



***Dedicated
to Reducing
Pesticides***

Unit 5 Section 1 Lesson 1: Nature's Bug Zappers

Focus Areas: Pest Control: Biological; Science, Language Arts, Math

Focus Skills: observing, listening to gather information, creative dramatics

Objective

To recognize that nature provides natural predators to control overpopulation

Essential Question

How does the natural world protect itself from overpopulation of insect pests?

Essential Understanding

Nature provides many natural predators to control pest populations.

Background

There are more than 4,800 different kinds of dragonflies. In fact, dragonflies are among the oldest winged insects that live on the Earth. They have been around for more than 300 million years. That means that they were inhabitants of the Earth long before dinosaurs roamed the land. Their ability to survive might be partially due to the fact that they are fabulous flyers. They can fly fast, hover like a helicopter, and even fly backward. They feed on midges, mosquitoes, flies, wasps, and butterflies. While they feed on many insects, they are also food for many other creatures such as birds and spiders.

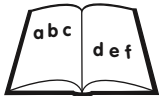


University of
Connecticut
College of Agriculture
and Natural Resources
Cooperative Extension System



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Vocabulary



dragonfly

any of various large insects having a long slender body and two pairs of narrow, net-veined wings that are usually held outstretched while the insect is at rest

population

all living things inhabiting a specific area

Logistics



Time: 30 minutes

Group Size: 2 to 30

Space: a classroom, carpeted area, or gym

Materials



Helpful and Harmful Insects Picture Card Set *

Handout 1 "Dragonflies vs. Mosquitoes" *

Overhead 1 "Biodiversity Pie" *

Izzy puppet *

book *You Are A Dragonfly* by Judy Allen and Tudor Humphries *

Preparation



1. Prepare copies of Handout 1, "Dragonflies vs. Mosquitoes."
2. Gather materials from kit.
3. Preview **Background** and story.

Activity



Introduction

1. Izzy shows Overhead 1, "Biodiversity Pie," of all creatures and explains that the pie represents all the creatures that live on the Earth.

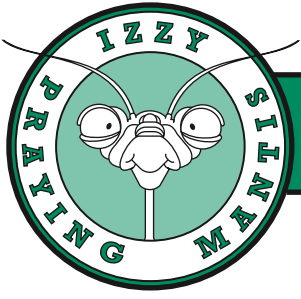


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2. Izzy asks the children to speculate on:
 - a. Which piece of the pie shows how many people there are?
 - b. Which piece stands for the number of insects?
3. Izzy asks the children how some insects help us:
 - Pollinate flowers - bees
 - Beautiful to look at – butterflies
 - Provide food for birds and other animals - mosquitoes
 - Aerate the soil - ants
4. Izzy asks the children how some insects hurt us:
 - Bite/sting – bees/mosquitoes
 - Eat crops – beetles/grasshoppers
 - Cause disease – mosquitoes, cockroaches, fleas
5. Izzy explains that helpful insects play a big role in controlling and eating other bugs so that the world isn't overcrowded with insects. This makes them part of nature's plan called the food chain.

Involvement

1. Read the book *You Are a Dragonfly*.
2. Read the story again, and have the group or various groups of children act out the life of the dragonfly.
 - Part I – Birth
 - Part II – Eating and Molting
 - Part III – Avoiding Predators
 - Part IV – Living on the Land
 - Part V – Dragonfly Hunting



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- Izzy says, "Mosquitoes bite to get your blood for their dinner. They also can carry certain diseases. Dragonflies are nature's mosquito bug zappers. When farmers spray pesticides they kill helpful insect hunters like dragonflies."

Follow Up

Complete Handout 1, "Dragonflies vs. Mosquitoes" together or as individuals.

