

Building A Butterfly, Making a Moth



STANDARD COURSE OF STUDY CORRELATIONS:

Science, Grade 2, Goal 1: The learner will conduct investigations and build an understanding of animal life cycles.

1.01 Describe the life cycle of animals.

- Birth.
- Developing into an adult.
- Reproducing.
- Aging and death.

1.02 Observe that insects need food, air and space to grow.

1.03 Observe the different stages of an insect life cycle.

1.04 Compare/contrast the life cycle of other animals.

MATERIALS

- ✿ Insect/butterfly field guides
- ✿ Pictures of butterflies and moths that are described in the field guides (1 picture per group)
- ✿ Craft supplies for building a replica of a butterfly or moth at each life stage (pipe cleaners, tissue, clothespins, pasta shells, orzo, etc.)
- ✿ Student journals

INTRODUCTION TO LESSON: Students will learn about and demonstrate understanding of the life cycle of butterflies and moths through research and class discussion. They will then use various craft materials to invent and build a novel species of moth or butterfly.

BACKGROUND FOR TEACHER: More insects live on Earth than any other group of animals—more than 1 million known species. Some insects, like butterflies and moths, change in structure and behavior as they grow and mature, so people don't often recognize them in all the stages of their life cycle. Some beneficial insects are seen as pests in their caterpillar stage and eliminated before they develop into their more familiar adult form.

engage ➤ Ask students to describe what insects they've observed in their yard or garden. How were they able to identify what type or species they found? Ask if they think that the same species of insect could have more than one "look" during different periods of its life. Why or why not? **Show Chapter 1 of the video.** Afterward, allow three to five minutes for small groups or pairs to explain the stages of a moth/butterfly life cycle to one another. Then lead a class discussion, using some of these questions: What are the stages of a moth/butterfly life cycle? Have students name each stage. Do butterflies and moths undergo complete or incomplete metamorphosis? Are these animals important to the ecosystem? Why/why not? What are the best places and times to look for moths and butterflies?

Write key vocabulary words on the board during discussion to enhance student understanding, communication among partners and activities to be done later.

explore ➤ **Show Chapter 2 of the video.** Hand out field guides and a picture of a moth or butterfly to each group. Have students identify their assigned species and read about its life cycle. Have students report to the class, showing the picture and describing their insect's life cycle. As groups share, have them compare and contrast the various butterfly/moth species they studied.

explain ➤ Review key words on the board, asking students to provide definitions. Fill in gaps as necessary. Have students use journals to draw pictures of their animal and illustrate its life cycle, adding descriptive labels or text. Share as needed to further refine student understanding.



Saddleback caterpillar photograph by N.C. Wildlife Resources Commission.

elaborate➤ Show Chapter 4 of the video. Afterward, discuss as a class the importance of host and nectar plants, the value of moths and butterflies to the ecosystem, and insect species as “indicators” of a healthy environment. Then have students use craft materials to invent and build an imaginary newly discovered species of moth or butterfly, representing all stages of metamorphosis. Have students explain the animal's needs and describe its ideal habitat.

evaluate➤ Use a checklist to measure understanding of concepts while listening to student discussions. Read and evaluate journal entries.

Teacher's Notes:



BEYOND THE CLASSROOM

Identify and observe butterflies and moths on school grounds. Alternatively, students could take photos of insects in their yards and keep a journal about the insects' life cycles.

Additional Resources:

Swope, Sam. 2000. *Gotta Go, Gotta Go*. New York: Farrar, Straus and Giroux.

Kalman, Bobbie. 2002. *The Life Cycle of a Butterfly*. (Spanish translation: *El Ciclo De Vida De La Mariposa*). New York: Crabtree Pub.

Ehlert, Lois. 2001. *Waiting For Wings*. San Diego: Harcourt.

First Hand Learning • <http://www.firsthandlearning.com> • Curriculum materials and professional development programs that emphasize direct, firsthand experiences with natural and cultural phenomena.

FOSS (Full Option Science System) • <http://lhsfoss.org/fossweb/teachers/index.html> • Inquiry-based science curriculum includes Insects Module.

Learning Resources® Inflat-able Butterfly Life Cycle Activity Guide • <http://www.learningresources.com/>

