



THE NOTEBAERT  
NATURE MUSEUM

*The Museum of the Chicago Academy of Sciences*

## A Butterfly's Life Cycle

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### Overview:

Butterflies are insects with large, colorful wings that undergo complete metamorphosis (egg-larva-pupa-adult). In this activity, students create models of the butterfly life cycle.

**Grade Levels:** Pre-K to 3

**State Goals:** 12A

### Objectives:

Students will be able to:

- Understand and identify the life cycle stages of a butterfly.
- Recognize the cyclical nature of various natural phenomena.

### Materials

- Glue
- Green paper
- Beads
- Penne (tube) pasta
- Medium shell pasta
- Bow-tie pasta
- Pipe cleaners
- Life Cycle labels
- Leaf Patterns, copied on to green paper and cut out
- Yarn cut in 32" pieces

### Background Information

Female butterflies lay eggs on the undersides of leaves. Eggs hatch into larvae; butterfly and moth larvae are called caterpillars. Larvae eat vegetation, mostly leaves, molting as they grow. After several weeks of eating, the caterpillar will pupate. The pupa of a butterfly is called a *chrysalis* (pronounced "kris-a-lis"; plural: chrysalides, pronounced "kris-a-lids".) After a few weeks, the adult butterfly will emerge from the pupa. When it first emerges, the wings are soft and floppy. The butterfly pumps fluid into the wings; once the wings have dried, the butterfly can fly away. Most adult butterflies will only live about two weeks, drinking sugary nectar from flowers, mating, and laying eggs. Those eggs then hatch, continuing the life cycle.

### Procedure:

1. Begin by discussing the butterfly life cycle, introducing the stages of egg, caterpillar, chrysalis, and adult butterfly. If possible, show a video or poster of a butterfly's life cycle. Pass out the green leaves, life cycle labels, and glue to the students. Explain that they will be making a model of the



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butterfly's life cycle.

2. Pass out the bead to represent the egg and have students glue it onto the leaf. The egg is laid on a leaf by the mother butterfly. It is very small and hidden so that other insects or animals do not try and eat it. On the leaf beside the bead, students should glue on the appropriate label.
3. When the egg hatches a *caterpillar* comes out. Pass out the penne pasta and a piece of pipe cleaner to each student. Show students how to fold the pipe cleaner in half and thread the bent end through the noodle. Bend the loose ends to form 2 antennae. Have the students glue the caterpillar and its label onto the leaf beside the bead. The caterpillar has sixteen legs (six true legs) and two antennae on its head, which it uses to smell and touch things. The caterpillar eats leaves and grows.
4. The caterpillar attaches itself to a leaf or branch and sheds its caterpillar skin, forming the *chrysalis*. Inside the chrysalis, it is getting ready for its last stage. Pass out the shell pasta to represent the chrysalis and have students glue them onto the leaf next to the caterpillar. Have students glue on the appropriate label.
5. When it is ready, the butterfly breaks out of its chrysalis and flies away. Pass out a piece of bow-tie pasta and a pipe cleaner to each student. Have students wrap the middle of the pipe cleaner around the center of the noodle and twist to secure. Bend the loose ends to form 2 antennae. Have students glue the butterflies and the labels on their leaves to complete the cycle.
6. Punch a hole in each student's leaf. Pass out the yarn and have students thread the yarn through the hole in the leaf. Help the students tie their necklaces on.



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## Life Cycle Labels

<b>Egg</b>	<b>Caterpillar</b>	<b>Chrysalis</b>	<b>Butterfly</b>
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## Leaf Pattern

