

## **Caterpillars, Butterflies & Moths**

### **Big World of Insects, Spiders & Bugs Series**

**Subject Areas:** Science, Life Science, Biology

**Synopsis:** Students will see many different types of caterpillars. The different ways these caterpillars are equipped for defense are shown and discussed. Caterpillars are shown to have the six legs characteristic of all adult insects, along with 4 pairs of false feet. The amazing metamorphosis from caterpillar to butterfly is shown as the *Red Admiral* butterfly emerges from its chrysalis. Various butterflies are shown close-up as they collect nectar from flowers. Butterflies are contrasted with moths and the importance of a butterfly's wings is discussed.

**Learning Objectives:**

- Objective 1)** Students will be able to describe several ways that caterpillars can protect against predators.
- Objective 2)** Students will be able to define several life science vocabulary words, including chrysalis, metamorphosis, camouflage and cold-blooded.
- Objective 3)** Students will be able to describe how a caterpillar changes into a moth or butterfly.
- Objective 4)** Students will be able to discuss the differences between butterflies and moths.

**Vocabulary:** Define and discuss the following key terms:

Caterpillar, predators, endowed, camouflage, metamorphosis, false feet, cocoon, transformation, butterfly, moth, chrysalis, emerge, disheveled, hibernating, nectar, ultraviolet, palate, diffuse

**Pre-Viewing Questions and Discussion:**

- 1) Have you ever seen a moth or butterfly? How are they similar? How are they different? What do they eat?
- 2) What is metamorphosis?

**Post-Viewing Questions and Discussion:**

- 1) List some of the ways that caterpillars can discourage predators.
- 2) What message do bright colors send?
- 3) Give some examples of how caterpillars imitate objects to confuse predators.
- 4) Why might it be better for a caterpillar to remain motionless? How is the twig caterpillar, or inchworm, able to avoid being eaten?
- 5) How many legs does a caterpillar have? What are false feet? Why are false feet important to a caterpillar? How many legs does an adult insect have?

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- 6) Why don't gardeners like caterpillars?
- 7) When do most butterflies emerge from their cocoons?
- 8) What do butterflies eat? How are they uniquely adapted for eating?
- 9) Describe a butterfly's wings. Why are the wings so important to the butterfly's survival?

### **Additional Activities:**

- 1) Create a chart that shows the different methods that caterpillars have for avoiding predators. Include in the chart a picture of the method of defense, and describe how this particular method is effective.
- 2) Draw pictures of both a caterpillar and a butterfly or moth. Label the head, six front legs and eight false feet of the caterpillar. Label the head, thorax, abdomen, six legs, wings, antenna and mouth on the butterfly or moth.
- 3) Pretend that you are a caterpillar. Describe your life as you grow, build your chrysalis or cocoon, and finally emerge as a butterfly or moth. Finish your story as you find food. Include illustrations for your story that show the caterpillar, the cocoon or chrysalis, the butterfly or moth emerging, and then finding food.
- 4) The narrator says that gardeners don't like caterpillars. How do gardeners prevent caterpillars from eating their vegetables? What natural predators might a gardener want to have in the garden? Research a variety of predators and create a poster for your classmates.
- 5) There are over 20,000 different butterflies. Create a picture collage of as many different butterflies as you can.
- 6) Butterflies are cold-blooded. What does this mean?
- 7) Write a research paper that describes the differences between butterflies and moths. Also include a poster that visually shows the differences.

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