Pests, IPM, Poison Prevention, and You

Activity Book for K – 4th Grade

Pesticide Education Program • extension.psu.edu/pested
Living things, or organisms, are all around us. Everywhere you look, you can find examples of living organisms: humans, animals, plants, insects, fish, fungi, and more. Even some things we cannot see with our eyes, such as bacteria, are living things.

Living things need a habitat to survive and grow. A habitat includes food, water, shelter, and space. Shelter is the home of the organism (or creature), providing air, suitable temperatures, and protection. If a living organism cannot find food, water, shelter, or space in the area they are living, then they will move to another place to find it.

Nonliving things do not grow and do not need food, water, and shelter. For example, a rock is nonliving. A rock cannot grow and does not need a habitat. However, a rock might be part of other organisms’ habitats by providing shelter or a protected space. Living organisms depend on other living and nonliving things to survive and grow.

Discussion: Can you tell a story about these creatures and what their habitat might look like?

Go outside or look out your window. What living organisms do you see?

Food

Water

Shelter
When you see lots of buzzing and activity around blooming flowers, you know pollination is happening! Pollination is when pollen from one plant’s flower is moved to another flower of same kind of plant. This process allows the plant to grow fruit, vegetables, or nuts. Pollinators, such as bees, butterflies, birds, bats, and others, move the pollen from plant to plant. Without pollinators doing their job, we would not have many of the foods we love to eat that help us stay healthy.

Pollinators, such as bees, move pollen grains from the anther of one apple blossom to the stigma of another apple blossom, which allows the apple tree to produce fruit.

**What Can You Do?**

**KIDS**
- Observe and learn more about living organisms and their habitats!
- Tell an adult if you see or find a living organism where it does not belong, like a bee in your house or a rabbit in the garden.

**ADULTS**
- Encourage children to observe the living world around them.
- Help children research and learn more about living organisms that they like, especially those they might see around their homes.
Living Organism

Living organisms need a habitat (food, water, shelter, and space) to survive and grow. Nonliving things do not grow and do not need food, water, and shelter.

Instructions: Look at the pictures. Is it a living? Or is it nonliving? Write the letter (beside each picture) to the correct group at the bottom of this page or the next page. Then on the line beside each letter, write its name. Two examples are done for you. When finished, color the pictures.

Living Organisms:

(A) cockroach, ( ) __________, ( ) __________,
( ) __________, ( ) __________, ( ) __________,
( ) __________, ( ) __________, ( ) __________.

(A) cockroach, ( ) __________, ( ) __________,
( ) __________, ( ) __________, ( ) __________,
( ) __________, ( ) __________, ( ) __________.

PennState Extension
or Nonliving Thing?

Nonliving Things:
(B) __________, ( ) __________, ( ) __________,
( ) __________, ( ) __________, ( ) __________,
( ) __________, ( ) __________, ( ) __________.
What Is a Pest?

A pest is an organism living and growing where it is not wanted and can cause damage to plants, structures, humans, and other organisms. Pests compete for habitat resources (food, water, shelter, and space) and can damage or destroy plants in flower or vegetable gardens, as well as crops in fields. Other pests can bite, sting, or spread allergens, germs, and diseases, which can cause sickness.

Any living organism can potentially be a pest, but it depends on the situation. Remember, all living things need a habitat to survive and grow. Organisms become pests when looking for food, water, shelter, and space in our homes, gardens, fields, structures, or even on us!

<table>
<thead>
<tr>
<th>Living Organism</th>
<th>Probably Not a Pest</th>
<th>Could Be a Pest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raccoon</td>
<td>In the woods</td>
<td>Digging in garbage can</td>
</tr>
<tr>
<td>Bee and Wasp</td>
<td>Pollinating flowers</td>
<td>Buzzing around food at picnic</td>
</tr>
<tr>
<td>Poison ivy</td>
<td>In a field or meadow</td>
<td>Growing near your home</td>
</tr>
</tbody>
</table>

Make the Connection

Remember a time that you had a pest in or around your home. What was the pest and what was it doing?
Spotlight:

**PESTS**

**Mice** are small rodents that can enter a home through any dime-sized hole. Mice can get into food, take materials for their nests, and chew on wires. You can put food in plastic containers, clean up trash, and organize clutter. Adults should seal any holes or gaps under doors.

**Cockroaches** come out at night and get into our food. Clean up crumbs, fix sink pipes that drip water, and seal holes where cockroaches may enter the home.

**Mosquitoes** might be in the yard looking to lay eggs in standing water. Empty outside items, such as a bird bath, bucket, or toy, that can collect water. Fix torn screens and keep doors shut to keep mosquitoes out of homes.

Sometimes, you do not see the pest, but you only see the evidence that the pest was there. Even if you have never had a pest problem before, keep your eyes open for pests and their signs, such as tracks, marks, or droppings.

<table>
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<th>What Can You Do?</th>
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<tr>
<td>• Shut doors and windows so unwelcome pests do not come in your home.</td>
</tr>
<tr>
<td>• Throw away trash, sweep up crumbs, and clean up clutter.</td>
</tr>
<tr>
<td>• Tell an adult if you see a pest or signs of a pest.</td>
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<td><strong>ADULTS</strong></td>
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<td>• Look outside your home for areas that may attract pests (gaps under doors, holes in window screens, overflowing garbage cans, and dripping hoses.)</td>
</tr>
<tr>
<td>• Look inside your home for areas that may encourage pests to stay (crumbs on counters and floors, open food containers, clutter, and dripping faucets.)</td>
</tr>
<tr>
<td>• If a pest problem is suspected or found, address the problem immediately.</td>
</tr>
</tbody>
</table>
Instructions: Look at the picture below. Circle the areas where pests can find food, water, and shelter, or access into the home. One example is done for you. Find 5 more things in the picture.

One Step Further: Describe how one item you circled may attract pests. What can you do to help solve this problem to discourage pests from staying in this home?

Example:
The pest was attracted because the sink was dripping water.
I can turn off the water or tell an adult.

The pest was attracted because _____________________________________________________________.

I can ___________________________________________________________.

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Instructions: Look at the picture below. Circle the areas where pests can find food, water, and shelter, or access into the home. Find 5 things in the picture.

One Step Further: Describe how one item you circled may attract pests. What can you do to help solve this problem to keep pests away from this home?

The pest was attracted because ____________________________________________
______________________________________________________________________
______________________________________________________________________

I can ________________________________________________________________
______________________________________________________________________
Integrated Pest Management (IPM) is a process that uses a variety of options to control pests.

1. The first step is to identify the pest.

2. The second step is to monitor activity, which means looking for signs of the pest, such as tracks, marks, or droppings. Monitoring includes determining whether the pest is creating a problem and what is the acceptable presence or population of the pest.

3. The third step is to choose the method or methods for control, including cultural, mechanical, biological, and chemical.

4. The fourth step is to evaluate the results from the control methods used and determine if the pest problem has been solved.

Make the Connection

If you had a pest problem, what did your family do to get rid of the pest?
Spotlight: IPM

Remember, IPM is a process that uses more than one option to manage the pest population. Start with using cultural control and then work your way through the other options.

**Cultural:** Change the environment (or habitat) so pests do not want to live there. Remove access to food, water, and shelter. Even if you do not have a pest problem, use cultural methods to prevent pests from becoming a problem! For example, clean up crumbs on counters and floors and keep food in closed containers.

√ *Kids can help with this!*

**Mechanical:** Use physical objects, including traps, machines, and devices, to keep out or control pests. For example, screens can keep insects out, traps can catch mice, or a flyswatter can stop pests!

√ *Kids can somewhat help with this.*

! *Adults should set traps and repair holes and cracks.*

**Biological:** Encourage natural predators, like animals and other organisms to capture and feed on pests. For example, cats chase mice away, bats eat mosquitoes, and beneficial insects, like ladybugs, eat other bugs that are pests.

√ *Kids can somewhat help, such as taking care of the cat.*

! *Adults should determine what biological controls to use.*

**Chemical:** When needed, pesticides, such as sprays, dusts, and baits, can be effective to repel or poison pests. To safely and properly use pesticides, adults must read and follow all label directions. For example, insect repellent keeps mosquitoes from biting humans, but an adult should always help a child correctly apply the repellent.

! *Only adults should use pesticides, not children.*

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<table>
<thead>
<tr>
<th><strong>What Can You Do?</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>KIDS</strong></td>
</tr>
<tr>
<td>• Assist with monitoring (looking) for any pests around the home.</td>
</tr>
<tr>
<td>• Help with cultural, mechanical, and biological controls when possible.</td>
</tr>
<tr>
<td><strong>ADULTS</strong></td>
</tr>
<tr>
<td>• Ask a professional to help with identifying a pest when uncertain.</td>
</tr>
<tr>
<td>• Assess the situation to determine acceptable levels or presence of the pest.</td>
</tr>
<tr>
<td>• Read and follow all label directions on pesticide products if using chemical controls.</td>
</tr>
</tbody>
</table>
Integrated Pest Management (IPM) is a process to control pests that uses a variety of methods, including cultural, mechanical, biological, and chemical. Several options are often used when controlling a pest population.

**Instructions:** Identify the pest management control options represented in the below pictures. Mark the corresponding shape (as defined below) by the picture of what pest control option is represented. One example is done for you. When finished, color the pictures of the controls that are used around your home or school.

**One Step Further:** Write the name of the control option-cultural, mechanical, biological, or chemical-beside the picture.

- **Cultural:** Changing the environment (or habitat) so pests do not want to live there. Remove access to food, water and shelter.
- **Mechanical:** Physical objects, including traps, machines, and devices, to keep out or control pests.
- **Biological:** Natural predators, like animals and other creatures, which can capture and feed on pests.
- **Chemical:** When needed, adults can use pesticides, such as sprays, dusts, and baits, which are poisonous to pests.

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**Screen in window**
- Mechanical

**Ladybug**
- Cultural

**Cat**
- Mechanical

**Flyswatter**
- Chemical
Integrated Pest Management (IPM)

- **Broom and dust pan**
- **Flea collar**
- **Insect repellent**
- **Bat**
- **Ant bait station**
- **Mousetrap**
- **Food storage**
- **Trash can**
Poison Prevention

Integrated Pest Management (IPM) in homes, schools, and communities can help control pests, which is important since pests can compete for resources; damage or destroy plants; bite or sting; and spread allergens, germs, and diseases. Chemicals can be used as part of IPM, but chemical products can be poisonous if not used correctly. Only ADULTS should touch and apply chemicals. Prevent accidental poisonings by recognizing signal words and using Mr. Yuk stickers on chemical products. Practicing IPM and poison prevention helps everyone stay healthy and safe!

**Signal words** represent toxicity, which is how poisonous a product may be. Products with signal words should be used only by adults. Kids should never touch, taste, drink, or smell a product with a signal word or Mr. Yuk sticker on it!

**Signal words** include **Caution**, **Warning**, **Danger**, and **Danger Poison**.

Adults can put **Mr. Yuk** stickers on products that have **signal words** to alert others of potential harm. Mr. Yuk’s green face indicates that a product is poisonous. If a signal word and/or a Mr. Yuk sticker is on a product, children should STAY AWAY! Do not touch, taste, drink, or smell products that display a signal word and/or a Mr. Yuk sticker!

**Meet Mr. Yuk!**

- Children’s Hospital of Pittsburgh developed Mr. Yuk in the 1970s.
- Mr. Yuk displays the phone number (1-800-222-1222) for the Poison Center.
- Call the Poison Center if someone has been accidentally poisoned.
- The Poison Center is free to call, is staffed by doctors, nurses, and pharmacists, and is open 24 hours a day, seven days a week.

**Make the Connection**

Write down one thing that you learned about signal words and Mr. Yuk.

[Blank space]

Remember, Mr. Yuk is Green.
Many products in our home, including cleaners, detergents, pesticides, medicines, cosmetics, and others, could be poisonous if used in the wrong way. For example, insect repellents can help keep mosquitoes or ticks away from us, but are not meant to be sprayed in our eyes or face. Adults should help children correctly apply a repellent. If a chemical product is spilled, an adult should immediately clean it up safely.

In addition, many of these potentially poisonous products look like other household items, such as fruit juices, sport drinks, or candy. Storing chemical products in a locked cabinet, high shelf, or other safe locations that are out of the reach of children is very important.

**Discussion:** Explain how the adult is keeping the child safe from being hurt by the repellent and chemical products.

### What Can You Do?

<table>
<thead>
<tr>
<th><strong>KIDS</strong></th>
<th><strong>ADULTS</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Help adults look for chemical products that have signal words. The adults should put a Mr. Yuk sticker on these items.</td>
<td>• Read and follow all directions on product labels.</td>
</tr>
<tr>
<td>• Teach others about Mr. Yuk. Help younger family members know that Mr. Yuk means DO NOT touch, taste, drink, or smell!</td>
<td>• Leave products in their original containers so others can read the label to use it properly.</td>
</tr>
<tr>
<td>• Tell an adult if you see a poisonous product or an unmarked container that is left on the floor, counter, or other location.</td>
<td>• Store chemical products in locked cabinets, high shelves, or other places that are out of reach of children.</td>
</tr>
<tr>
<td></td>
<td>• Post the Poison Center phone number (1-800-222-1222) near a phone or put into a cellphone so it is available for an emergency.</td>
</tr>
</tbody>
</table>
Instructions: Poison prevention can help everyone to stay safe and healthy! Do you see what could cause an accidental poisoning in the home? Circle the 5 differences between the two pictures.
Mr. Yuk

Instructions: Color Mr. Yuk green.

To receive Mr. Yuk stickers, send a stamped, self-addressed, business-sized envelope to:

Mr. Yuk Stickers
Penn State Pesticide Education Program
222 Special Services Building
University Park, PA 16802
**Vocabulary**

**Habitats** are food, water, shelter, and space for a living organism. Shelter is the home of the organism, providing air, suitable temperatures, and protection.

**Integrated Pest Management (IPM)** is a process to control pests that uses a variety of methods, including cultural, mechanical, biological, and chemical controls.

**Living Organisms** need a habitat to survive and grow. If a living organism cannot find a suitable habitat in the area they are living, then they will move to another place to find it.

**Pests** are organisms living and growing where they are not wanted and can cause damage to plants, structures, humans, and other organisms. Pests compete for resources, such as eating plants in flower and vegetable gardens, and crops in fields. Other pests can bite, sting, or spread allergens, germs, and diseases, which can cause sickness.

**Predators** catch and feed on animals and other organisms. Predators can be a biological control for some pests.

**Review Questions**

**Instructions:** These questions can be asked by an educator in a group setting, given to a student as an assignment by a teacher, or used in other appropriate ways for learner audiences. The answers to the questions can be found in previous sections.

1. Living organisms need: 1)_________ 2)____________ 3 )____________ 4)____________.
2. An example of a living organism is ________________________________________.
3. An example of a nonliving thing is _________________________________________.
4. A pest is ____________________________________________________________________.
5. An example of a pest is ________________________________________________________.
6. Integrated pest management is__________________________________________________.
7. Integrated pest management includes four control options:
   1)_________________2)_________________3)_________________4)_________________.
8. Signal words on a product represent _____________________________________________.
9. The four signal words are:
   1)_________________2)_________________3)_________________4)_________________.
10. If Mr. Yuk is on a product, that means _____________________________________________.
11. The Poison Center phone number on Mr. Yuk is 1-800-_________ - ____________________.
**Answer Key**

**Answers: Pages 4 and 5**

**Living Organisms:** (A) cockroach, (D) tree, (F) bird, (G) flower, (J) mouse, (K) cat, (L) ant, (N) mosquito

**Nonliving Things:** (B) rock, (C) ball, (E) juice box, (H) bike, (I) book, (M) crayon, (O) truck

**Answers: Pages 8 and 9**

**Pests Inside Your Home**

1) Sink is dripping water.
2) Food containers are open (in 2 places).
3) Window screen is torn.
4) Garbage is overflowing.
5) Drink spilled on the floor.
6) Food crumbs are on the floor.

**Pests Outside Your Home**

1) Garbage is overflowing.
2) Hose is dripping water.
3) Door is open.
4) Bird bath contains standing water.
5) Clutter is located near home.
6) The tire can collect standing water.

**Answers: Pages 12 and 13**

**Integrated Pest Management**

**Cultural:** Broom and dust pan, Food storage, Trash can

**Mechanical:** Screen in window, Flyswatter, Mousetrap

**Biological:** Ladybug, Cat, Bat

**Chemical:** Insect repellent, Flea collar, Ant bait station

**Answers: Page 16**

**Poison Prevention**

1) Poison Center phone number is posted.
2) Adult is using chemical product.
3) Cabinets are locked (in 3 places).
4) Chemical spill is cleaned up.
5) Chemical products are stored on high shelf.
6) Mr. Yuk is on chemical products.