

# School Recycling Club SHIP

(Supporting Home Instruction Program)



## Lesson Plan 4

- Grade Level: K-3
- Lesson: I—What is Household Hazardous Waste?  
Home Tour
- Source: *Teaching Toxics*
- Activity/Craft: Math Activities About Recycling by Erica Miller PDF
- Video Link: Spike's Poison Prevention Adventure ([https://www.youtube.com/watch?v=7\\_wKRruqpGI](https://www.youtube.com/watch?v=7_wKRruqpGI))
- Game Link: Earth Day Printable Pack (<https://www.totschooling.net/2014/04/free-earth-day-pack-for-toddlers-prek.html>)
- Earth Day Link: Earth Day Tree Coloring Page (<https://www.crayola.com/free-coloring-pages/print/earth-day-tree-coloring-page/>)



# Lesson Matrix Grades K-3

## Teaching Toxics

Lesson	Concept	Objective	Common Core Alignments	Skills
K-3 Home Tour	Products containing hazardous substances are commonly used in homes.	<ul style="list-style-type: none"> <li>Identify types of hazardous products</li> <li>Identify place where hazardous products are found in the home</li> </ul>	<b>Kindergarten</b> CC.RI.K.4 CC.W.K.2 CC.K.G.1  <b>Grade 2</b> CC.RI.2.4 CC.SL.2.3 CC.2.MD.10	<ul style="list-style-type: none"> <li>Analyzing</li> <li>Applying mathematics concepts</li> <li>Collaborating</li> <li>Investigating</li> </ul>
		<ul style="list-style-type: none"> <li>Recognize the signal words ("caution," "warning," "danger,") and visual symbols that indicate the presence of hazardous substances in consumer products</li> </ul>	<b>Kindergarten</b> CC.RI.K.9 CC.W.K.2 CC.K.MD.2  <b>Grade 2</b> CC.RI.2.4 CC.SL.2.2 CC.2.MD.10	<ul style="list-style-type: none"> <li>Applying mathematics concepts</li> <li>Communicating</li> <li>Evaluating</li> <li>Graphing data</li> </ul>
K-3 Warning Words	Signal words and /or symbols identify products which contain hazardous substances.	<ul style="list-style-type: none"> <li>Trace the path of water to find out what happens after something is poured down the drain</li> </ul>	<b>Kindergarten</b> CC.RI.K.1 CC.SL.K.2 CC.W.K.3  <b>Grade 2</b> CC.RI.2.2 CC.SL.2.2 CC.W.2.2	<ul style="list-style-type: none"> <li>Collaborating</li> <li>Gathering information</li> <li>Questioning</li> </ul>
		Household wastewater is treated by biological or chemical means so that it can be used again.	<b>Grade 1</b> CC.RI.1.2 CC.SL.1.2 CC.W.1.8  <b>Grade 3</b> CC.RI.3.1 CC.RI.3.3 CC.SL.3.2 CC.W.3.4	<ul style="list-style-type: none"> <li>Applying mathematics concepts</li> <li>Communicating</li> <li>Evaluating</li> <li>Graphing data</li> </ul>

Lesson	Concept	Objective	Common Core Alignments		Skills
<b>K-3</b> <b>Household Connections</b>	Hazardous substances in household products can enter the environment if they are improperly used or disposed.	<ul style="list-style-type: none"> <li>Recognize how homes are connected to the environment</li> <li>Trace the ways household hazardous waste enter environment</li> </ul>	<b>Kindergarten</b> CC.RI.K.3 CC.W.K.8 CC.K.CC.6	<b>Grade 1</b> CC.RI.1.3 CC.SL.1.2 CC.1.MD.4	<ul style="list-style-type: none"> <li>Applying ideas to solve problems</li> <li>Communicating</li> <li>Graphing data</li> <li>Synthesizing</li> </ul>
<b>K-3</b> <b>Prevention is the Best Medicine</b>	Substances from the external environment enter the body through ingestion, inhalation, and absorption.	<ul style="list-style-type: none"> <li>Identify the ways in which substances enter the body</li> <li>Develop awareness of the ways in which substances enter the body</li> </ul>	<b>Kindergarten</b> CC.L.K.6 CC.RI.K.4 CC.SL.K.1	<b>Grade 1</b> CC.RI.1.7 CC.SL.1.2 CC.SL.1.5	<ul style="list-style-type: none"> <li>Defining problems</li> <li>Evaluating</li> <li>Researching</li> </ul>
<b>K-3</b> <b>Test the Alternatives</b>	Using non-toxic cleaning products is one way to reduce consumption of hazardous products.	<ul style="list-style-type: none"> <li>Introduce the concept of toxicity reduction by using non-toxic cleaners in the classroom</li> </ul>	<b>Grade 2</b> CC.RI.2.2 CC.SL.2.2 CC.SL.2.6	<b>Grade 3</b> CC.RI.3.7 CC.SL.3.3 CC.W.3.8	<ul style="list-style-type: none"> <li>Collaborating</li> <li>Designing</li> <li>Investigating</li> <li>Using mathematics</li> </ul>
			<b>Kindergarten</b> CC.L.K.5.c CC.RI.K.10 CC.SL.K.4	<b>Grade 1</b> CC.RI.1.1 CC.SL.1.2 CC.1.NBT.3	
			<b>Grade 2</b> CC.RI.2.3 CC.SL.2.2 CC.2.NBT.3	<b>Grade 3</b> CC.RI.3.1 CC.W.3.4 CC.3.NF.1	

# Lesson Matrix Grade K-3

## Teaching Toxics

# Checklist of Things To Do

## Home Tour

- ✓ Draw a large, basic diagram of house and yard. This diagram should show the rooms where hazardous products are commonly found, e.g., garage, basement, kitchen and bathroom.
- ✓ Collect pictures of common hazardous products. Tip: look in housekeeping magazines or hardware advertisements. You can also use the hazardous product pictures from [Section I, 4-6, Looking at Labels.]
- ✓ Collect empty containers of hazardous products for a teacher demonstration.
- ✓ Attain Mr. Yuk stickers from your local poison center. If not available locally, go to <http://www.upmc.com/Services/poison-center/Pages/store.aspx> to order them online.

## Warning Words

- ✓ Make a poster with the lyrics of "Be Aware of Toxics in the Home" song.
- ✓ Enlarge and copy pictures of Mr. Yuk and skull and crossbone poison symbols.
- ✓ Collect three clear containers. Label one with Caution, one with Warning and one with Danger.

## Washing Water

- ✓ Attain a copy of *The Magic School Bus at the Waterworks*, by Joanna Cole.
- ✓ Collect empty, hazardous product containers for a teacher demonstration. You may want to take safety precautions, such as sealing the containers in clear plastic bags.

## Household Connections

- ✓ Photocopy the Solutions to Household Pollution Maze
- ✓ Draw a large mural to show how household hazardous waste enters the environment. Use the Routes to the Environment Sheet from [4-6, Getting to the Route of the Problem] as a guide.
- ✓ Collect all types of clean trash (empty packages). Include materials which can be locally recycled such as plastics, tin, newspaper, etc. Also include pictures of hazardous products.

## Prevention Is the Best Medicine

### *Set Up Learning Station*

- ✓ The only advanced preparation needed is soaking the cotton balls with strong non hazardous scent, such as wintergreen oil.
- ✓ Write student instructions for each of the three stations.
- ✓ Make copies of the Human Body Diagram.
- ✓ Optional: Read *The Magic School Bus* and *The Human Body* by Joanna Cole. This book vividly illustrates how substances may move through our bodies.

## Test the Alternatives

- ✓ Collect the following ingredients for nontoxic cleaners: vinegar, salt, lemon juice, baking soda, vegetable oil, bucket, measuring cups, newspaper, sponges, rags and water.
- ✓ Attain a video recorder to create student commercials.
- ✓ Collect empty eco-friendly cleaning solution containers.

# K-3: Home Tour

## Subjects

Social Studies, Language Arts, Art, Mathematics

## Skills

Analyzing, applying mathematical concepts, collaborating, investigating

## Materials

Large diagram of house and yard (teacher made), pictures of common hazardous products (e.g.: magazine advertisements, hand drawn pictures), empty containers of hazardous products (for teacher's use only)

## Time

Two class periods

## Vocabulary

Products, hazardous, poison, dangerous, caution, danger, warning, pesticide, paint, cleaning product

## Related Teaching Toxics Activities

- K - 3 Warning Words
- 4 - 6 Hazardous Homes?
- 4 - 6 Looking at Labels
- 7 - 8 What's Hazardous?



## Concept

Products containing hazardous substances are commonly used in homes.

## Objective

Students will identify what types of products are hazardous and place where they are typically found on a house diagram.

## Background

See Information Section, pages 120, 127, 139.

There are several ways to identify which household products contain hazardous substances. Generally certain types of products contain hazardous ingredients.

Cleaners	
This is not a complete list. Only the most hazardous cleaners are listed.	
Furniture Polish Spot Removers Drain Openers	Toilet Bowl Cleaner Oven Cleaner
<b>Other Household Products</b> Household Batteries Shoe Polish Rubber Cement Fingernail Polish & Remover	<b>Pesticides</b> Flea Powder/Collar Insect Repellant Weed Killer Garden Insect Spray
<b>Paint/Related Products</b> Paint Wood Preservatives/Wood Stains Paint Brush Cleaners	<b>Car Products</b> Motor Oil Antifreeze Car Batteries

## Procedures and Activities

Introduction To Hazardous Products

- Discuss the meaning of the word hazardous.
- Write the categories of hazardous products on the board (e.g. cleaners, car products, pesticides, paint products) and help students list types of hazardous products in their homes.
- A discussion of Mr. Yuk Poison Control Center's program to help young children identify hazardous products may help students think of hazardous products. On what types of products do students see Mr. Yuk stickers?

## Common Core Alignments

### KINDERGARTEN

#### CC.RI.K.4

Reading Informational Text:  
Craft & Structure

#### CC.W.K.2

Writing:  
Text Types & Purposes

#### CC.K.G.1

Mathematics:  
Geometry

### GRADE 1

#### CC.RI.1.6

Reading Informational Text:  
Craft & Structure

#### CC.SL.1.1(c)

Speaking & Listening:  
Comprehension & Collaboration

#### CC.1.MD.4

Mathematics:  
Measurement & Data

### GRADE 2

#### CC.RI.2.4

Reading Informational Text:  
Craft & Structure

#### CC.SL.2.3

Speaking & Listening:  
Comprehension & Collaboration

#### CC.2.MD.10

Mathematics:  
Measurement & Data

### GRADE 3

#### CC.RI.3.7

Reading Informational Text:  
Integration of Knowledge & Ideas

#### CC.SL.3.4

Speaking & Listening:  
Presentation of Knowledge &  
Ideas

#### CC.3.MD.3

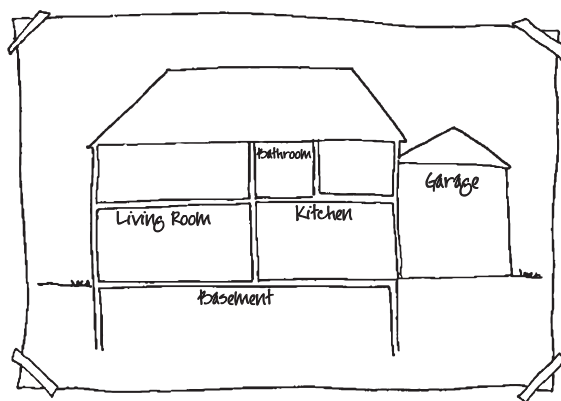
Mathematics:  
Measurement & Data

## Hazardous Advertising

- Have students cut out pictures of hazardous products from magazines (e.g.: housekeeping magazines, paint and automobile advertisements.)
- Teachers may want to provide students with real product labels

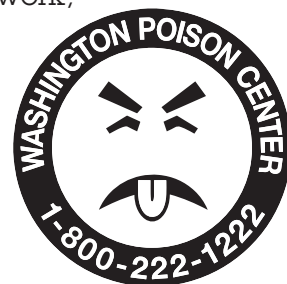
## Locating Where Hazardous Products Lurk

- On a house diagram ask five student volunteers to place one of their pictures of a cleaning product, a paint product, an automotive product, a pesticide and a product from the other category in the room where it would most likely be found.
- After students place the picture on the diagram, ask them to read (or the teacher reads) the corresponding hazardous product text (see next page). Younger students can identify the shapes and relative positions of the pictures on the diagram; older students can graph their findings of the 5 categories of the products and compare the amounts found in the various categories.
- Variation: In small groups, older student groups could draw their own house diagrams on newsprint paper and place pictures in the appropriate rooms.



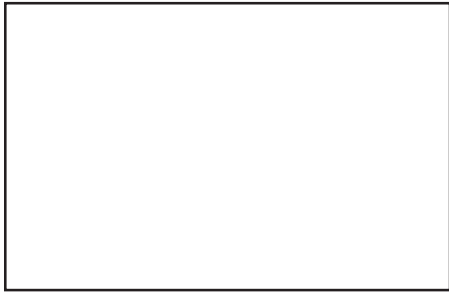
## Mr. Yuk and Safer Homes

- Discuss how Mr. Yuk stickers can help students. Mr. Yuk stickers help students identify the products as hazardous. They know if they see Mr. Yuk stickers that they should stay away from that product.
- Pass out Mr. Yuk stickers. For homework, ask students to work with their families and place the stickers on hazardous products at home.
- Have students keep track of how many products they put Mr. Yuk stickers on. Discuss their findings the next day in class.



# Hazardous Products Text

Draw a thumbnail sketch  
of each product



## Cleaning Products

"I am Clarence Cleaning product. I could make you very sick if I am eaten. Sometimes I'm found in a closet in the bathroom or kitchen. Please put a Mr. Yuk sticker on me and store me in a locked cabinet."



## Paint

"I am Patty Paint Can. I could catch on fire if I am in a place that is too hot. I would also make you very sick if I am eaten. Usually I'm found in a garage or basement. Please store me in a cool place in a locked cabinet."



## Automotive Products

"I am Alice Automotive Product. I could make you very sick if I am eaten. Most of the time, I'm found where the car, lawn mower or farm machines are located. Please put a Mr. Yuk sticker on me and store me in a locked cabinet."



## Pesticides

"I am Patrick Pesticide. I could make you very sick if I am eaten. I'm found in many different places. Sometimes I'm used inside the house, other times I'm used on the lawn and garden. Please put a Mr. Yuk sticker on me and store me in a locked cabinet."



## Other Products

"I am Fancy Fingernail Polish Remover. I can catch on fire very easily and make you very sick if I am eaten or smelled. I'm usually found in the bathroom or bedroom. Please put a Mr. Yuk sticker on me and put me in a locked cabinet."





# Math Activities to Learn about Recycling - Erica Miller

- **Graph the Recycling!**- How many pieces of paper are in the bin at the end of the week? How many plastic bottles/containers?
- **Patterns-** Reuse materials for this activity. Collect caps from milk jugs and other bottles to use for creating AB patterns with preschoolers. (Younger children can sort by color!)

Name: \_\_\_\_\_

## Sorting Trash

Cut the pictures at the bottom and paste them in the right category.

<u>Recycle</u>	<u>Garbage</u>
	

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