

“Putting Ladybugs to Work” Video Script

for Pest Patrol IPM Action Kit

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Tip: Vocabulary Alert!
Before you watch the video, present any unfamiliar words used in the script. See boldface words below.

Introduction (about 30 seconds)

Section I: “Introducing...the Beetles!”

Narr 1: Beetles are the largest group of insects. There are over 400,000 different beetle **species** in the world.

Narr 2: Ladybugs are actually beetles. **Entomologists**, or people who study insects, call them **ladybeetles**, but most people know them as “ladybugs.” Ladybugs belong to a family of beetles called **Coccinellidae**.

Narr 1: The word *Coccinellidae* comes from an old Greek word that means “berry.” The shape of a ladybug’s body kind of looks like a berry.

Narr 2: Different ladybug species have different colors. Some are orange with black stripes. Some are yellowish with black splotches. Some are red and spotless. And some are reddish orange with exactly 13 spots.

Section II: “The Convergent Ladybug”

Narr 1: There are 400 species of ladybugs in the United States, and the **convergent ladybug** is one of them. Convergent ladybugs live on plants and trees. It gets its name from the two white lines above its head that look like they’re going to cross or converge into each other.

Narr 2: Convergent ladybugs are found all over the United States (slight pause). They’re “native,” which means they’ve lived here a long time.

Narr 1: People who grow vegetables and flowers usually welcome convergent ladybugs on their plants because they don’t eat plants. They eat other insects that feed on plants, like **aphids**.

Narr 2: Aphids are plant-feeding insects that get the food they need by drinking plant juices. To get at plant juices, aphids stick their tiny mouthparts inside plant tissue. Their mouthparts are shaped like tiny drinking straws.

Narr 1: When a plant has too many aphids, its leaves turn yellow (pause). Or its leaves curl up (pause). Or its flowers don’t **blossom**.

Narr 2: One way ladybugs help plants is by eating aphids and other small insects. By keeping aphids under control, plants have a better chance at growing healthy, and producing flowers, fruit, and seeds.

Section III: The Ladybug Life Cycle

Narr 1: When ladybug moms eat aphids, they get *protein* and other **nutrients** they need to lay eggs.

Narr 2: Ladybug **eggs** look like tiny golden footballs...and when they hatch, little baby ladybugs called **larvae** crawl out.

Narr 1: Ladybug larvae eat aphids, too. The more aphids they eat, the bigger they grow. When they grow too big for their skin, they shed their skin. After they shed four times, ladybug larvae roll into a ball...and start the next stage of their life cycle...the **pupa**.

Narr 2: In the pupal stage, the ladybug looks like it’s sleeping. But after about a week, the pupa turns into an adult...and when the adult is ready, it crawls out and leaves behind its pupal shell. And the ladybug **life cycle** continues.

Section IV: “Using Ladybugs to Fight Pests”

Narr 2: Ladybugs are one way you can reduce plant pests like aphids. You can actually buy living convergent ladybugs and have them delivered in a package. When you buy ladybugs, they’re usually shipped as adults in a package with materials inside that help keep them from getting too hot or cold.

Narr 1: For best results, it’s better to release ladybeetles when it’s cool and dark — like early in the morning or at twilight. That way, the ladybugs stay near the plants and won’t fly away as soon as you let them go.

Narr 2: If they’re hungry enough, they’ll start eating aphids right away. They’re **predators** — eating other insects is their job.

Narr 1: When you use ladybugs and other living organisms to fight pests, you’re using **biological control**. Biological control uses the rules of the **food chain** to help deal with pest problems.

Narr 2: Biological control means using living organisms to reduce other **organisms** you don’t want. People can use biological control in places where they can’t or don’t want to use chemical **pesticides** — like malls, organic gardens, conservatories, greenhouses, and other places where people live and work.

Narr 1: When you use ladybugs to fight pests, you put the power of insects to work.

Credits (about 30 seconds)



“Putting Ladybugs to Work”

Teacher Guide for Video Viewing

Materials:

- Video/CD: “Putting Ladybugs to Work”
- Video Script
- TV/VCR player or
- DVD player
- **If you don’t have Windows Media Player on your computer, download the free software at: www.microsoft.com/windows/windowsmedia/mp10/default.aspx**
- Pest Patrol: A Backyard Activity Book for Kids*, page 16
- Chart paper and markers for KWL Chart

How do people put ladybugs to work? You’ll find out in this fun and fascinating 7-minute video. In addition to learning about the ladybug life cycle, children will be introduced to the concept of **biological control**, or using good bugs to fight bad bugs. Alternative, non-toxic pest controls are key tools in Integrated Pest Management (IPM), and hungry ladybugs show us a great example!

Guiding the Activity

Prepare by previewing the 7-minute video/CD, or simply read through the script. See boldface words in the script, as you may wish to present them to students before viewing.

1. Begin by creating a class KWL chart. What do students already know (K) about ladybugs, and what do they want (W) to learn?
2. Before children view the video, write some guiding questions about its content on the board:
 - Do all ladybugs look the same?
 - What do ladybugs eat?
 - How can ladybugs help reduce the use of toxic pesticides?
 - What is biological control?
3. View the video together, looking for answers to questions. Consider viewing a second time just for note taking. Encourage students to write down facts, or to write answers to the guiding questions.
4. After viewing, return to the KWL chart to include what students learned (L). Add their new questions for further research. Discuss: *How do biological controls (using living organisms to reduce harmful or less desirable organisms you don’t want) provide a safe alternative to chemical pesticides?*

K W L		
Know	Want to Know	Learned
Ladybugs are insects.	What they eat	
They have six legs.	Lay eggs?	
They fly.	Where they live	
	How they move	

Digging Deeper



Do page 16 in *Pest Patrol: A Backyard Activity Book for Kids*: “Pests have Enemies, Too!”



Do a classroom investigation using live ladybugs. Your kit provides two activities:

1. (Fall or Spring) “Looking at Ladybugs: Observing Like a Scientist.”
2. (Spring) “Ladybugs to the Rescue.”

Decide which activity you’ll do, and plan the date to mail your voucher.

Did You Know?

- A lady bug can live for several seasons. It’s unusual for a ladybug exposed to the elements and predators to live for more than a year.
- Ladybugs make a chemical that smells and tastes terrible so that birds and other predators don’t eat them.

Bulletin Board IDEAS

Display your KWL Chart, adding to it as you explore more.

Minnesota Graduation Standards, Grade 3

History and Nature of Science: A. Scientific World View; B. Scientific Inquiry.

Life Science: B. Diversity of Organisms; C. Interdependence of Life.

Reading and Literature: B. Vocabulary Expansion.

Speaking, Listening and Viewing: B. Media Literacy.

