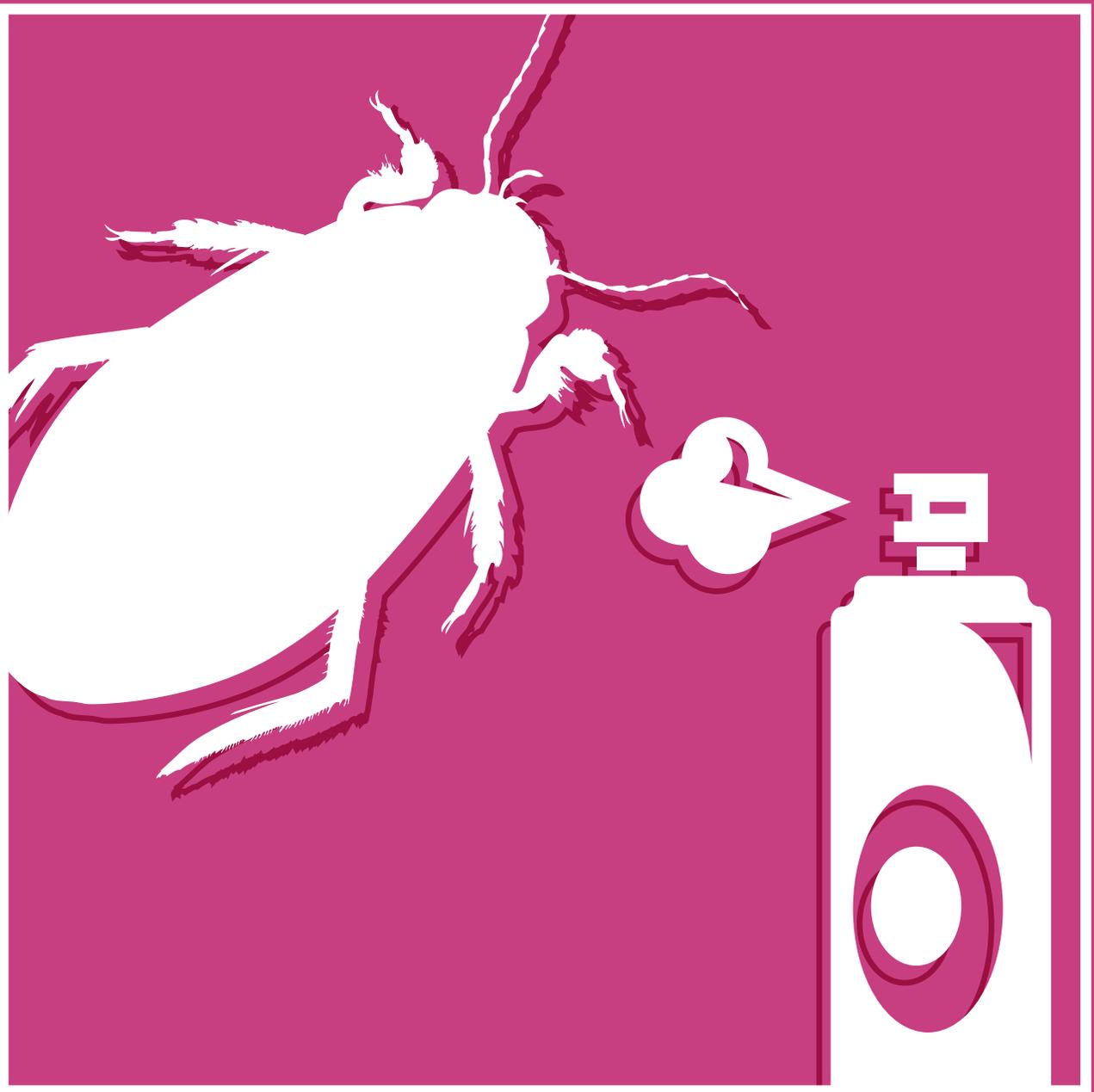


# Lesson 2: Pesky Pests and Household Hazards





# Lesson 2: Pesky Pests and Household Hazards

## Snapshot

This lesson examines environmentally friendly ways to keep our homes and schools pest-free. We define pests, pesticides, household hazards, chemicals, and toxic, and explores strategies for keeping common household hazards out of reach.

### Preparation and Materials:

- Posters 1–3, Visual Cards 1–5, Household Hazards Hunt Handout, Take-Home Talk
- Poison Control stickers (*call your local poison control center to receive these*)
- Flip chart and markers
- Black or white board
- Large sheets of paper for each child to make a poster
- Markers or crayons
- Select up to five students to read and speak in front of the class

**Suggested Giveaways:** Poison Control stickers or magnets

### Objectives—Students will be able to:

- define *pests*, *pesticides*, *household hazards*, *hazardous*, and *toxic*;
- list the steps to take if you ingest or touch a household hazard; and
- name three household pests and explain how to safely get rid of them.

**Vocabulary:** pests, pesticides, household hazards, chemicals, toxic

### Procedure:

1. Introduction (*8 minutes*)
2. Define Vocabulary—Pests, Pesticides, and Household Hazards (*5 minutes*)
3. Safely Getting Rid of Pests and Pest Detectives Activity (*15–25 minutes*)  
Optional Activity: Pest Free Poster Creation (*10–15 minutes*) *Note: If you do the Pest Free Poster Creation, you can end the lesson there and pick it back up in the next session.*
4. Keeping Household Hazards Out of Reach and Find the Household Hazards Activity (*5–15 minutes*)  
Optional Activity: Creating Household Hazards Warning Signs (*10 minutes*)
5. Close and Take-Home Talk (*5 minutes*)



## Lesson 2: Pesky Pests and Household Hazards

### 1. Introduction

(8 minutes)

#### Review

**Review previous lesson:** Ask several students to share something that they remember from the previous lesson.

**Prompts:** What did you learn that you didn't know before? What did we talk about that you already knew? What surprised you from our last lesson? What are some of the new words that you learned from our last lesson? What can you do to positively impact the issue we learned about?

#### Do

[Show **Poster #1** (photographs of mouse, housefly, raccoon, aphids, roach, rat, mold, and ant).]

#### Ask

What are these things? What do they have in common? What else do they have in common? Which ones are most like each other?

**Prompts:** All are alive; all need air, water, food, and shelter; sometimes these living organisms are where we don't want them to be (e.g., in our homes!).

#### Ask

All of these are commonly called household pests. What is a pest?

**Prompts:** Are they alive? Do we like them? Why not? Why might they be a problem for us?

#### Explain

**Pests** are living things that can hurt us by making us sick, damage our homes or other property, or destroy plants or agricultural products. Pests are everywhere—in our schools, homes, and our cities, suburbs, and in the country. There are pests in the White House, in the Empire State Building, and in *[insert celebrity's name]*'s home.

#### Ask

Why do you think they want to get into our homes and schools?

**Prompts:** What do all living beings need to survive? If you've got water and food and shelter, pests may try to hang out with you.

(continued on other side)

## 1. Introduction *(continued – page 2)*

Explain

A pest is any living organism that annoys humans or causes damage to people, their health, or their property. In nature, there are no pests, just different types of relationships, such as predator and prey or parasite and host. A pest can be a plant, an animal, or a disease. Insects are just one kind of pest that people may encounter. The world has more insects than all other living things combined. It's estimated that there are 10 quintillion (10,000,000,000,000,000,000) insects alive at any one time! Now, not all of them are pests. In fact, less than 1 percent of all insects are considered to be pests.

Do

*[Write 10 quintillion (10,000,000,000,000,000,000) on the board or flip chart and then ask the students for other numbers to compare it to so that the students can see how massive this number truly is. Try numbers such as 100, 1,000, 10,000, or 1,000,000.]*

Do

*[Show **Poster #2** (Earth divided into insects, mammals, and other animals).]*

Ask

Have you heard the saying "Beauty is in the eye of the beholder?" What does it mean?

**Prompts:** Does everyone agree when something or someone is beautiful?

Explain

We all have different ideas about what is beautiful. Well, pests can also be beautiful in the eye of the beholder. What we think of as pests—roaches, mice, and raccoons—might not be pests to everyone or at all times or in all settings.

Ask

When is a pest a pest? If you're in a different environment, or you're a different animal, might these things be good to have around? When would one of these household pests not be considered a pest?

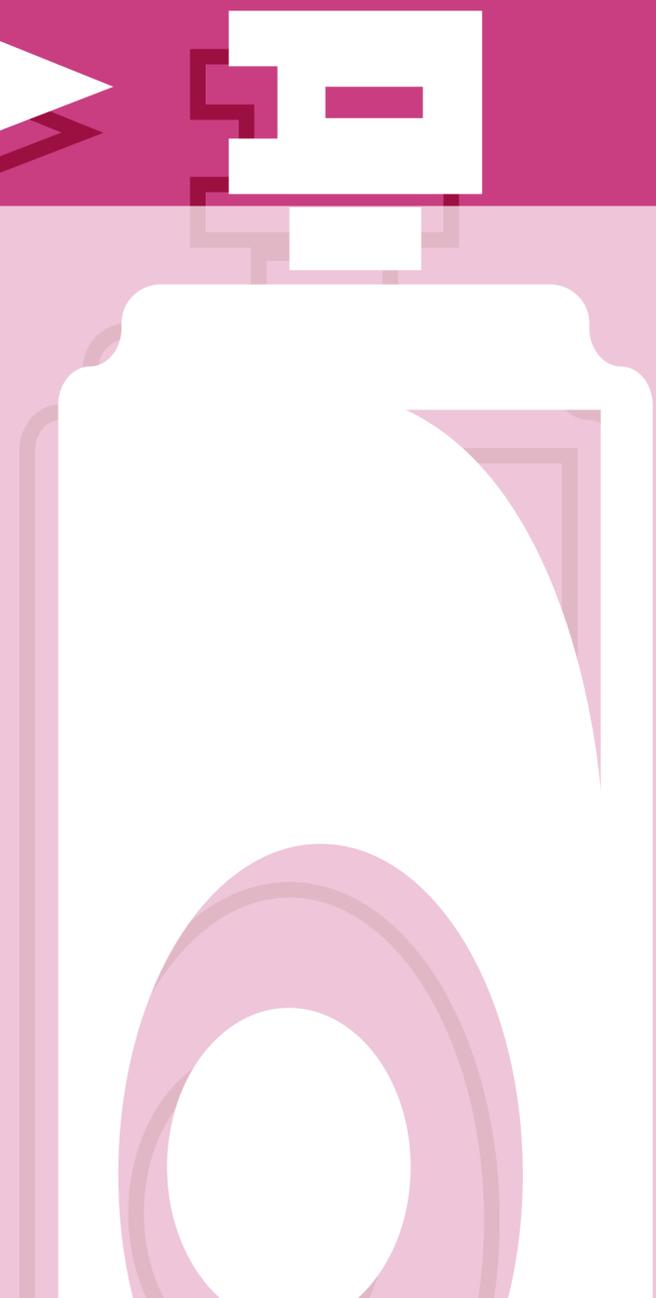
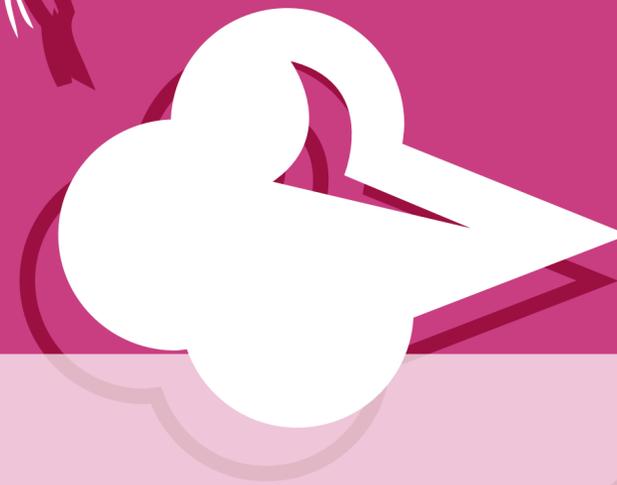
**Prompt:** What if you're an owl and you're hungry—would that mouse be a pest or lunch? What if you're in a forest with fallen trees—would that termite be a pest or just part of the life cycle?

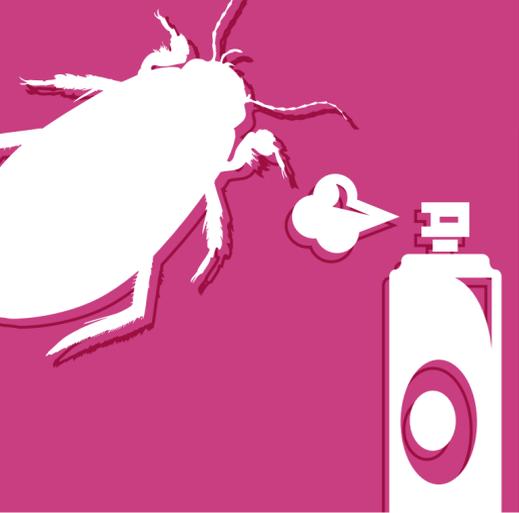
Explain

So, while these may be pests to us, in another environment and in another situation, they are just part of the food chain or a life cycle, or may actually be beneficial. Now we're going to focus on how to keep our homes pest-free.

# Lesson 2: Pesky Pests and Household Hazards

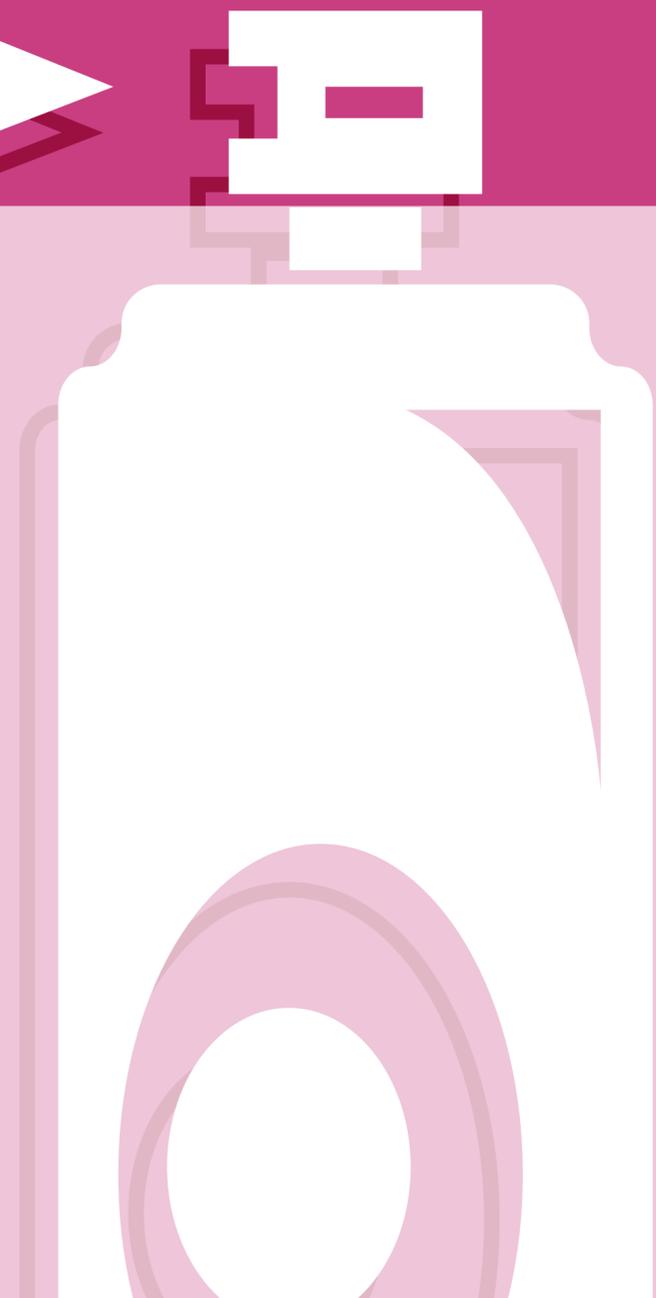
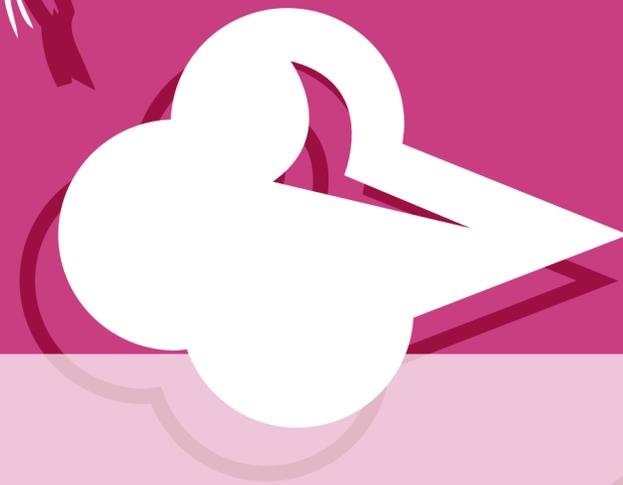
## Poster #1

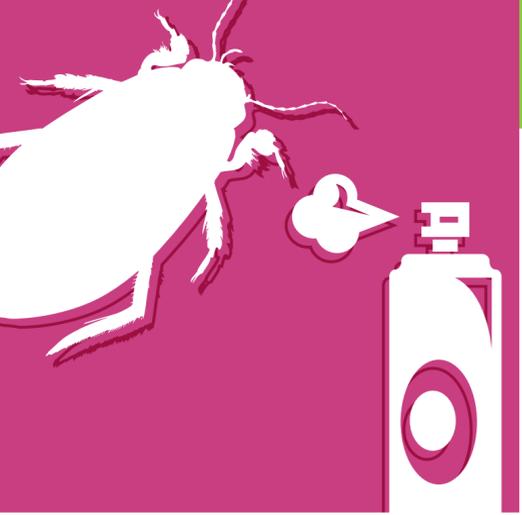




# Lesson 2: Pesky Pests and Household Hazards

## Poster #2

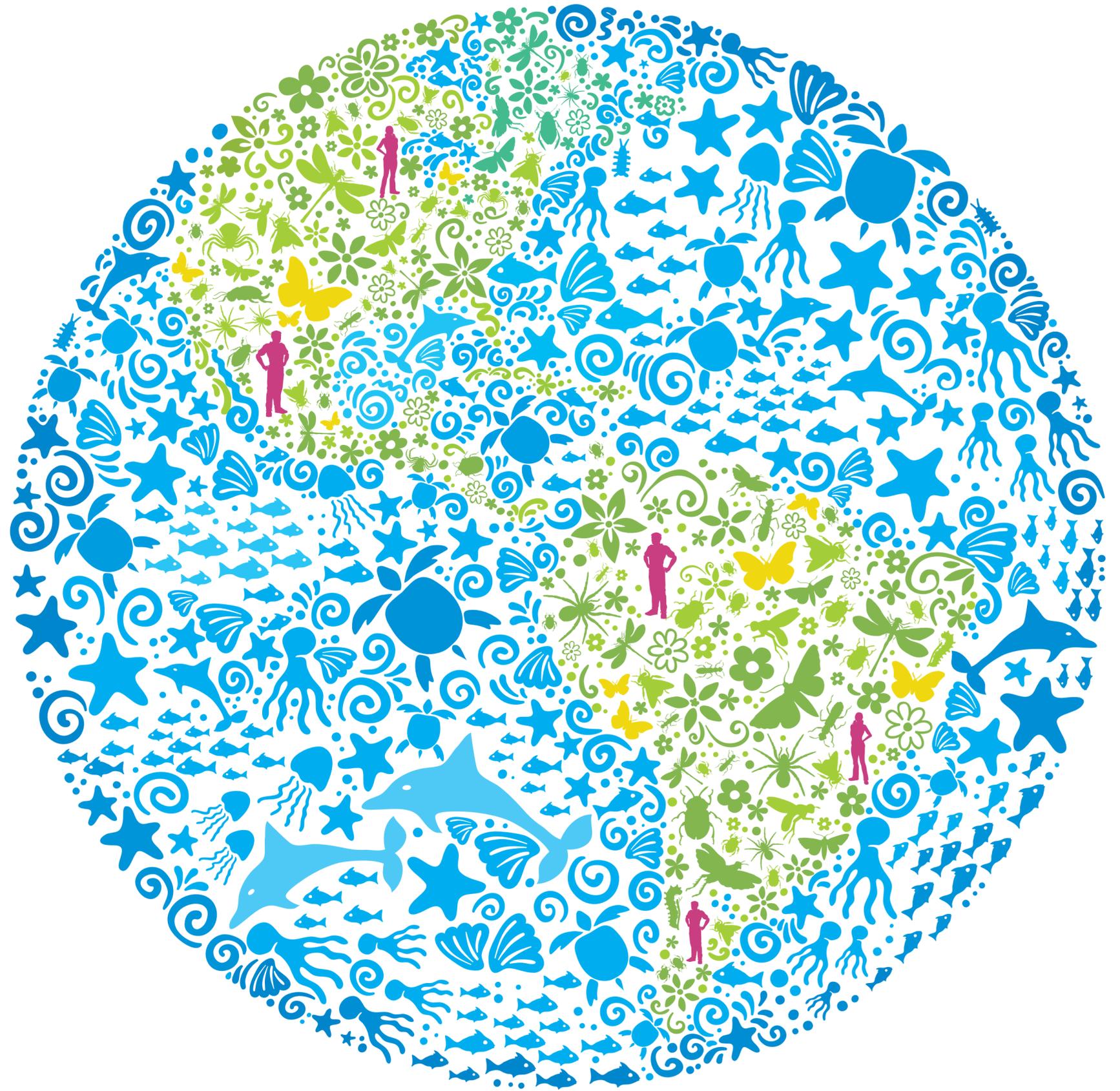




Number  
of humans  
compared  
to number  
of insects:

humans =  
6,913,811,533

insects =  
10,000,000,000,000,000,000





## Lesson 2: Pesky Pests and Household Hazards

### 2. Define Vocabulary: Pesticides, Household Hazards, Hazardous, and Toxic (5 minutes)

Ask

What are the best things that we can do to help keep our homes and schools pest-free?

**Prompts:** Keep these places clean, tidy, and in good repair.

Explain

Even when we keep our homes and schools clean and tidy, pests can still get in. For example, roaches and mice can come in through cracks and crevices, or even walk under the front door. Everyone has to deal with pests at some point in his or her life.

Ask

How can we prevent pests from coming in? What do we do when pests come in? How do we get rid of them?

**Prompts:** Insect spray, roach spray, mouse poison, exterminator, plug up holes where they are getting in, repair leaky pipes and faucets, keep things clean and clutter-free.

Explain

Some of the things that you mentioned that get rid of pests have chemicals in them. These products are called **pesticides** and they are used to kill or repel pests. More often, we can use a little bit of planning to prevent pests from getting in to begin with; then, we won't need to use pesticides at all!

Ask

Why might it be better to get rid of pests without the use of pesticides?

**Prompts:** Some chemicals may negatively impact human health; they often smell bad; they can be expensive; and they may be ineffective, especially if not used properly. These chemicals can also hurt the environment and cause harm or kill non-targeted plants or animals. There are easier ways to get rid of pests that we'll learn about in a moment.

(continued on other side)

## 2. Define Vocabulary *(continued – page 2)*

Explain

If a pesticide is strong enough to kill pests, do you think that it might be strong enough to hurt you, too? Some of these products are **toxic** and can be hazardous if we accidentally spill them; breathe them in; or get them on our fingers, in our eyes, or in our mouths. Things that are hazardous or toxic can hurt us as we develop and grow. Remember that hazardous chemicals and toxic products can especially impact children since kids are developing and growing at a much faster rate than adults.

Do

*[Act these out.]* While you might not be interested in tasting window cleaner, do any of you have little brothers or sisters, cousins, or neighbors who put everything in their mouths? Or do you know small children who spend a lot of time crawling on the floor or getting into drawers and cabinets? Have you ever used a chemical, such as an antibacterial cleaner or insect spray, and accidentally breathed some in? Did it make it hard to breath or make your eyes water? Could you “taste” it in the back of your throat?

Ask

A lot of these pesticides are hazardous and/or toxic. What does **hazardous** mean? What does **toxic** mean?

Explain

**Hazardous** means that the item is dangerous if used in the wrong way. **Toxic** means that something is poisonous or deadly if you’re exposed to it at certain concentrations. So, let’s talk about how we can prevent the pest problem rather than trying to stop an infestation by using a pesticide that might also hurt us.



## Lesson 2: Pesky Pests and Household Hazards

### 3. Safely Getting Rid of Pests and Pest Detectives Activity (15–25 minutes)

#### Explain

In order to prevent a pest problem or to rid our homes or schools of pests, we need to use what we know about the pests and we need to think like the pest. We need to plot and plan.

#### Ask

Ask one student to volunteer to be a pest and another student to volunteer to be a pest detective. At the front of the room, give the detective **Visual Card #1** (*Detective Card*) and the pest **Visual Card #2** (*Mouse Pest Card*). Tell the students to review their cards quickly. Tell them not to tell the class what the pest is. Tell the students that they will need to get into character and really think and act like a pest and a detective, respectively. Ask the student playing the pest what he/she would like his/her name to be. Ask the detective the same question.

**Optional Activity:** There are a total of four Pest Cards (Mouse, Cockroach, Ant, and Fly). You can decide to do just the Mouse or you can do several Pest Cards at the same time or one after the other.

#### Explain

Here's the situation. Detective *[insert name]* has been called in because we have a pest in our space. We've seen some signs of a pest, but we're not sure what kind of pest it is or how to get rid of it. The detective is going to help.

#### Ask

If you have a pest in your home, what's the first thing that you need to know? You have to know what you're dealing with, right? **Step 1: Properly identify the pest.**

#### Ask

Why do we need to know what kind of pest it is?

**Prompts:** Would we treat a roach and a termite infestation in the same way? A mouse and a raccoon infestation in the same way?

#### Ask

So, let's ask the detective, What have you observed about the pest? *[Detective uses Visual Card #1 to answer.]*

*(continued on other side)*

### 3. Safely Getting Rid of Pests and Pest Detectives Activity *(continued – page 2)*

Explain

So, the detective has used his/her powers of observation and interviewing people to get some answers.

Ask

What type of pest do we think this is?

**Answer:** A mouse. How do you know it is a mouse? Gnaw marks? Nibbled food? Feces? Mice sightings? Smell?

Explain

So, we know that we have a mouse because the detective has observed clues that lead us to a mouse, right? Since we have the mouse right here, let's interview *[him/her]*.

Ask

Mouse, why are you in our space? *[Mouse uses **Visual Card #2** to answer.]*

Ask

What four things do all living beings need to survive? *[Air, water, food, and shelter.]*  
Which of these four needs is the mouse getting from our space? *[Air, water, food, and shelter.]*

Ask

What happens if you take away something that the mouse needs? Would our space still be an attractive place to be?

**Prompts:** The mouse would need to look elsewhere in order to meet its needs.

Explain

**Step 2: Take away food** and **Step 3: Take away water.**

Ask

How would we do that?

**Prompts:** Store food in hard plastic or glass containers with tight-fitting lids, or in the refrigerator; clean up crumbs and spills when they happen; don't walk around the house eating food, eat only in the kitchen; use a trash can with a tight-fitting lid and take it out as needed; tell your parents about dripping faucets and pipes that need to be repaired; keep surfaces clean and dry; put away pet food when the pet isn't eating.

Ask

Mouse, what would you do if we took away these things?

### 3. Safely Getting Rid of Pests and Pest Detectives Activity *(continued – page 3)*

Ask

What if we took away one more thing? What is it? **Step 4: Take away their hiding places/shelter/entrance place.** How would we take away shelter?

**Prompts:** Fill in holes, cracks, and crevices (a mouse can fit through a hole the size of a pencil). Investigate how the mouse got into the building. Get rid of clutter such as piles of papers or clothing. Keep things tidy.

Explain

Finally, after taking all these steps we want to make sure they worked. **Step 5: Monitor the situation.** We need to watch to see if the pest returns. If the pest returns, we want to go back and make sure steps 1–4 were done correctly.

Do  
Explain

*[Show **Poster #3 (Steps).**] By taking these steps:*

1. **Identify the pest,**
2. **Remove food,**
3. **Remove water,**
4. **Take away shelter,** and
5. **Monitor the situation**

you're encouraging the pest to move on and find somewhere else to live. These steps might not always work, but it is important to get rid of those things that pests need to survive first. That way, you might not have to use pesticides that can hurt you and the environment.

Explain

We can use the same steps that we used to get rid of the mouse in our space to get rid of pests in our homes.

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#### **Optional Activity: Pest Free Poster Creation** *(10–15 minutes)*

Explain

**Optional Activity:** Now that we know how to keep our spaces clean, we want to advertise to pests and to everyone else that this is a pest-free place. This will also help teach other people how to keep pests away. Each of you (or in pairs) will make a poster that announces this is a pest-free space. Remember to include the three ways we keep pests away on the poster.

Do

*[Pass out large sheets of paper and markers or crayons.]*

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## Lesson 2: Pesky Pests and Household Hazards

# Visual Card #1 Detective

### What have you observed about the pest?

- There are scratches on the floor and baseboards.
- There is a hole in the back of the room that is a couple of inches in size. (Mice can fit through a hole the size of a pencil!)
- There are little droppings.
- Several pieces of food have had small bites taken out of them recently.
- Someone in the building saw a mouse a few days ago.





## Lesson 2: Pesky Pests and Household Hazards

# Visual Card #2 Mouse

### Why are you in our space?

- It's warm in the winter and cool in the summer in here. No rain, wind, or snow.
- I like snacks and there is lots of food around.
- After I have a snack, I like a drink of water and there's always fresh water here.

### Mouse, what would you do if we took away these things?

- I'd look for another place that has these things.
- But I might still live in this space and get my food and water someplace else. It's cozy here!





## Lesson 2: Pesky Pests and Household Hazards

# Visual Card #3 Cockroach

### Why are you in our space?

- There are always snacks around here and I really like to munch on people food.
- After a snack I like to take a sip of water and there's usually water to be found around here.
- I'm nice and small and there are lots of tiny cracks in the floors and walls where I can build nests and have lots of babies.

### Cockroach, what would you do if we took away these things?

- I might look for another place that had these things.
- I'm pretty small though so people would need to be really careful about the food they left out if they wanted me to leave.





## Lesson 2: Pesky Pests and Household Hazards

### Visual Card #4 **Fly**

#### **Why are you in our space?**

- I like room to roam and this is a nice big space.
- Plus there's food left in trashcans and on the floor that I can eat.
- It can get really cold or really hot outside; in here it's a nice constant temperature.

#### **Fly, what would you do if we took away these things?**

- Well if the food was gone I'd have to look for another way to eat.
- I'd probably head out in search of another spot.





## Lesson 2: Pesky Pests and Household Hazards

# Visual Card #5 Ant

### Why are you in our space?

- I have a very large family that I live with so we need a place with little cracks we can squeeze through. We are teeny tiny but there are a lot of us.
- There is plentiful food. We don't have large stomachs, so a little goes a long way with us.
- There's also water to drink whenever we want it.

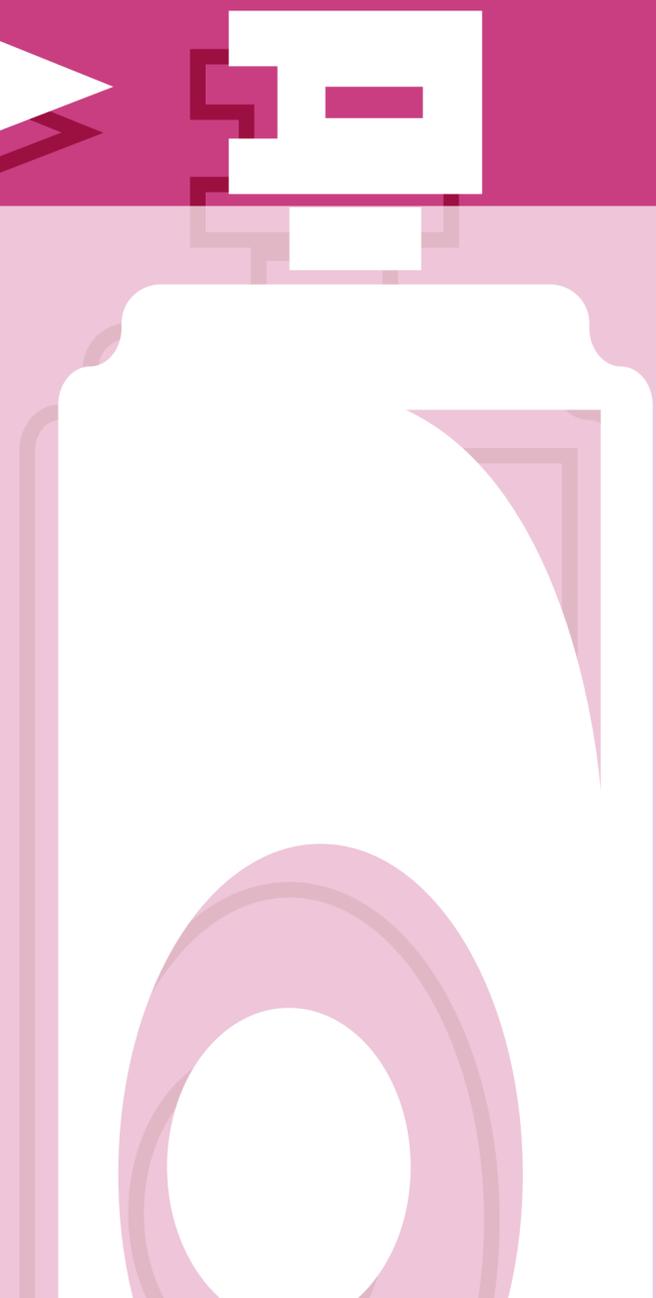
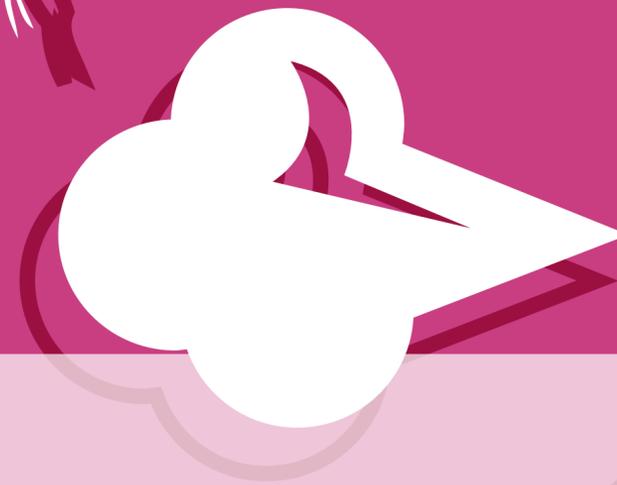
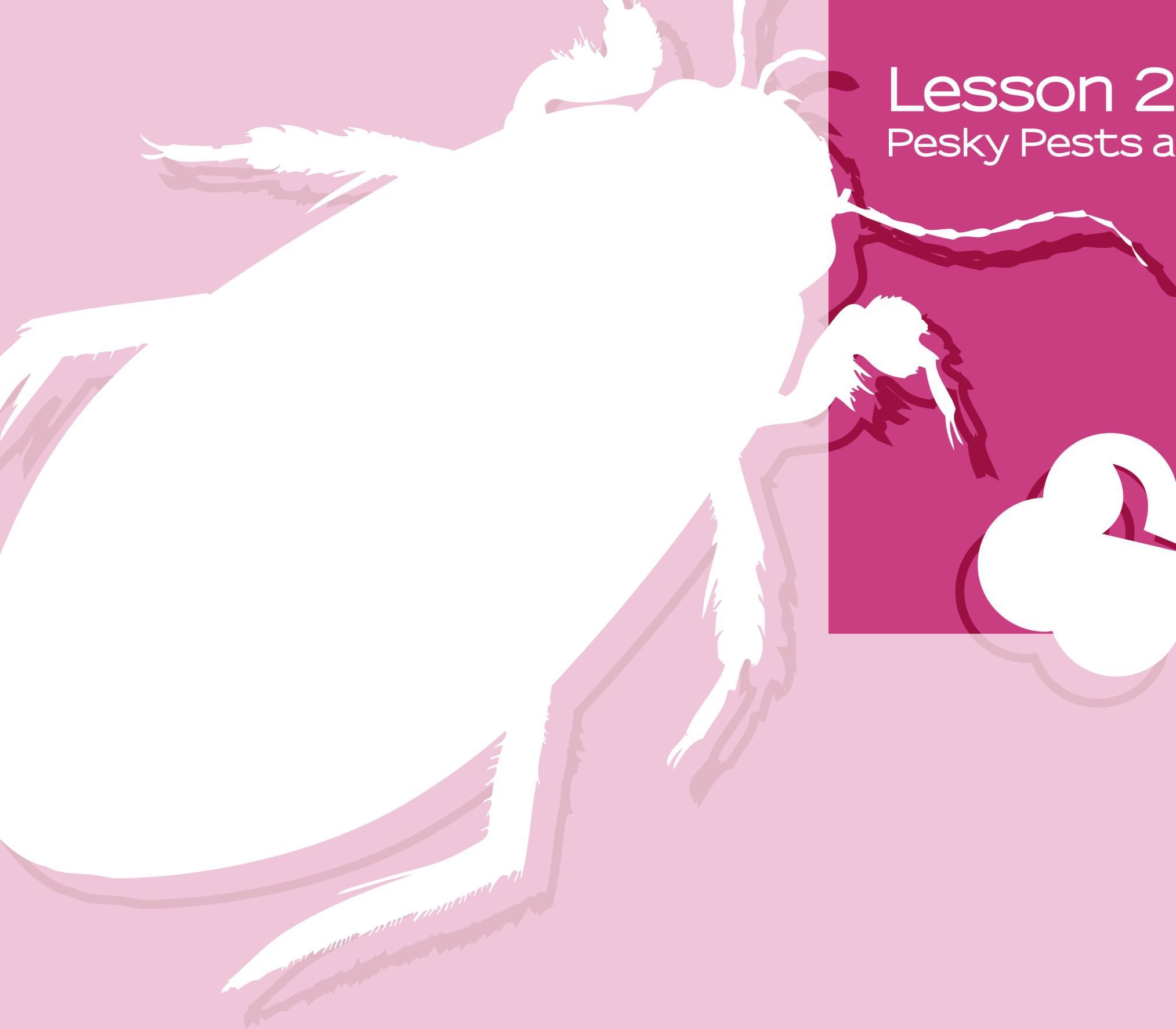
### Ant, what would you do if we took away these things?

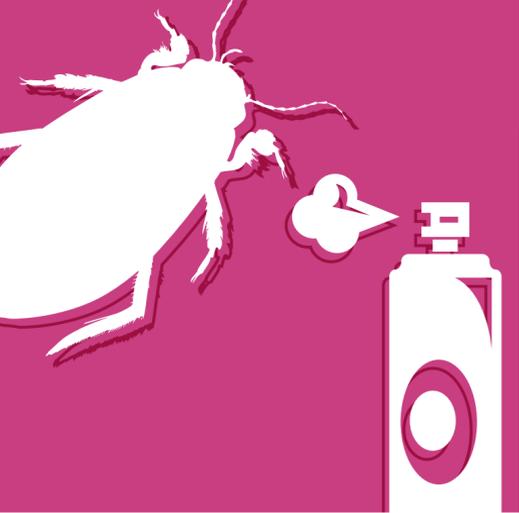
- My family and I might look for another place that had these things.
- But we also might stick around and look for food farther away.



# Lesson 2: Pesky Pests and Household Hazards

## Poster #3





# Steps to Get Rid of Pests

**#1** Identify Pest



**#2** Take Away Food



**#3** Take Away Water



**#4** Take Away Shelter

**#5** Monitor the Situation



## Lesson 2: Pesky Pests and Household Hazards

### 4. Keeping Household Hazards Out of Reach and Find the Household Hazards Activity

*(5–15 minutes)*

Explain

Some situations may require the use of pesticides even after we've gone through all of the preventative and nontoxic steps.

Ask

When do we use these pesticides and chemical cleaners? What can we do to make sure that they are used safely? Should children use them?

**Prompts:** Young children shouldn't use these products. Use products that are the least toxic and the most specific for the situation. Parents should read the label and use accordingly. Keep these products locked up, up high, and out of reach of children.

Do

Break the class up into five groups and give each group a copy of the **Household Hazards Hunt Handout**. Ask each group to find the household hazards in each picture. For each hazard that they identify, they should also determine a way to make it safer.

Explain

It's important to keep these household hazards out of reach so that children (ourselves included) don't accidentally touch them, breathe them in, or drink them.

Ask

If you accidentally touch or drink a pesticide or a household chemical, what should you do?

**Prompts:** Tell an adult and call the poison control center at 1-800-222-1222, or call 911.

Ask

Who knows what the Poison Control Center does?

**Prompts:** There are Poison Control Centers all over the country and you can call them 24 hours a day.

Explain

If you accidentally swallow an adult's medicine or your little brother or sister accidentally drinks some of the cleaners we saw in our Household Hazards Hunt, you can call a Poison Control Center and they will be able to tell you if you should go to the hospital or not.

*(continued on other side)*

## 4. Keeping Household Hazards Out of Reach *(continued – page 2)*

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### Optional Activity: Creating Household Hazards Warning Signs *(10 minutes)*

Explain

We want to be sure we keep what we learned in mind when we're at home, so we're going to create flyers to bring home that remind us to keep household hazards out of reach of kids and who to call if someone accidentally uses a household hazard product incorrectly.

Do

*[Pass out large sheets of paper and markers or crayons.]*

Ask

What are some good reminders about what we just learned?

**Prompts:** Kids shouldn't touch cleaners. If a cleaner spills, let an adult know; keep cleaners and other household hazards out of reach.

Do

*[Pass out Poison Control stickers.]*

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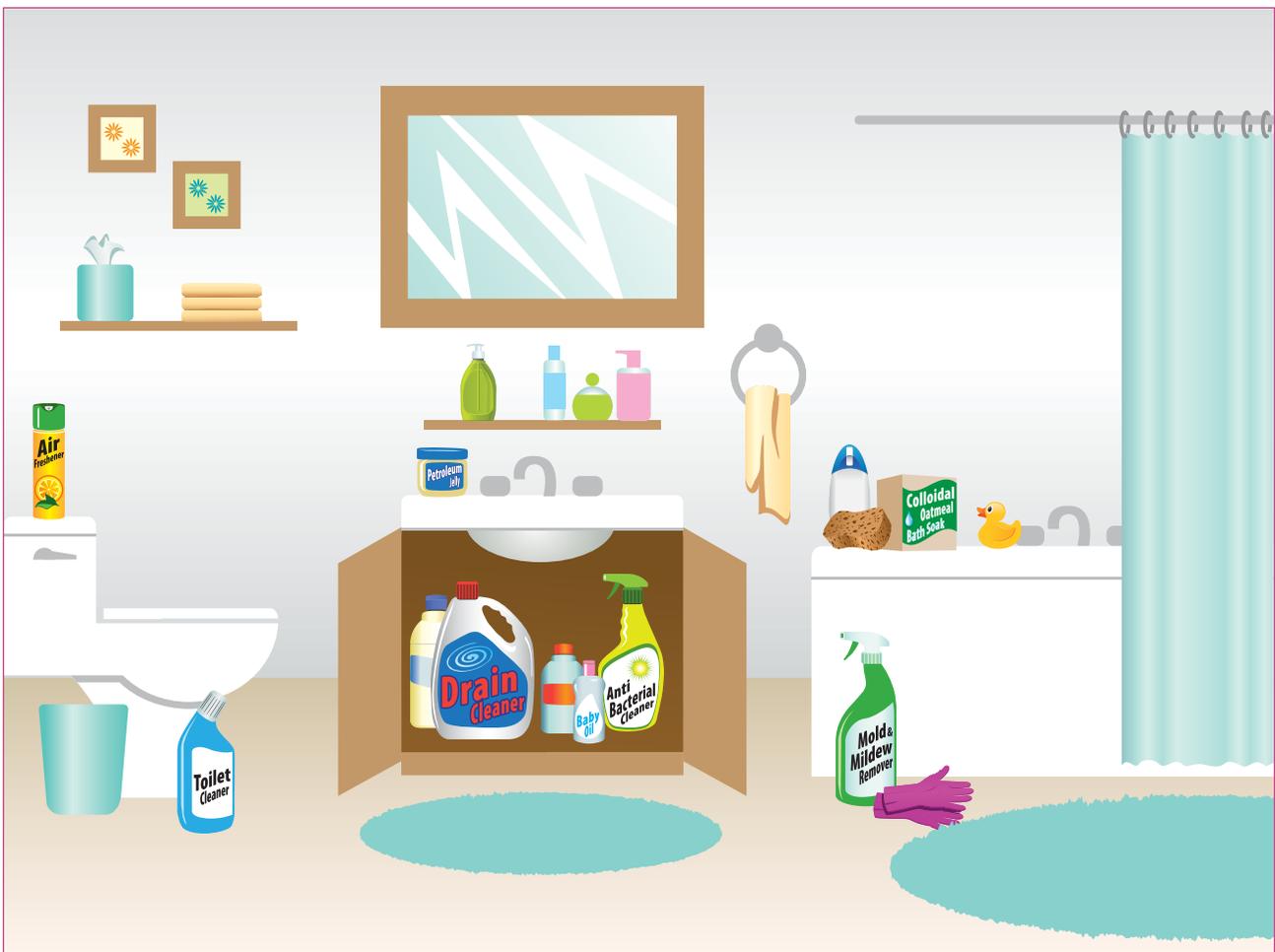


## Lesson 2: Pesky Pests and Household Hazards

### Household Hazards Hunt

Can you identify which items are household hazards in the image below?

**Hint:** There are 8 things in the bathroom. But only 5 are household products that contain pesticides or toxic substances.



*(continued on other side)*

## Household Hazards Hunt (continued – page 2)

Can you identify which items are household hazards in the image below?

**Hint:** There are 11 things in the kitchen. But only 7 are household products that contain pesticides or toxic substances.



## Household Hazards Hunt (continued – page 3)

Can you identify which items are household hazards in the image below?

**Hint:** There are 8 things in the laundry room. But only 5 are household products that contain pesticides or toxic substances.



(continued on other side)

## Household Hazards Hunt (continued – page 4)

Can you identify which items are household hazards in the image below?

**Hint:** There are 10 things in the garage. But only 6 are household products that contain pesticides or toxic substances.





## Lesson 2: Pesky Pests and Household Hazards

### Household Hazards Hunt Answers

#### Bathroom

##### 1 Air Fresheners

###### What is it?

These products are used to freshen the air in various places throughout the home, including kitchens, bathrooms, bedrooms, and living rooms. Air fresheners are usually stored in the kitchen, bathroom, or laundry room.

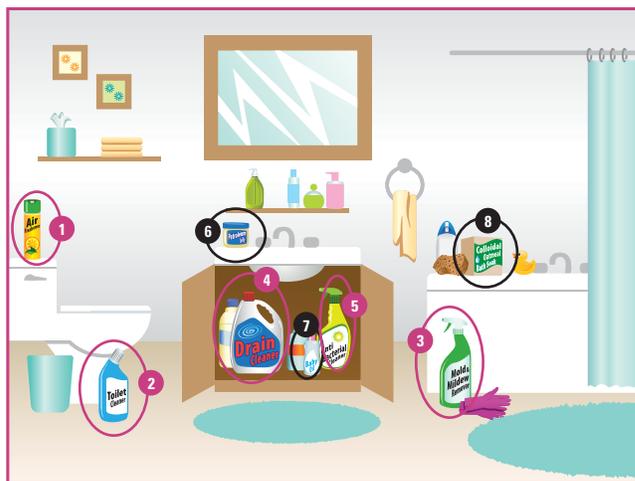
###### What's in it?

There are four basic ingredients in air fresheners: formaldehyde, petroleum distillates, p-dichlorobenzene, and aerosol propellants.

###### What health and safety precautions do you need to think about when using air fresheners?

Air fresheners are usually highly flammable and also are strong irritants to the eyes, skin, and throat. Additionally, solid fresheners usually cause death if eaten by people or pets.

Please take precautions when using these products. You also need to be sure to always “Read the Label First” so that you know how to properly use these products and for safety information. Don't use them near open flames like candles or gas stoves. Use only in a well-ventilated area. Baking soda, which is nontoxic, can also be used to freshen the air in your home.



##### 2 Toilet Cleaners

###### What is it?

Toilet cleaners clean and disinfect toilets and kill germs. You probably wouldn't think that these cleaners have pesticides in them, but they do. The pesticide is the disinfectant. This type of pesticide is known as an antimicrobial pesticide.

If cleaning the bathroom is one of your chores around the house, you may be using toilet cleaners to do the job. If so, you need to be sure to always “Read the Label First” so that you know how to properly use these products and for safety information. Also, be sure that your parents/guardians know what household products you are using. They can make sure that you use them safely.

###### What's in it?

The pesticide chemical usually found in toilet cleaners is bleach, which contains sodium hypochlorite.

###### What health and safety things do you need to think about when using toilet cleaners?

Toilet cleaners also have other chemicals in them, too, like hydrochloric acid. Never mix a toilet cleaner with any other household or cleaning products. Doing so can result in poisonous gases being released and can cause very serious breathing problems. Always be sure when cleaning a bathroom that the room has plenty of ventilation. Leave the door open and use the exhaust fan, if you have one.

Most disinfectant cleaners are very irritating to your eyes and skin and will burn your throat. It's a good idea to wear latex dishwashing gloves to help protect your skin from splashes when using toilet cleaners. If you splash some on your skin, wash it off immediately. Because toilet cleaners can be harmful, it is important to protect yourself from exposure to them.

##### 3 Mold and Mildew Removers

###### What is it?

Have you seen black spots on your shower curtain? Have you seen black, brown, or pinkish slimy stuff growing between bathroom tiles, the corner area where your tub meets the walls, or under your bathtub mat? These spots and slimes are molds and mildew. Molds and mildew are kinds of fungi. What's a fungus? A fungus is a plant that has no leaves, flowers, roots,

*(continued on other side)*

## Household Hazards Hunt Answers *(continued – page 2)*

or chlorophyll. (Chlorophyll is a chemical that allows plants to make their own food. It makes plants green.) A mushroom is an example of a fungus.

Mildew is also the name of the discoloration that is caused by a fungus. Maybe you have heard of “mildew stains.” Molds and mildew like to grow in damp, dark places with little air circulation, like in bathrooms and basements.

Household products that contain mold and mildew removers usually come as a liquid in a spray container. If you are old enough to do cleaning chores around the house, you’ve probably used a cleaner with a mold and mildew remover to do the job. If so, you need to be sure to always “Read the Label First” so that you know how to properly use these products and for safety information. Also, be sure that your parents/guardians know what household products you are using. They can make sure that you use them safely.

### **What’s in it?**

The pesticide chemicals found in mold and mildew removers are chlorine and alkyl ammonium chlorides. These pesticides are known as fungicides.

### **What health and safety things do you need to think about with mold and mildew removers?**

The chemicals in mold and mildew removers can be very caustic. That is, these cleaners can be corrosive to objects and harmful to humans. It’s a good idea to wear latex dishwashing gloves to help protect your skin when using these products. If you get some on your skin, wash it off immediately.

Cleaners with mold and mildew removers may also cause breathing problems and, if swallowed, they will burn your throat. Because mold and mildew removers can be harmful, it is important to protect yourself from exposure to them.

## **4 Drain Cleaners**

### **What is it?**

These types of cleaners are used to unclog drains in sinks or in the bathroom. These cleaners are usually stored in the kitchen or bathroom cabinets, or in the basement.

### **What’s in it?**

The main ingredients that cause the drain to become unclogged are lye and sulfuric acid.

### **What health and safety precautions do you need to think about with drain cleaners?**

Lye and sulfuric acid have dangerous fumes. They can cause skin burns and, in some cases, blindness if they come in contact with your eyes. They can cause death if they are swallowed. Because of the toxicity of these products, only an adult should use them. Remind your parents/guardians to always “Read the Label First” so that they know how to properly use these products and for safety information. They should always use protective gloves and wear goggles when using these products. Also, make sure that when these cleaners are used, there is good air circulation in the room.

## **5 Antibacterial Cleaner**

### **What is it?**

Cleaners are used to remove dirt. Antibacterial cleaners remove dirt and kill bacteria. Bacteria are organisms that are too small to be seen with just your eyes. Some bacteria cause diseases or make you sick; others do not do so.

Antibacterial cleaners come in a spray can, pump bottle, or other container. They are commonly used in the kitchen to clean things that come in contact with food, like cutting boards and counter tops. Keeping these areas clean will help prevent harmful bacteria from contaminating your food. It is especially important to clean areas that come in contact with raw meat. Raw meat can also carry bacteria. Use an antibacterial kitchen cleaner or wash the area with hot soapy water.

If helping to clean the kitchen is one of your chores around the house, you may be using antibacterial cleaners to do the job. If so, you need to be sure to always “Read the Label First” so that you know how to properly use these products and for safety information. Also, be sure that your parents/guardians know what household products you are using. They can make sure that you use them safely.

### **What’s in it?**

Antibacterial cleaners usually contain water, a fragrance, a surfactant, and a pesticide. The surfactant breaks up the dirt, the pesticide kills the bacteria, the fragrance makes it smell good, and the water holds the cleaner together. In antibacterial cleaners, the pesticides are commonly quaternary ammonium or phenolic chemicals. They are known as antimicrobial pesticides.

### **What health and safety things do you need to think about with antibacterial cleaners?**

Antibacterial cleaners are very irritating to your eyes and skin and will burn your throat. It’s a good idea to wear latex dishwashing gloves to help protect your skin when using these cleaners. If you get some on your skin, wash it off immediately; if you get some in your eyes, flush your eyes with cool water. Because antibacterial cleaners can be harmful, it is important to protect yourself from exposure to them.

## Household Hazards Hunt Answers (continued – page 3)

### 6 Petroleum Jelly

This is just an ordinary jar of petroleum jelly. Nothing toxic here.

### 7 Baby Oil

Nope! You won't find any pesticides or toxic chemicals in baby oil.

### 8 Colloidal Oatmeal Bath Soak

Colloidal oatmeal is used for soaking in your bathtub. No problem with pesticides or toxic ingredients here. People add colloidal oatmeal to bath water to soothe dry or irritated skin. If you have had a bad case of poison ivy, hives, or chicken pox, your Mom might have added some to your bathwater to make your skin feel better.

## Kitchen

### 1 Baits for Ant, Cockroaches and Crickets

#### What is it?

Insect baits are used to kill ants, cockroaches, and crickets inside your home. Baits work by enticing the insect to eat a food that contains an insecticide. An insecticide is a pesticide that kills insects.

For insect baits to work, the areas where food is stored, prepared, or eaten need to be kept clean. If there are other foods around that the insect likes better, or finds first, it will probably not eat the bait at all.

So do baits kill just one insect at a time? No. Baits work by tricking the insect into eating something poisonous and spreading the poison to others. How do they spread the poison? Both ants and cockroaches leave a scent trail for others to follow to find the bait. Also, ants may carry some of the bait back to their colony to share with the other ants. In a short time, the insecticide kills the insects that have eaten the bait. But how fast a bait works depends on several things. It depends on the kind of pesticide in the bait, whether the insect likes the taste of the bait, and whether there is other food around for the insect to eat instead of the bait.

You may have seen insect bait on countertops, in cabinets, hidden behind stoves or refrigerators, or on the floor near cracks or crevices where insects go in and out. They are usually square or round, with a flat top, and are about half an inch high. They may also be sort of dome shaped, like an igloo. The containers are about 2 inches across in size and may be plastic or metal. The bait inside the container is usually a solid or a gel. Some bait isn't in a container at all. They can be tablets or gels that are put out for insects, like cockroaches, to eat. Your parents/guardians can decide the best location for insect bait so that it will work well. Remind them to always "Read the Label First" so that they know how to properly use these products and for safety information.

#### What's in it?

The insecticides commonly found in insect baits include abamectin, propoxur, trichlorfon, sulfluramid, chlorpyrifos, and boric acid.

#### What health and safety things do you need to think about with insect baits?

Because the majority of insect baits are enclosed in containers, it is not likely that you will be exposed to the pesticides. But if you find them, leave them alone. Do not move them, open them, or put them in your mouth. Keep your pets away from them, too. Let your parents/guardians know that you found them. If you should touch one, wash your hands with plenty of soap and water to be sure that none of the pesticides that insects might have carried out of the container got on your skin. And remember to never put anything in your mouth unless you know for sure what it is and that it is safe to do so.



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## Household Hazards Hunt Answers *(continued – page 4)*

### 2 All-Purpose Cleaner

#### What is it?

All-purpose cleaners can be used for many different kinds of cleanup jobs around the house. All-purpose cleaners are used to clean windows, floors, and kitchen and other appliances in your house. All-purpose cleaners are usually kept in the kitchen, but they can also be found in other parts of the house, such as the bathroom, basement, or garage.

#### What's in it?

All-purpose cleaners may use many different kinds of ingredients, such as detergents, grease-cutting agents, solvents, and disinfectants.

All-purpose cleaners can contain hazardous chemicals such as ammonia, ethylene glycol monobutyl acetate, sodium hypochlorite, and trisodium phosphate.

If you "Read the Label First," it should tell you if any of these chemicals are found in the all-purpose cleaners used in your home.

#### What health and safety precautions do you have to think about when using all-purpose cleaners?

Depending upon the ingredients used, all-purpose cleaners can irritate the skin, eyes, nose, and throat. They can be highly poisonous if swallowed. Some of these chemicals have a sweet smell, which attracts animals and can poison them, too.

#### When using all purpose cleaners, follow these safety steps:

1. Wear rubber gloves to protect your skin.
2. Be sure that there is good air circulation in the room. Open several windows or keep a fan running.
3. NEVER mix two cleaners of different types together, especially if one contains ammonia and the other contains chlorine. This can produce a gas called chloramine and the breathing of its fumes could be fatal.

### 3 Insect Sprays

#### What is it?

Insect sprays are used to get rid of ants, bees, flies, roaches, spiders, wasps, and many other insects, even lice. Insect sprays are pesticides known as insecticides. There are many different kinds of insecticides. The kind to use depends on the type of insect and where you want to use it. Read the product label to find out about the insecticide. Not all insecticides can be used in your house. Some can only be used outside. Some can be used on your dog, cat, or parakeet – even on your pet goat, if you have one. Others can only be used on items such as bedding, rugs, lawns, or plants.

Insecticides used around your home usually come in the form of liquids, sprays, or powders. Sometimes they are mixed with other products that are used around your house. Sometimes they are mixed with other pesticides. For example, a fertilizer for your grass may have an insecticide in it. It could even have both an insecticide and an herbicide (weed killer) in it.

#### What's in it?

Examples of pesticide chemicals that are commonly found in insecticides are permethrin, diazinon, propoxur, and chlorpyrifos.

#### What health and safety things do you need to think about with insecticides?

When you use an insecticide, especially indoors, make sure that it doesn't get on food or things that come in contact with food, like dish towels, dishes, silverware, or countertops. Insecticides can come in a spray can, bottle, or other container. Some insecticides that you buy from the store have to be mixed with water first before they can be used. Be sure that you and your parents/guardians always "Read the Label First" so that you know how to properly use these products and for safety information.

Insecticides can hurt your eyes. They can make you really sick if you breathe their fumes, get some in your mouth, or on your skin and you don't wash it off right away. They can also be fatal. How you are affected depends on your exposure.

### 4 Window or Glass Cleaners

#### What is it?

These cleaners are used to clean windows throughout the house, glass tables, mirrors, and the screens of TVs and computers. These cleaners are usually kept in the kitchen, bathroom, or basement.

#### What's in it?

The basic ingredients in window and glass cleaners are ammonia and isopropanol.

#### What health and safety precautions do you have to think about when using window/glass cleaners?

These products are irritating to the eyes, skin, nose, and throat. If swallowed, they may cause drowsiness, unconsciousness, or death. If you need to use these products, you need to be sure to always "Read the Label First" so that you know how to properly use these products and for safety information. Always wear protective gloves when using these products and use them in a well-ventilated area.

## Household Hazards Hunt Answers *(continued – page 5)*

### 5 Antibacterial Cleaner

#### What is it?

Cleaners are used to remove dirt. Antibacterial cleaners remove dirt and kill bacteria. Bacteria are organisms that are too small to be seen with just your eyes. Some bacteria cause diseases or make you sick; others do not do so.

Antibacterial cleaners come in a spray can, pump bottle, or other container. They are commonly used in the kitchen to clean things that come in contact with food, like cutting boards and counter tops. Keeping these areas clean will help prevent harmful bacteria from contaminating your food. It is especially important to clean areas that come in contact with raw meat. Raw meat can also carry bacteria. Use an antibacterial kitchen cleaner or wash the area with hot soapy water.

If helping to clean the kitchen is one of your chores around the house, you may be using antibacterial cleaners to do the job. If so, you need to be sure to always “Read the Label First” so that you know how to properly use these products and for safety information. Also, be sure that your parents/guardians know what household products you are using. They can make sure that you use them safely.

#### What’s in it?

Antibacterial cleaners usually contain water, a fragrance, a surfactant, and a pesticide. The surfactant breaks up the dirt, the pesticide kills the bacteria, the fragrance makes it smell good, and the water holds the cleaner together. In antibacterial cleaners, the pesticides are commonly quaternary ammonium or phenolic chemicals. They are known as antimicrobial pesticides.

#### What health and safety things do you need to think about with antibacterial cleaners?

Antibacterial cleaners are very irritating to your eyes and skin and will burn your throat. It’s a good idea to wear latex dishwashing gloves to help protect your skin when using these cleaners. If you get some on your skin, wash it off immediately; if you get some in your eyes, flush your eyes with cool water. Because antibacterial cleaners can be harmful, it is important to protect yourself from exposure to them.

### 6 Dishwashing Detergent

#### What is it?

These products are used to wash dishes primarily in the kitchen. These detergents are divided into two categories: automatic dishwashing detergents and hand dishwashing detergents. These cleaners are usually kept in the kitchen.

#### What’s in it?

Both of these contain cleaning agents with cationic, anionic, or non-ionic in their names. The main ingredient usually used in these detergents is phosphate.

#### What health and safety precautions do you need to think about when using dishwashing detergent?

Automatic dishwashing detergents have been known to produce skin irritations or burns. They are poisonous if swallowed. Hand dishwashing detergents are milder than automatic dishwashing detergents. If swallowed, they may cause irritation to the mouth and throat, and nausea, but not death. They are generally safe for people and the environment. If you need to use these products, you need to be sure to always “Read the Label First” so that you know how to properly use these products and for safety information. Keep them away from small children to minimize the risk of accidental poisoning.

### 7 Oven Cleaners

#### What is it?

Oven cleaners are used to help break up the baked-on food stuck to the inside of the oven. Oven cleaners are usually kept in the kitchen.

#### What’s in it?

The basic ingredient in oven cleaners is lye (either sodium hydroxide or potassium hydroxide).

#### What health and safety precautions do you have to think about when using oven cleaners?

Lye is extremely corrosive and can burn your skin and eyes. It is usually fatal if swallowed.

Because of the toxicity of these products, only an adult should use them. Remind your parents/guardians to always “Read the Label First” so that they know how to properly use these products and for safety information. They should always wear an apron, gloves, and safety goggles, and they should not breathe the fumes. Make sure that there is plenty of fresh air and ventilation when using these products.

Nontoxic oven cleaners without lye are available.

### 8 Flour Canister

This canister contains flour. It looks like white powder and is used for baking. Although flour is nontoxic, there are several other products that look a bit like flour, such as laundry detergent or talcum powder. If you are unsure, check with an adult.

*(continued on other side)*

## Household Hazards Hunt Answers (continued – page 6)

### 9 House Plant

No toxic pesticides in these houseplants. But the leaves or sap from some plants can be poisonous to animals and humans. Poisonous plants don't always cause death, but they can make you very sick or cause you to have a severe reaction to them.

Here are a few examples of poisonous houseplants:

Mums: The leaves and stalks are poisonous.

Common English Ivy: The leaves are poisonous.

Dumbcane, Giant Dumbcane, and Spotted Dumbcane: All parts are poisonous.

If these plants are in your house, make sure that your parents/guardians know that parts or all of the plant are poisonous. Keep them away from places where kids or pets could get into them.

### 10 Vinegar

Vinegar is commonly used in certain foods, like salad dressings and vinaigrettes, pickles, and even candy. But did you know that vinegar can also be used for cleaning?

Vinegar has been used for several generations and perhaps your grandparents or great-grandparents may have used it to clean items from windows to pots and pans. Today, vinegar is sometimes used instead of household cleaning products because it is nontoxic.

### 11 Baking Soda

Some people use baking soda for baking cakes and pastries. Some people use baking soda for cleaning and others use it to absorb or eliminate mild odors. Perhaps you will find an open box of baking soda being used in your refrigerator to eliminate odors because it is nontoxic and it doesn't contaminate your food. Baking soda is also an ingredient in some products like toothpaste and deodorant.

## Laundry Room

### 1 Insect Sprays

#### What is it?

Insect sprays are used to get rid of ants, bees, flies, roaches, spiders, wasps, and many other insects, even lice. Insect sprays are pesticides known as insecticides. There are many different kinds of insecticides. The kind to use depends on the type of insect and where you want to use it. Read the product label to find out about the insecticide. Not all insecticides can be used in your house. Some can only be used outside. Some can be used on your dog, cat, or parakeet – even on your pet goat, if you have one. Others can only be used on items such as bedding, rugs, lawns, or plants.

Insecticides used around your home usually come in the form of liquids, sprays, or powders. Sometimes they are mixed with other products that are used around your house. Sometimes they are mixed with other pesticides. For example, a fertilizer for your grass may have an insecticide in it. It could even have both an insecticide and an herbicide (weed killer) in it.

#### What's in it?

Examples of pesticide chemicals commonly found in insecticides are permethrin, diazinon, propoxur, and chlorpyrifos.

#### What health and safety things do you need to think about with insecticides?

When you use an insecticide, especially indoors, make sure that it doesn't get on food or things that come in contact with food, like dish towels, dishes, silverware, or countertops. Insecticides can come in a spray can, bottle, or other container. Some insecticides that you buy from the store have to be mixed with water first before they can be used. Be sure that you and your parents/guardians always "Read the Label First" so that you know how to properly use these products and for safety information.

Insecticides can hurt your eyes. They can make you really sick if you breathe their fumes, get some in your mouth, or on your skin and you don't wash it off right away. They can also be fatal. How you are affected depends on your exposure.



## Household Hazards Hunt Answers *(continued – page 7)*

### 2 All-Purpose Cleaner

#### What is it?

All-purpose cleaners can be used for many different kinds of cleanup jobs around the house. All-purpose cleaners are used to clean windows, floors, and kitchen and other appliances in your house. All-purpose cleaners are usually kept in the kitchen, but they can also be found in other parts of the house, such as the bathroom, basement, or garage.

#### What's in it?

All-purpose cleaners may use many different kinds of ingredients, such as detergents, grease-cutting agents, solvents, and disinfectants.

All-purpose cleaners can contain hazardous chemicals such as ammonia, ethylene glycol monobutyl acetate, sodium hypochlorite, and trisodium phosphate.

If you "Read the Label First," it should tell you if any of these chemicals are found in the all-purpose cleaners used in your home.

#### What health and safety precautions do you have to think about when using all-purpose cleaners?

Depending upon the ingredients used, all-purpose cleaners can irritate the skin, eyes, nose, and throat. They can be highly poisonous if swallowed. Some of these chemicals have a sweet smell, which attracts animals and can poison them, too.

#### When using all purpose cleaners, follow these safety steps:

1. Wear rubber gloves to protect your skin.
2. Be sure that there is good air circulation in the room. Open several windows or keep a fan running.
3. NEVER mix two cleaners of different types together, especially if one contains ammonia and the other contains chlorine. This can produce a gas called chloramine and the breathing of its fumes could be fatal.

### 3 Laundry Detergents

#### What is it?

Laundry detergents are used to clean stains and loosen dirt from the household laundry. Laundry detergents are usually found in the laundry room or the kitchen.

#### What's in it?

Laundry detergents contain cleaning agents with cationic, anionic, or non-ionic in their names. Laundry detergents also contain enzymes that are used to loosen stains and ground-in dirt.

#### What health and safety precautions do you need to think about when using laundry detergents?

These products may irritate skin or make people more sensitive to other chemicals. They might also cause asthma; however, this is usually when used in extremely large quantities. If you need to use these products, you need to be sure to always "Read the Label First" so that you know how to properly use these products and for safety information. Detergents are responsible for many household poisonings by accidental swallowing. Keep these boxes and bottles out of reach of small children and only use as directed.

### 4 Chlorine Bleach

#### What is it?

Did you know that a pesticide is added to your washing machine to help keep your white clothes white? This pesticide is also found in many household cleaning products that contain a disinfectant to kill germs. And it is found in household products used to clean mold and mildew from your shower or tub. Can you guess what this pesticide is? Chlorine Bleach!

You wouldn't think that ordinary chlorine bleach is a pesticide – but it is. Because it kills bacteria and viruses, it is called a disinfectant or an antimicrobial pesticide. And because it kills fungi and molds, it is also known as a fungicide.

If you are responsible for doing laundry or other types of cleaning as some of your chores around the house, you may be using liquid chlorine bleach to do the job. If so, you need to be sure to always "Read the Label First" so that you know how to properly use this product and for safety information. Also, be sure that your parents/guardians know what household products you are using. They can make sure that you use them safely.

#### What's in it?

Standard household bleach contains the chemical sodium hypochlorite.

#### What health and safety things do you need to think about with chlorine bleach?

Liquid bleach in a bottle is a 5.25% sodium hypochlorite solution. This means that 5.25% of the liquid is the chemical sodium hypochlorite and the rest is mostly water. The number 5.25% tells you the strength of the concentration of the chemical. Look at the labels of other household cleaning products that contain bleach. Some contain sodium hypochlorite or chlorine bleach in concentrations of 0.7%, 1.8%, or 2.4%.

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## Household Hazards Hunt Answers *(continued – page 8)*

Never mix chlorine bleach with any other household or cleaning products. Doing so can result in different types of harmful acids being formed. Poisonous gases can also be released that will cause very serious breathing problems or death.

Always be careful when using chlorine bleach. Because it comes in 1-gallon jugs, the container can be a little hard to handle. Spills and splashes can happen. Not only will the bleach damage your clothing, but it is irritating to your skin and can cause serious damage to your eyes, even blindness. As with any chemical, it is important to protect yourself from exposure.

### 5 Wood Stains and Finishes

#### **What is it?**

Stains and finishes are used to change the color of wood. A stain is a pigment that is dissolved in a solvent.

#### **What's in it?**

The solvent can be water or volatile organic chemicals, such as mineral spirits (naphtha). Read the label to find out about the ingredients and safety precautions.

#### **What health and safety precautions do you need to think about with stains/finishes?**

Many of these products contain chemicals that can irritate your skin, eyes, nose, and throat when they are being used because of the vapors that are given off. Before using these products, you need to be sure to always "Read the Label First" so that you know how to properly use these products and for safety information. If at all possible, use the stain or finish outside. If that is not practical, open the windows and doors fully and put a box fan in the window to direct the air and fumes outdoors. Keep the fan on while painting and for about 48 hours afterwards. Keep small children away from the room where the stain or finish is being applied and away from the open cans of stain or finish. Do not use stain or finish indoors that is labeled "for exterior use only." If the room you are painting does not have a window, consider using a water-based product.

### 6 Milk Jug

This is an empty milk jug. So what's it doing in the laundry room? It could be that someone was going to use it to store something other than milk in it. Never use food containers to mix or store pesticides or any other household cleaning products. Not even if you write over the label and store them for later use or disposal. Why? Because kids or others can mistake it for something to eat or drink. Little kids can't read, so writing over the label won't help to tell them that a food container does not contain food. Unfortunately, many household poisoning accidents are caused by people not safely using or storing chemicals.

If you see a food container somewhere other than the kitchen or pantry, ask your parents/guardians what's in it. Ask them why it is there. Tell your parents/guardians to always store pesticides and other household products in their original containers. That way the label, with its list of ingredients and directions for use, is always with the household product.

### 7 Package of Cheesecloth

Most people use cheesecloth like a rag in order to apply stains and finishes. By itself, cheesecloth does not contain anything toxic. However, if you find a piece of cheesecloth that has already been used for stains or finishes, ask an adult to properly throw it away.

### 8 Case of Soda Pop

This is just a case of soda pop or, depending on where you live in the United States, just soda or pop or soft drinks.

## Garage

### 1 “Spot-ons”

#### What is it?

Fleas and ticks are pretty annoying to dogs and cats. These insects bite your pets and can carry diseases. They bite people, too! If your dog or cat is in and out of the house a lot, they may be giving fleas and ticks a free ride into your home. What can you use to keep these pests off of your pets? Spot-ons.

A spot-on is an insecticide product that is named for the way in which it is applied. It's applied to a small area, or spot, on your dog or cat. It comes in liquid form. The pesticide in the spot-on works by spreading out over your pet to kill and repel fleas and ticks.

Your parents/guardians should be the ones to apply a spot-on product on your pet. Remind them to always “Read the Label First” so that they know how to properly use these products and for safety information.

#### What's in it?

Examples of the pesticides found in spot-ons are chemicals called imidacloprid, fipronil, pyrethrins, permethrin, and methoprene.

#### What health and safety things do you need to think about with “Spot-ons”

If a spot-on is used on your dog or cat, be sure not to pet them for at least 24 hours. If you forget and do pet them, or you get any of the spot-on on your hands or skin, wash it off immediately with lots of soap and water. Whether or not you get sick from pesticides depends on your exposure to them. It is important to protect yourself from exposure to these chemicals.



### 2 Wet-Cell Batteries

#### What are they?

Wet-cell batteries are used in cars, trucks, tractors, and other motor vehicles to provide the spark to start the vehicle. They are usually about twice the size of a shoe box.

#### What's in them?

Wet-cell batteries contain lead and a solution of sulfuric acid.

#### What health and safety precautions do you need to think about with wet-cell batteries?

Most wet-cell batteries today are sealed so that you cannot be exposed to the sulfuric acid and the lead. However, when activated, the electrolyte solution in the battery produces explosive gases that are easily ignited. Manufacturers of batteries that contain sulfuric acid must use labels that warn consumers about the dangers from battery acid and accumulated gases. Sulfuric acid is extremely caustic, which means that it burns. The fumes are strongly irritating and contact can cause burning and charring of the skin; it can cause blindness if you get it in your eyes. Lead is poisonous in all forms and accumulates in our bodies and in the environment.

It is important never to break the seal of wet-cell batteries. If you do so accidentally, do not attempt to clean it up yourself, get an adult right away. If an adult is not available, you can call the fire department. Keep other children and pets away from the area until the battery's acid is cleaned up. Wash your hands after you have any contact with wet-cell batteries.

### 3 Latex Paint

#### What is it?

Latex paint can be used indoors or outdoors on walls, wood, and ceilings. The label on the can will say where the paint should be used. It is also called water-based paint.

#### What's in it?

The main solvent used in latex paint is water. The other ingredients are pigments and fillers. The term “latex” refers to the resin that is contained in the paint. Paints that are used outdoors may have larger amounts of biocides in them.

#### What health and safety precautions do you need to think about with latex paint?

Indoor water-soluble latex paints may be of low toxicity unless ingested in large quantities. Some interior latex paint can emit formaldehyde when it is drying. Latex paints that give off high levels of formaldehyde when drying can give you a headache and can irritate your eyes, nose, and throat.

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## Household Hazards Hunt Answers *(continued – page 10)*

Before using these products, you need to be sure to always “Read the Label First” so that you know how to properly use these products and for safety information. In the room that is being painted, open the windows and doors fully. Put a box fan in the window to direct the air and fumes outdoors. Keep the fan on while painting and for about 48 hours afterwards. Keep small children away from the room where the painting is being done and away from the open cans of paint. Do not use paint indoors that is labeled “for exterior use only.”

### 4 Oil-Based Paints

#### What is it?

This type of paint is most often used to paint the outside of the house because it dries very hard and withstands harsh weather conditions for a long time. Sometimes people may use oil-based paint indoors in areas that have a lot of moisture such as in kitchens and bathrooms.

#### What’s in it?

The solids in the oil-based paint are kept suspended by a number of chemicals that are organic solvents. The solvents commonly used in oil-based paints include mineral spirits (naphtha), toluene, xylene, and other petroleum distillate solvents. Oil-based paints are sometimes called alkyd paints. Alkyd refers to the resin type that is used in the paint.

#### What health and safety precautions do you need to think about with oil based paint?

Oil-based paint contains organic solvents that can be irritating to eyes and skin, and can cause cracking of the skin. Inhaling paint fumes can result in headaches, nausea, and dizziness, and can make you very tired if you breathe in the fumes for too long without good air circulation. Most of these symptoms will go away if you remove yourself from the area being painted and get some fresh air. Let an adult know if you continue not to feel well. If you are exposed to the chemicals in these types of products often, you may experience other long-term problems such as kidney, liver, or blood effects. Breathing in paint fumes from cans of spray paint on purpose is a very bad idea. It can lead to irreversible brain damage and death even after the first time.

Before using these products, you need to be sure to always “Read the Label First” so that you know how to properly use these products and for safety information. In the room that is being painted, open the windows and doors fully. Put a box fan in the window to direct the air and fumes outdoors. Keep the fan on while painting and for about 48 hours afterwards. Keep small children away from the room where the painting is being done and away from the open cans of paint. Do not use paint indoors that is labeled “for exterior use only.” If the room you are painting does not have a window, consider using a latex paint.

### 5 Motor Oil

#### What is it?

Motor oil is used in the engines of vehicles, such as cars, trucks, and tractors to make sure that the pistons don’t rub against the metal in the engine block.

#### What’s in it?

Motor oil is made up of many unique chemicals that come mainly from crude oil, the same source from which we get gasoline. Used oil or waste motor oil may be contaminated with magnesium, copper, zinc, and other heavy metals that are picked up from the engine.

#### What health and safety precautions do you need to think about with motor oil?

Motor oil can contain some chemicals that are suspected to cause cancer (that is, carcinogens). If disposed of improperly (for example, if you pour it in the storm sewer or down the drain), used motor oil poses a very serious threat to the environment because it is toxic to fish and birds. When poured into water, one quart of motor oil can form an oil slick almost 9,680 square yards. That is more than two football fields! Always take used motor oil to the recycling center; never pour it on the ground, in the storm sewer, or down the drain.

## Household Hazards Hunt Answers *(continued – page 11)*

### 6 Antifreeze

#### What is it?

Antifreeze is a bright yellow or green liquid that has a slightly sweet smell. It is used in the radiators of cars, trucks, and other motor vehicles. Antifreeze works to keep the vehicle from overheating in the summer or freezing in the winter. When it's added to the water in a radiator, it changes the water's boiling and freezing points. How much it changes these points depends on the ratio or concentration of antifreeze to water.

#### What's in it?

The main hazardous ingredient of antifreeze is ethylene glycol.

#### What health and safety precautions do you need to think about with antifreeze?

Ethylene glycol is very poisonous when swallowed. It will cause severe damage to your heart, kidneys, and brain. It can cause death.

Antifreeze can be spilled on the ground or leak from the radiators of cars and trucks. Because of its sweet smell, animals may be attracted to it. Antifreeze is very poisonous, so licking or drinking the fluid can kill an animal. If you see a bright green or yellow liquid on the ground in the garage or on a driveway, parking lot, or street, keep your dog and other pets away from the puddle and let an adult know about it.

When cleaning up antifreeze, all adults need to wear protective gloves because ethylene glycol can cause damage to internal organs through skin absorption. Inhalation of the fumes can also cause dizziness.

There is a new type of antifreeze available that contains propylene glycol. Propylene glycol is much less toxic than ethylene glycol. An animal would have to consume a lot more of this type of antifreeze (a quantity that is unlikely to be available) to get sick or to die. The bottle's label should tell you what type of antifreeze it is.

Some people who have vacation homes that they close up for the winter will pour antifreeze into the toilets so that the water doesn't freeze. In this case, these people should always use the less toxic antifreeze (the one with propylene glycol in it) because pets can drink out of the toilets and can be poisoned.

### 7 Toolbox

Besides your Dad's tools, toolboxes sometimes contain products that are used to fix things around the house. These products could contain toxic chemicals. You should be careful with anything that you find in there. When in doubt, ask an adult.

### 8 Paint Roller and Pan

There may be some leftover paint on the roller and/or the pan and this may be toxic. Check with an adult before handling a used paint roller and pan (especially if there is paint on it, no matter how old or dry the paint is). Make sure that you wear protective gloves and wash your hands thoroughly after you handle paint.

### 9 Flashlight

Normally, flashlights are safe and nontoxic to use. However, be careful when handling the batteries and bulb in a flash light. Better yet, let an adult take care of these things.

### 10 Bucket

This is an empty bucket. No pesticides or toxic chemicals in here.



## Lesson 2: Pesky Pests and Household Hazards

### 5. Close and Take-Home Talk

(5 minutes)

Do  
Explain

Close your eyes and take a nice deep breath. We've covered a lot today. We talked about pests. Raise your hand if you know what a **pest** is. *[Call on a student to give the definition.]* We talked about **pesticides**—chemicals and cleaners that kill or repel pests—and learned that some can be **hazardous** and/or **toxic**. We also talked about how we can make our homes and our space a less inviting place for pests to live.

Ask

You can open your eyes now. What is the first thing that the detective did when we thought that we had a pest?

**Answer:** 1. Identify the pest. You have to know what kind of pest it is first.

Ask

Our mouse told us that this space was a nice place to live because it had what it needed to live. What three things was it looking for?

**Answer:** Food, water, and shelter.

Explain

When we are using our plot and plan method to get rid of pests instead of using pesticides, we want to make the environment undesirable for pests. So, we take away their food and water and shelter. Finally, we talked about how to stay safe from household hazards by locking them up and putting them up high where they are out of reach.

Take-Home  
Talk

The coolest part about learning something new is sharing the knowledge. Tonight, when you get home, I want you to talk with your family about the things that we learned today. What do we need to do to make our homes pest-free? Look for clues about which pests may be in your home. What can you do to safely eliminate them? Discuss this with your family.

Do  
Explain

*[Pass out **Take-Home Talk**.]* This Take-Home Talk Sheet has some things that you can share with your family and some activities that you can do at home. See what you can accomplish on the sheet and we'll talk about it the next time we meet.



*Recipes for Healthy Kids and a Healthy Environment*  
*Kids Building a Safer and Healthier Community*

## Take-Home Talk

### Lesson 2: Pesky Pests and Household Hazards

#### To Share:

- Pests are living things that can hurt us by making us sick, damage our homes or other property, or destroy plants or agricultural products. A pest can be a plant, an animal, or a disease.
- Pests are everywhere—in our schools, homes, and clubs, and our cities, suburbs, and in the country. There are pests in the White House, the Taj Mahal, and Buckingham Palace. They are everywhere!
- Insects are just one kind of pest that people may encounter. The world has more insects than all other living things combined. It's estimated that there are 10 quintillion (10,000,000,000,000,000) insects!
- Instead of using chemicals that can be toxic in order to get rid of pests, we can remove the things that they need to survive. Take these steps:
  1. Identify the pest.
  2. Take away food.
  3. Take away water.
  4. Take away shelter.
  5. Monitor the situation

#### To Do and Talk About:

- **Household Hazard Hunt!** With the adults in your family, walk around your home and locate all of the pesticides and chemical cleaners that you use. Are they being kept in a safe place, out of reach? Do you know what each of them is used for? Are there some chemicals that you don't really use or need?
- **Become a Pest!** Imagine that you're an ant. Get down low to the ground. What would an ant see? Where could they go that you can't go? Where is the best place in your neighborhood to live if you're an ant? What would be amazing about being an ant? What would be not so great about being an ant?

#### To Take Back:

- What was the coolest thing that you learned from talking about this topic with your family and friends?