

Metemorphosis Bracelets

Wyoming Ag-tivity

Objectives:

- Students will learn the stages of metamorphosis.

Background:

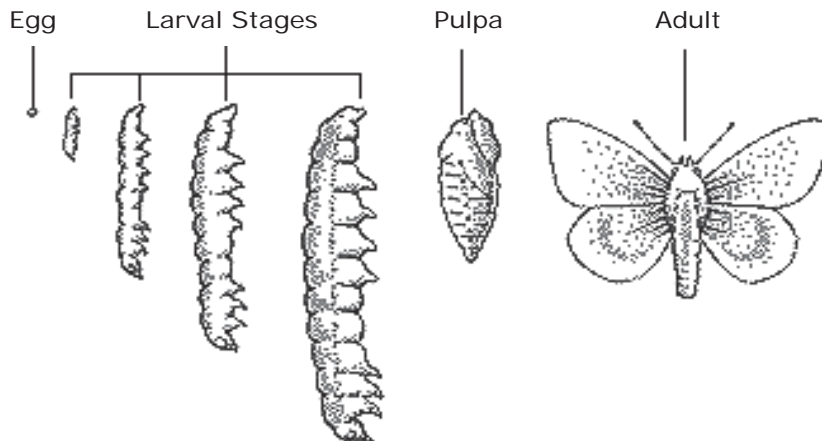
Insects go through different life stages as they grow. This process is called metamorphosis, which means “change of form.”

Some insects, such as butterflies, change form completely as they go through the different stages. Their larval forms, caterpillars, look very different and even have different types of mouthparts than their adult forms, butterflies. Other types of insects may look similar to their adult forms throughout their life.

There are two different types of metamorphosis: complete and incomplete. The insects grouped together in an order all undergo the same type of metamorphosis. The stages of each type of metamorphosis are pictured below.

Complete Metamorphosis: egg, larva, pupa, adult:

An adult insect lays its eggs in a protected place where the hatching larvae can easily find food. When the larvae hatch, they're eating machines! As a larva grows, it sheds its skin several times because its skeleton is on the outside of its body and cannot expand and grow with it. When it has reached full size as a larva, it is ready for the next stage, called the pupa (Plural: pupae). The larva may form a cocoon, or chrysalis. Inside the cocoon, the insect's body changes and is transformed into the adult form. Then the adult insect breaks out of the cocoon and mates. The cycle over again.



Materials

- String or cording
- Cardboard
- Marker
- Beads
- Hole punch
- Cut-out template



Estimated Time

60 Minutes

Grades 5-6

vocabulary:

- *metamorphosis*
- *larva*
- *pupa*
- *cyclical*
- *aquatic*
- *organisms*

Incomplete Metamorphosis: egg, nymph, adult:

There are several types of incomplete metamorphosis. Insects that undergo incomplete metamorphosis may change features somewhat as they grow, may change very little except for the addition of such features as wings or sex organs, or may not change at all. Some insects with this type of metamorphosis may live part of their lives underwater as aquatic insects.

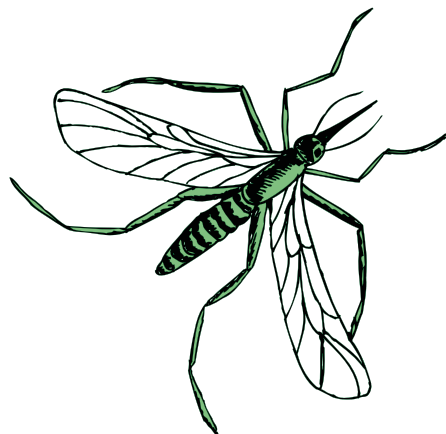
An insect that undergoes incomplete metamorphosis sheds its skin during its growth stages; however, it doesn't completely change form (such as from caterpillar to butterfly), as insects do in complete metamorphosis.

Activity Procedure:

1. Discuss metamorphosis with the students using the cycle illustrations above as a guide. Discuss the different insects that undergo complete metamorphosis butterflies, beetles, ants and wasps are a few examples.
2. Ask the students to draw and cut out small pictures of each stage of the life cycle in complete metamorphosis (egg, larva, pupa, and adult). Each picture should be no larger than a 3- to 4-inch oval.
3. Have them use a hole-punch to make holes at both ends of the ovals, and tie a piece of cord or string through the holes. Tie all four pictures together to make a metamorphosis bracelet or belt. If they wish, they may add colorful beads or other decorations between the four segments. When they are finished, discuss again the four stages of metamorphosis, emphasizing the ongoing cyclical aspect of life cycles.

Additional Activities:

Compare the contrast of the life cycles of different organisms such as mammals, reptiles, and insects.



Materials Adapted from Junior Master Gardener Teacher/Leader Guide

