of information on household hazardous waste for students to take home to their families. An example of a letter to parents and other information that applies to your community that you will need to complete this activity are provided at the end of this lesson.
- Ask students to make posters to inform adults of the importance of taking household hazardous waste to the household hazardous waste facility.

- Ask students to write a sentence or two in their journals about what they have learned in this lesson. They can also draw a picture. Have them share their journal entries in small groups. Check each student's writing.

I have learned to read the labels of hazardous products and to keep toxic products on high shelves.

I have learned that we should be very careful of what we touch, eat, and smell and drink. 'Cause you never know something you think is good could be bad to your health.

Submitted by Christina Lucas, second- and third-grade teacher, Baywood Elementary School, San Luis Coastal Unified School District.

## RESOURCES

### Videos

*Hazardous Waste, Whose Problem Is It Anyway?* 1989. Available from the Environmental Health Coalition, San Diego (10 minutes).

A class goes to different rooms in a house and looks at the problems of household hazardous products and waste. Discusses the importance of reading labels, storing household hazardous products safely, and disposing household hazardous waste safely.

*Peter Paint and Pals*, Produced by Creative Edge Communications and City of Chino, 1996.

Cartoon-type characters representing various household hazardous products explain why some household hazardous waste disposal methods are not acceptable and discuss how to dispose properly of household hazardous waste.

### Other Resources

Call "Earth's 911" at 1-800-CLEANUP or visit the Web site at [www.1800cleanup.org](http://www.1800cleanup.org) to acquire automated information on locations of recycling centers in your community.

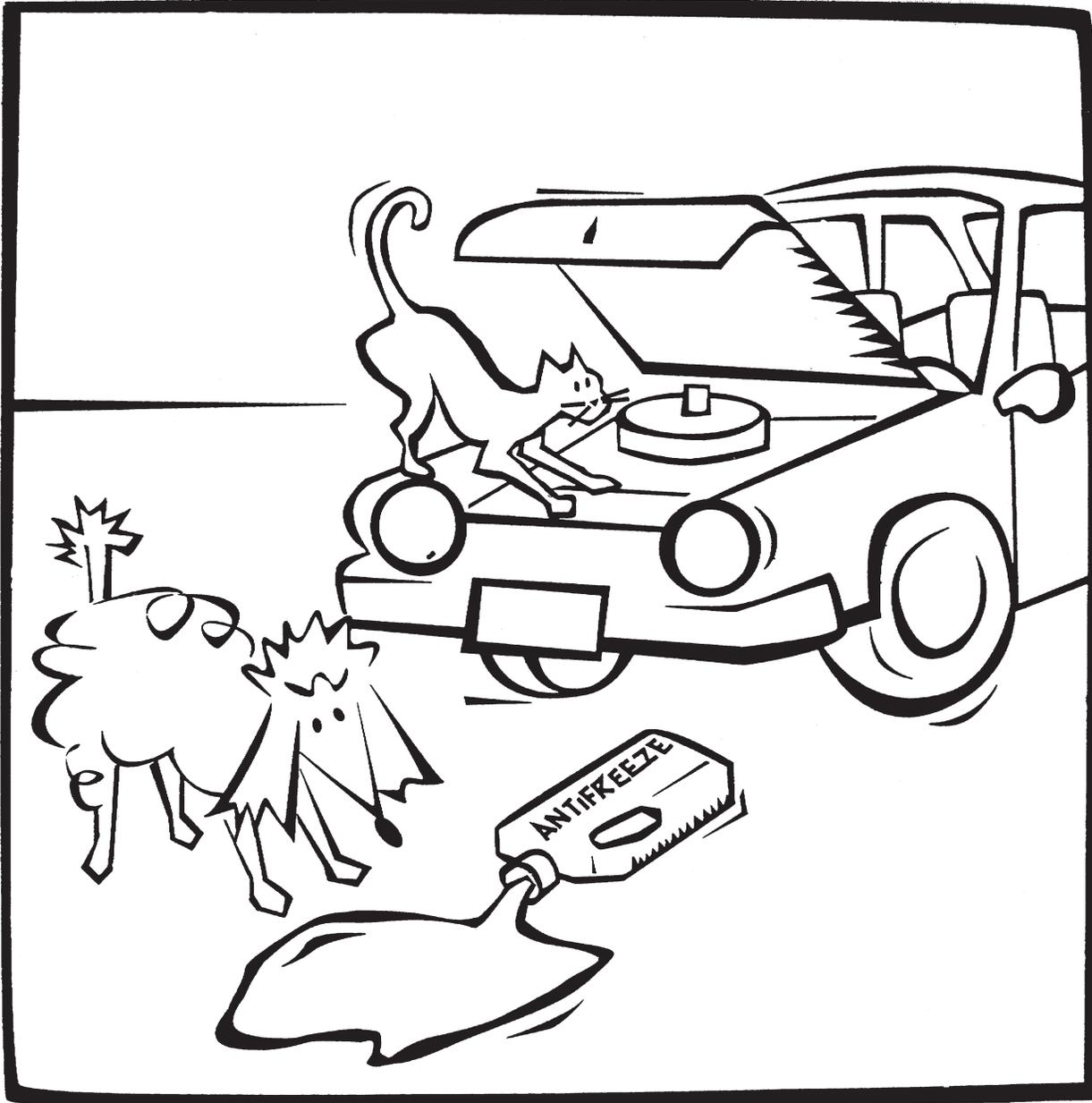
# SAFE HOUSE, SAFE ME! (PAGE 1)



K-3 Module  
Unit 5

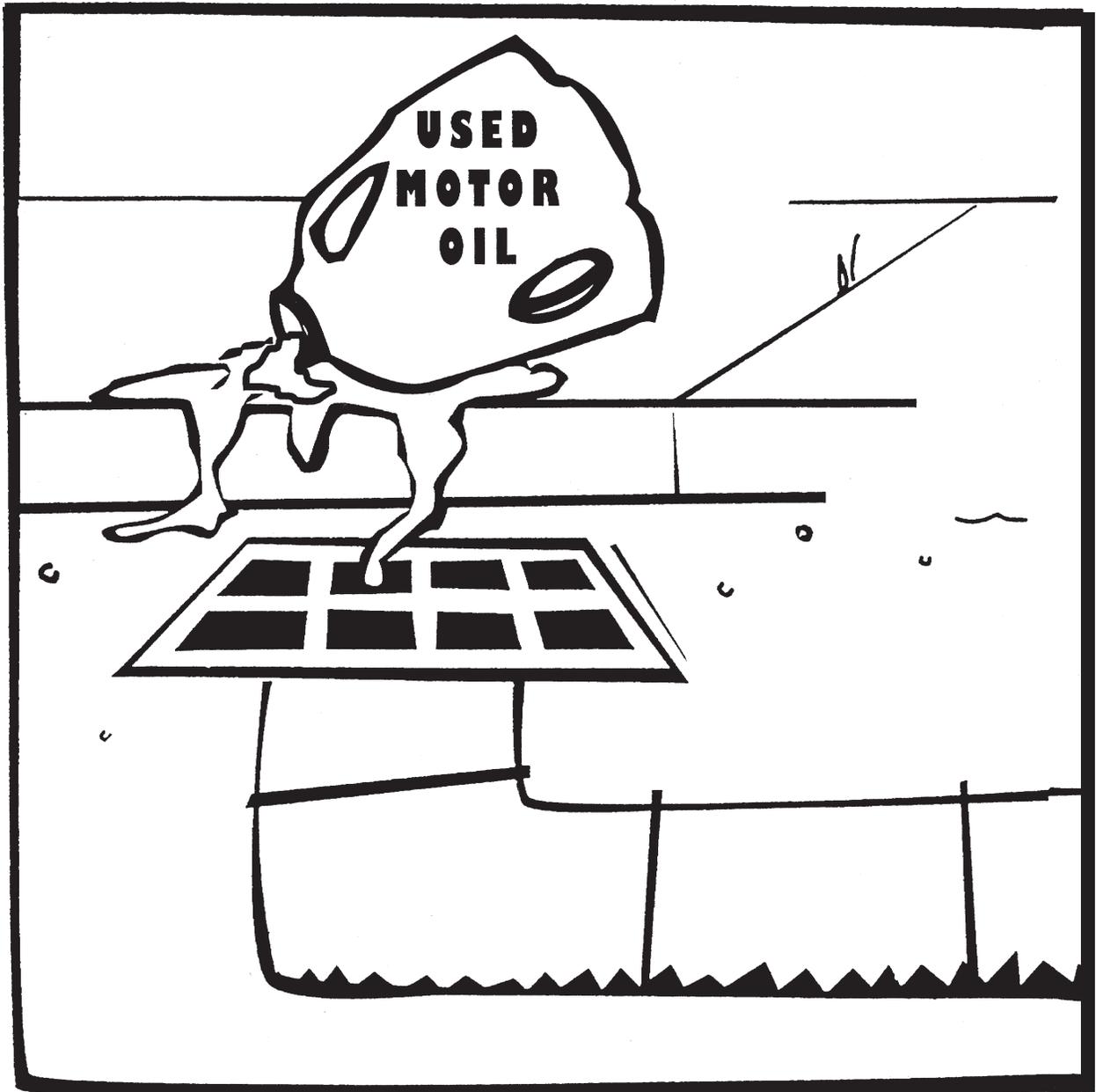
Keep in a safe place.

**SAFE HOUSE, SAFE ME!**  
**(PAGE 2)**



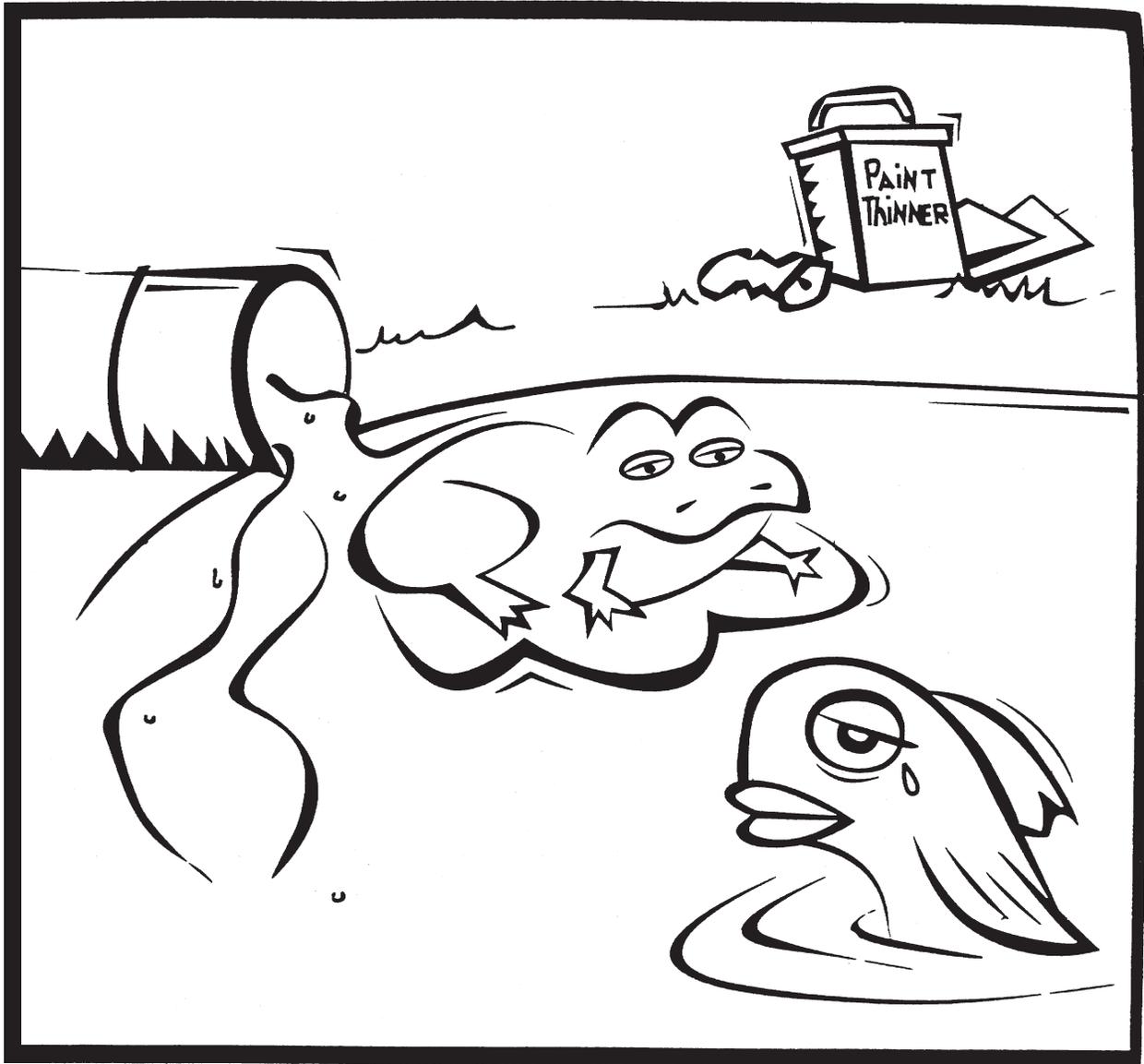
**Antifreeze is poisonous.**

**SAFE HOUSE, SAFE ME!**  
**(PAGE 3)**



**Do not dump used oil down a storm drain.**

**SAFE HOUSE, SAFE ME!**  
**(PAGE 4)**



**Paint thinner is dangerous to animals.**

**SAFE HOUSE, SAFE ME!**  
**(PAGE 5)**



**Recycle old car batteries, leftover latex paint,  
and used motor oil.**

Student's Page

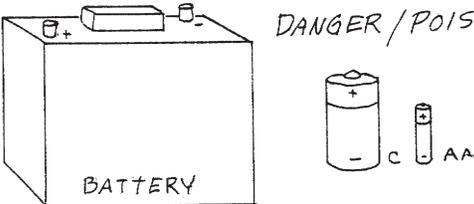
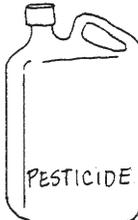
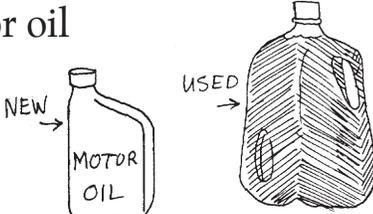
**SAFE HOUSE, SAFE ME!**  
**(PAGE 6)**



**Everybody is safe.**

# CARDS REPRESENTING VARIOUS PRODUCTS

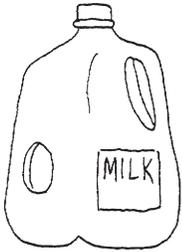
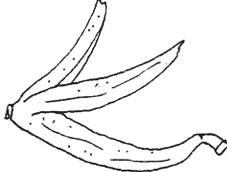
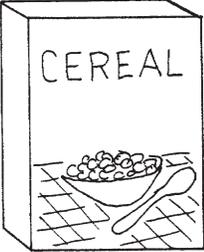
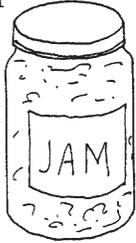
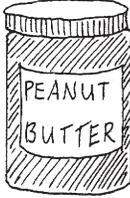
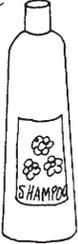
(Household Hazardous Products)

<p><b>Aerosol can</b></p>  <p>DANGER: EXTREMELY FLAMMABLE</p>	<p><b>Fertilizer</b></p>  <p>CAUTION: CAN BE HAZARDOUS TO HUMANS OR ENVIRONMENT.</p>
<p><b>Toilet bowl cleaner</b></p>  <p>DANGER: KEEP OUT OF REACH OF CHILDREN.</p>	<p><b>Medicine</b></p>  <p>WARNING: KEEP OUT OF REACH OF CHILDREN.</p>
<p><b>Battery</b></p>  <p>DANGER / POISON</p>	<p><b>Paint</b></p>  <p>CAUTION: KEEP OUT OF REACH OF CHILDREN.</p>
<p><b>Window cleaner</b></p> 	<p><b>Pesticide</b></p>  <p>WARNING: HAZARDOUS IF SWALLOWED</p>
<p><b>Antifreeze</b></p>  <p>WARNING: HAZARDOUS IF SWALLOWED</p>	<p><b>Motor oil</b></p>  <p>DANGER: HARMFUL OR FATAL IF SWALLOWED</p>

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# CARDS REPRESENTING VARIOUS PRODUCTS

(Household Nonhazardous Products)

<p>Milk jug</p> 	<p>Banana peel</p> 
<p>Cereal box</p> 	<p>Aluminum soda can</p> 
<p>Glass jar from jam</p> 	<p>Plastic jar from peanut butter</p> 
<p>Soup can</p> 	<p>Plastic 2-liter beverage bottle</p> 
<p>Shampoo bottle</p> 	<p>Box from baking soda</p> 

(Use school's letterhead.)

Dear Parent or Guardian:

Please read the following information with your child:

Our class is studying household hazardous products. Since the safety of children is our highest priority, we have been studying the various kinds of household hazardous products they may encounter, including:

- Aerosol cans
- Automotive products (including used oil and used oil filters)
- Batteries
- Cleaning products
- Fertilizer
- Fluorescent light bulbs
- Fuels
- Medicines
- Paints (including wood preservatives and paint solvents)
- Pesticides

Students have learned that:

- Containers containing any leftover household hazardous products should never be placed in the trash.
- The contents of household hazardous products should never be poured down the drain, on the ground, or into a storm drain.
- The contents of household hazardous products that are no longer wanted by the family that bought them are called household hazardous waste (HHW).
- To protect people and water supplies and to keep our environment from becoming polluted, the community provides a household hazardous waste collection site where you can bring your household hazardous waste.

To increase home safety with household hazardous materials, the California Integrated Waste Management Board suggests the following:

- Buy only what you need and will be able to use up.
- Use the product up.
- Give it to someone who could use it safely.
- Take it to the household hazardous waste disposal site. This is located on

The telephone number to call for information on the proper disposal of household hazardous waste in our community is: \_\_\_\_\_

Thank you,

# BACKGROUND INFORMATION FOR THE TEACHER

Research the types of household hazardous waste collections that are available in your community. Contact the county waste department or environmental health services. Many communities sponsor monthly drop-off events or maintain a permanent disposal location for household hazardous wastes. You can also call “Earth’s 911” at 1-800-CLEANUP or visit the Web site at [www.1800cleanup.org](http://www.1800cleanup.org) for information on household hazardous waste and referrals to local program coordinators.

Household hazardous waste does not belong in a landfill, on the ground, in the gutter, in creeks or other bodies of water because it pollutes the environment. It belongs at a household hazardous waste collection site. Some household hazardous wastes can be recycled. In fact, recycling used motor oil is the only safe and legal option. The following information explains the household hazardous waste disposal options.

## Recommendations for Household Hazardous Wastes (HHW)

- Keep all household hazardous products and wastes out of the reach of children and pets.
- Read the label before handling any household chemicals.
- Avoid mixing household wastes together for disposal.
- Avoid putting a hazardous product in a different container.
- Use the product up before recycling or disposing the empty container. (Follow directions on the container’s label on how to dispose properly of the empty container.)
- Call the local county recycling agency, health department, or household hazardous waste coordinator to learn proper disposal and/or recycling/reuse options in your community.
- Take household hazardous waste to a household hazardous waste collection site or event in your community.

## Actions to Take Concerning HHW (In the order recommended by

## the California Integrated Waste Management Board)

### A. Reduce

Identify household hazardous products that can be used less. Consider whether the product is really needed and whether safer alternatives are available.

**B. Reuse** (In the case of household hazardous waste, reuse can mean “to use up” the product).

Whenever possible use up the product or give it to someone who will use all of it. For example, reuse paint solvents by letting the paint sludge settle and then reuse the solvent. Some charities accept excess paints that they will use. Household hazardous waste collections programs may offer opportunities to reuse items.

### C. Recycle

Recycle those household hazardous wastes that can be recycled in your community. Used automobile oil, used oil filters, used antifreeze, used batteries, and leftover paints are the principal household hazardous waste that are recyclable. None of these should ever be poured into storm drains or sewers, because these may be directly connected to streams or other bodies of water and the waste will pollute the water. To find out how and where to recycle used automobile oil, oil filters, and antifreeze, call the county’s recycling or household hazardous waste coordinator or the Environmental Protection Agency’s environmental hotline 1-800-CLEAN-UP. Note that recycling used oil and used oil filters is the **only** legal and environmentally safe way of handling this resource.

### D. Safe Disposal

- Many cities and counties have a permanent household hazardous waste collection facility. Some of these household hazardous waste collection facilities are called ABOP, which is an acronym for the four items that are accepted at that facility:
  - Antifreeze
  - Batteries
  - Oil (used motor oil)

- Paint
- Many communities organize household hazardous waste collection events. Call the county recycling or household hazardous waste coordinator for locations of local household hazardous waste collection events.
- Some household hazardous waste collection facilities or household hazardous waste collection events accept all of the following:
  - Aerosol cans
  - Automotive products (including used motor oil and used motor oil filters)
  - Batteries
  - Cleaning products
  - Fertilizer
  - Fluorescent light bulbs

- Fuels
- Medicines
- Paints (including wood preservatives and paint solvents)
- Pesticides
- None of the above products should be placed in a trash can or poured down a drain.
- Most household hazardous waste collection facilities or household hazardous waste collection events do not accept ammunition, explosives, radioactive materials, or infectious wastes.

**Note:** For more information, see “Appendix B–VI, Household Hazardous Wastes.”



Mendo-Lake HazMobile collects household hazardous waste on specific days throughout the year in Mendocino and Lake counties.

# NOTES