Focus Areas: IPM Methods; Science, Social Studies, Language Arts  
Focus Skills: cause and effect, solving problems  

Objectives  
• To understand that chemical application is not the only solution to pest problems  
• To discover safer ways than using chemicals to control pests  
• To understand the need for reducing the use of chemicals in our environment  

Essential Question  
How can we control pests without using chemicals?  

Essential Understandings  
• Using chemicals to control pests should not be our first choice.  
• IPM uses mechanical, physical, and biological methods as well as urging people to practice common sense when dealing with pest problems.  
• The overuse of chemicals is not healthy for our environment or us.  

Background  
Because excessive use of chemicals poses an environmental threat, alternate solutions to pest control are both practical and necessary. IPM makes use of multiple tactics to control pests. These include biological, physical, cultural, and regulatory controls (government, laws). Chemical pest control is used only when less invasive methods are inadequate or ineffective. Furthermore, chemical control should be carefully monitored to minimize negative outcomes.
Vocabulary

biological controls  ways of controlling pests without chemicals by using a pest’s natural enemies like ladybugs to control aphids or a cat to get rid of mice

chemical controls  synthetic materials used to control pests. They should be used carefully and only when other methods don’t work.

common sense controls  things people do to discourage pests like cleaning up crumbs and wearing proper clothing when outside during mosquito season

IPM  Integrated Pest Management. A program that uses mechanical, physical, biological, cultural, and regulatory methods in combination with chemicals to more safely control pests.

mechanical controls  ways of controlling pests without chemicals, like putting out traps and keeping screens repaired

physical controls  ways of controlling pests without chemicals, like digging up weeds or dumping standing water

Logistics

Time: 30 minutes
Group Size: 5 to 30
Space: an area for comfortable seating and presentation
Unit 5 Lesson 7: Wrap up and Review

Materials

- fly swatter
- sponge
- covered containers
- mousetrap
- soap
- picture of a covered garbage can
- cheesecloth
- long-sleeved shirt
- pair of tweezers
- chicken wire
- picture of a screen door
- trowel
- picture of a refrigerator
- picture of a cat or a cooler
- pair of socks
- picture of a ladybug
- sample of bug repellent
- an ant cup
- a picture of a Havahart trap* (see Unit 5 Lesson 5)
- copy of the IPM Song *
- Izzy puppet *

* single copy provided

Preparation

Gather materials. Note: Other “weapons” may be added at your discretion.
Display materials where children can see them. Note: DO NOT allow the children to touch the ant cup or the insect repellent.

Activity

Introduction

Using Izzy,
1. Ask the children what all the materials you have displayed have in common. (They are used to control pests.)
2. Review the meaning of IPM.

**Activity**

**Introduction** (continued)

3. Print **CONTROL** on the board and ask if the children can name some kinds of controls used in IPM (biological, mechanical, physical, common sense) or review each type by putting the word on the board and talking about it.

**Involvement**

1. Model the activity for the children using the ant cup. Be sure to stress this is a chemical control, which should be used only as a last resort and handled only by an adult!

2. The children take turns choosing an object or a picture and explaining how it is used to help control pests. **Note:** Izzy can prompt the children who need help by asking leading questions or making up a story to help them see how a particular control could be used.

**Follow Up**

1. Izzy praises the group for knowing so much about controlling pests the IPM way!

2. Izzy leads the group in the *IPM Song*. He sings line 1 of each verse; the children repeat it (line 2). He sings lines 3 and 4, and everyone sings line 5.