

***Dedicated  
to Reducing  
Pesticides***



**University of  
Connecticut**  
College of Agriculture  
and Natural Resources  
*Cooperative Extension System*

## Unit 2 Lesson 2: Safety First

**Focus Areas:** IPM Basics; Science, Language Arts

**Focus Skills:** observing, making decisions, supporting an opinion

### Objectives

- To recognize that non-chemical options may be used to control pests (insects, weeds, and diseases)
- To understand that chemical solutions should not be the first choice to control pests

### Essential Question

Why should people use IPM (Integrated Pest Management) to control pests?

### Essential Understandings

- IPM seeks to control pests in ways that are most environmentally friendly.
- IPM uses chemical controls only when absolutely necessary.

### Background

The use of chemicals to control pests has a long history, but it wasn't until the late 1930s that they became the control measure of choice. New synthetic products replaced the less effective compounds, and farmers and homeowners alike hailed them as the ultimate answer to their pest problems. The trend continued for two decades!

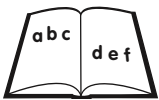
In the early 1960s, a small group of people began to question the adverse effects of chemicals on the environment. They worked tirelessly to get the warning out, and by the 1970s, governmental regulations and changes in public policy were put in place. This decade also marked the birth of IPM programs at Land Grant colleges across the nation.



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IPM, which uses a combination of biological, mechanical, cultural, and chemical controls, seeks to find ways to control pests using methods that are least harmful to the environment. Each decade brings new challenges, but one thing is certain. Chemicals alone are not the answer! Chemicals may damage the pest population, but they also damage other populations too. In addition, over time, the pests may become resistant to the chemical controls and more toxic chemicals may be needed. We can't afford to rely on a control method that pollutes the air, contaminates the ground and water, and threatens non-pest species from daisies to humans in the process!

### Vocabulary



<b>disease</b>	a condition that upsets the health of living things
<b>food crop</b>	something grown for humans or animals to eat
<b>pest</b>	a living thing that shows up where it's unwanted and causes problems
<b>poison</b>	something that hurts living things

### Logistics



**Time:** 30 minutes  
**Group Size:** 5 to 30  
**Space:** an area for comfortable seating

### Materials



Izzy puppet \*  
Handout 1 "Bye Bye Pest!" \*  
The *IPM Song* \*

\* single copy provided



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### Preparation



1. Make copies of Handout 1, “Bye Bye Pest!” (1 per team).
2. Review the script provided in the **Introduction**, **Involvement**, and **Follow Up** sections.
3. Rehearse the *IPM Song*.

### Activity



#### Introduction

1. Reintroduce Izzy to the children and have the puppet join you and the children in the following discussion: (**Note:** “T” will indicate teacher speaking; “I” will indicate the puppet)

- T: If you’ve ever been stung by a bee, stand up! (Teacher counts those standing.) Oh MY!
- I: If you’ve ever been bitten by a mosquito, raise your hand! (Izzy counts hands aloud.) WOW!
- T: Not all pests are insects.
- I: And not all insects are pests!
- T: Can anyone think of a plant that’s a pest because it makes you itch? (poison ivy) That’s right!
- I: Some pests, like fleas, bother our pets.
- T: Some pests attack our food crops, like corn.
- I: The corn earworm - I love those little worm like things! (T reacts with horrified surprise.)
- I: They’re one of my favorite snacks! Yum, Yum.
- T: Well, I love deer, but not when they snack on the flowers in my garden!
- I: Let’s face it, pests are everywhere, and everyone is pestered sometime!
- T: Can you think of some other pests, boys and girls?



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### Involvement

1. As the children suggest other pests, print them on the board in a column.
2. Generate a reasonable list before asking the children: (Izzy can help by suggesting some pests if the children struggle)  
  
T: Wherever you live, wherever you go, you can find pests! What can we do? (Take suggestions from children and print them on the board. Responses will probably be, “kill them,” “destroy them,” “get rid of them,” etc.)
3. Select one pest at a time and have the children identify specific methods for control. As children make suggestions, print them on the board. When a non-chemical suggestion is made, IZZY reacts happily. When a chemical solution is given, he shudders or drops his head.
4. I: Well, you’ve come up with lots of suggestions, but some are safer than others and safety is what IPM is all about!  
T: Tell us more, Izzy!
5. Izzy checks off all the chemical solutions the children gave like Raid®, ant cups, rat poison, OFF!®, etc. The children count as Izzy checks.  
  
I: (Depending on which is greater, chemical or non chemical)
  1. Like many people, most of your solutions rely on some kind of chemical to control the pest,  
-or-
  2. You’re smarter than a lot of people I’ve met. You came up with safer ways to control pests than using chemicals. (You can discourage pests from bothering you by taking away their food, water, or shelter.)



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6. Does anyone know why chemicals should not be our first choice for pest control? (Chemicals can make us sick, chemicals pollute our ground and water, chemicals can hurt plants and animals that aren't pests.) If the children don't know, print the word POISON on the board and ask the children what poison is. (something that makes you or your pets sick)
7. I: Chemicals are poison. That's why they work so well on pests. Sometimes adults need to use them to control pests. IPM tries to think of other safer ways to control pests so plants and animals we like don't get sick, and neither do we!
8. Divide the children into teams of two or three, depending on the total number. Distribute Handout 1, "Bye Bye Pest!" and allow teams time to determine how each pest control item could be used to control a pest. Circulate to help teams that need help.
9. Discuss each item and its possible uses.

### Follow Up

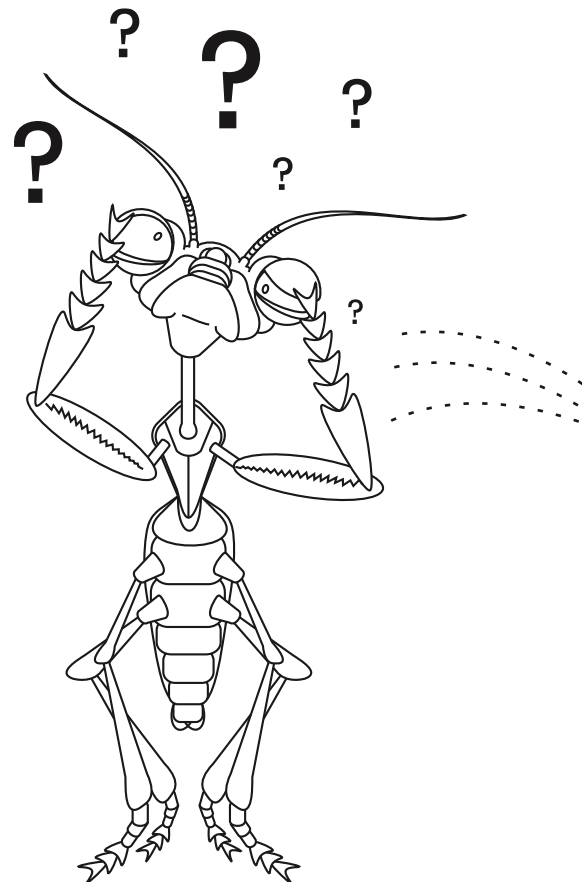
1. I: You are terrific IPM Detectives! You deserve to sing our *IPM Song*. Listen to the tune – it's one you know. When I point to you, shout IPM! Can you do that? (Sing the first verse, pointing to the children for the "IPM" portion.)
2. I: You are wonderful! This time shout IPM, and if you can, repeat what I sing when I shout "everybody." (Sing the 2nd verse and have children sing the second line with you.)
3. I: I love singing with you. You sing so well! This time I want you to sing when I say "everybody," shout IPM when I point to you, **AND** join me for the last line, "That's the best solution...IPM. Let's GO!!
4. Complete the song with the correct verbal directions.
5. To check for understanding, ask the children why they should look for other ways to control pests and ask them what else they can do.



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### Assessment

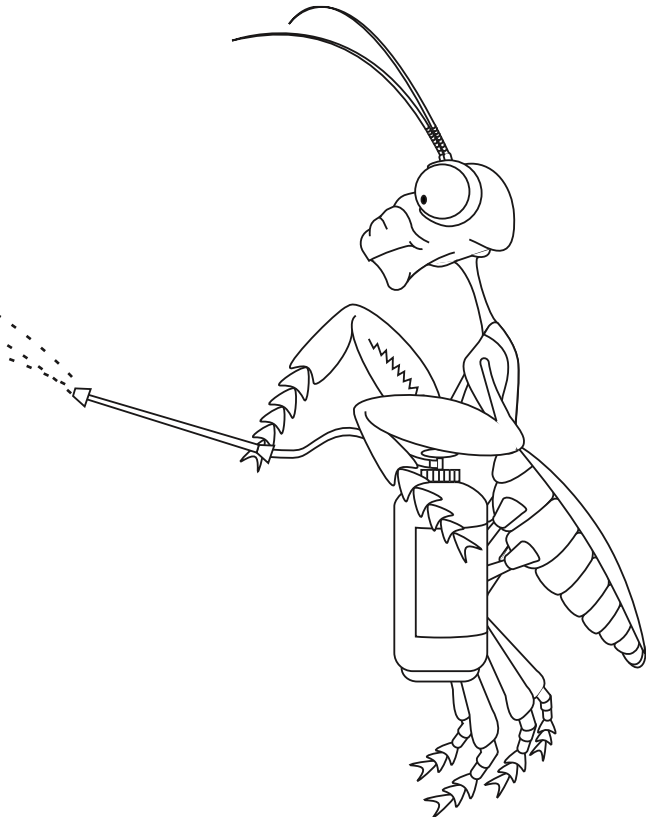
Evaluate the children's work on Handout 1, "Bye Bye Pest!" giving ten points per correct answer that allows a margin of twenty points.





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## Notes





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