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 pests.
• Chemicals are not healthy for us or our environment.

Background

Because excessive use of chemicals poses an environmental threat, alternative solutions to pest control are both practical and necessary. IPM makes use of multiple tactics to control pests. These include biological, physical, cultural, regulatory, and chemical controls. 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 control**  a way of controlling pests without chemicals by using a pest's natural enemies, such as ladybugs to control aphids or a cat to get rid of mice

**chemical control**  using poisonous materials to control pests. It should be used only by experts when other methods don't work.

**cultural control**  something we do to discourage pests, like cleaning up crumbs or wearing proper clothing when outside during mosquito season

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

**mechanical control**  a way of controlling pests without chemicals, such as putting out traps and keeping screens repaired

**physical control**  a way of controlling pests without using chemicals, such as digging up weeds or dumping standing water

Logistics

**Time:** 30 minutes

**Group Size:** 5 to 30

**Space:** an area for comfortable seating and presentation
**Materials**

- fly swatter
- covered containers
- soap
- cheese cloth
- pair of tweezers
- picture of a screen door
- picture of a refrigerator or a cooler
- picture of a ladybug
- an ant trap or a picture
- sponge
- mouse trap
- picture of a covered garbage can
- long sleeved shirt
- chicken wire
- trowel
- picture of a cat
- pair of socks
- sample of insect repellent or a picture
- Hav-a-Hart trap
- the *IPM Song* *
- Izzy puppet *

* single copy provided

**Preparation**

1. Gather materials. **Note:** other “weapons” may be added at your discretion.

2. Display the materials where the children can see them. **Note:** DO **NOT** allow children to touch the ant trap or the insect repellent. Ads for these products are a safer option.
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.
3. Print CONTROL on the board, and ask if they can name some kinds of controls used in IPM (biological, mechanical, physical, cultural) 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 trap. Be sure to stress this is a chemical control, should be used only as a last resort, and should be handled only by an adult!
2. Have 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), Izzy sings lines 3 and 4, and everyone sings line 5.