

## Lesson 7                      Why Pollinators are in Danger and Integrated Pest Management

**Learning Objective:** Students will understand that many insect pollinators are in danger. Loss of habitat, introduction of insect diseases, and poisons in their environment threatens pollinators now more than any time in the past. Students will learn how Integrated Pest Management practices can be used to protect pollinators.

**Question:** What are some practical things we can do to help protect pollinators?

**Introduction:** We have learned how important pollinators are to the reproduction of not only the flowering plants that beautify our world, but also to the flowering plants that produce much of our food supply. Our very survival depends on pollinators, but the survival of those pollinators is being threatened. What can be done?

### Facilitating the Activity:

- Have your students watch the video entitled *Why are the Bees Dying? How Can We Help Them?* at [www.youtube.com/watch?v=2dunmK2xo50](http://www.youtube.com/watch?v=2dunmK2xo50).
- Have them complete the *Why are the Bees Dying? How Can We Help Them?* worksheet.
- This video worksheet could be used as a graded homework assignment, an in-class individual or small group assignment, or discussed with an entire class.
- Have the students work through the interactive computer adventure entitled *Plight of the Honey Bee*.
- Have the students read the Purdue University extension publication entitled *Protecting Pollinators in Home Lawns and Landscapes*, available for download at <https://extension.entm.purdue.edu/publications/POL-1/POL-1.pdf>. They will also need to use the free app entitled *Purdue Perennial Doctor*.
- Have them complete the *Protecting Pollinators in Home Lawns and Landscapes* worksheet.
- This worksheet could be used as a graded homework assignment, an in-class individual or small group assignment, or discussed with an entire class.
- Have the students write an essay in which they develop a plan for implementing Integrated Pest Management practices into their own home lawn or garden with the goal of protecting pollinators in their own backyard.

**Classroom Discussion:** In addition to going over the questions in the worksheets, here are some other suggested questions you might discuss with your students after completing the worksheets.

- How would you (briefly) explain what Integrated Pest Management (IPM) is?
- What IPM practices could you put into effect in your own lawn or garden that would result in the protection of pollinators?

**Next Generation Science Standards:** TBD

## **Glossary:**

- **Colony Collapse Disorder** –a present phenomenon where a higher than normal percentage of honey bee hives are dying each winter.
- **Neonicotinoids** - insecticides that are sprayed on crops to kill harmful insects that eat the crops. These chemicals are systemic, that is, they spread throughout the body of the plant.
- **Varroa** - mites that are parasites on the honey bees. These mites also transmit a virus which causes the bees to be born with deformed wings.
- **Systemic pesticide** – an insecticide that, once sprayed on a plant, ends up moving throughout the plant's entire body.
- **Integrated Pest Management (IPM)** - an environmentally sensitive, common sense approach to controlling insect pests