

Praying Mantis: Insect Predator

Big World of Insects, Spiders & Bugs Series

Subject Areas: Science, Life Science, Biology

Synopsis: Praying mantises are seen as they hatch from their cocoon. They emerge as miniature adults and begin hunting prey almost immediately. As the mantises grow, their unique adaptations for hunting and blending in with their environments are seen. Students will see how these predatory insects catch and devour their prey.

Learning Objectives:

- Objective 1)** Students will be able to describe and identify the characteristics of an insect, including the three body parts and six legs.
- Objective 2)** Students will be able to describe the life cycle of a praying mantis.
- Objective 3)** Students will be able to describe the adaptations the mantis has for survival and hunting.

Vocabulary: Define and discuss the following key terms:

Larva, ootheca, cocoon, bulbous, imperceptibly, cannibalism, stealthily

Pre-Viewing Questions and Discussion:

- 1) What are the typical colors of most insects? Why do you think most insects are these colors? Can you think of any insects that have unusual colors?
- 2) Do all insects eat leaves and plants? Can you think of any insects that eat other animals? What are some animals that insects might eat?

Post-Viewing Questions and Discussion:

- 1) Describe the pod that the praying mantises hatch out of. What is this pod called? How many baby mantises are usually found in the pod?
- 2) How do the baby mantises differ from most other baby insects?
- 3) Describe the baby praying mantises. What do they look like? What do they eat? What animals eat them?
- 4) What colors are praying mantises? Why do you think these colors determine where the mantises live?
- 5) Describe how the praying mantis hunts. What special adaptations does the mantis have that make it an effective hunter?
- 6) How does cannibalism regulate the praying mantis population?
- 7) What are the praying mantis' weapons?

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- 8) Why do the female praying mantises become aggressive in the summer? How do the mantises show their aggressive feelings?
- 9) After mating, what does the female mantis do? Describe the egg laying process.

Additional Activities:

- 1) Draw a detailed picture of a praying mantis. Label the head, thorax, abdomen, six legs, antenna, and wings.
- 2) Pretend you are a baby praying mantis. Describe your life as you grow up. How do you avoid predators? What animals do you hunt? How do you hunt? Where do you live?
- 3) Research the life cycle of these insects. How long do the eggs develop in the ootheca? Where are praying mantises found? How many different species are there?
- 4) Find out if praying mantises are used as a pest control method for organic farmers. Do you think gardeners appreciate these animals? It is possible to order a praying mantis ootheca (cocoon) from many garden supply stores. As a class, you may want to observe as the mantises hatch from the pod. Be sure to have them in a secure location and release them quickly after they hatch.
- 5) Create a food web that includes the praying mantis, its predators and its prey. Include illustrations with your food web.

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