Modeling Life Cycles

2017 Texas Essential Knowledge and Skills in Science for K-4

K.10.B: Identify basic parts of plants and animals.
K.10.C: Identify ways that young plants resemble the parent plant.
K.10.D: Observe changes that are part of a simple life cycle of a plant: seed, seedling, plant, flower, and fruit.

1.10.B: Identify and compare the parts of plants.
1.10.D: Observe and record life cycles of animals such as a chicken, frog, or fish.

2.10.C: Investigate and record some of the unique stages that insects such as grasshoppers and butterflies undergo during their life cycle.

3.10.B: Investigate and compare how animals and plants undergo a series of orderly changes in their diverse life cycles such as tomato plants, frogs and lady beetles.

4.10.C: Explore, illustrate and compare life cycles in living organisms, such as beetles, crickets, radishes or lima beans.

Young children have several misconceptions regarding life cycles. The most common misconception when presented with a typical image like the butterfly life cycle below is that the adult turns back into an egg.
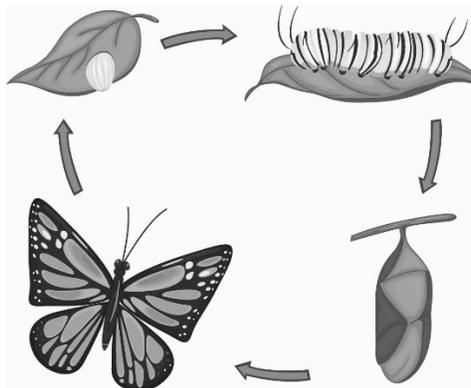
Images like this one clearly show an arrow going from the adult to the egg, and it is not intuitive for very young children to understand that the next time around the cycle it is a **different** egg. You have to explicitly teach them that each trip around the life cycle is a **new generation**.

Students may also think that a life cycle only has four stages, due to the prevalence of representations shown with only four images. Examples given here have more than 4 images for the same stages.

Making a 3-D model to illustrate that a life cycle **does not travel in a circle.**

Materials:

- 2 paper plates
- Scissors
- Glue stick
- Two complete images of a life cycle (bean and butterfly images included)

Procedure:

1. Cut the center out of 2 paper plates.

2. Glue images of the life cycle around BOTH plates.

Cut location

3. Glue the plates together to make a spiral.

It will be clear that the adult does not "turn back into an egg."

Every egg belongs to a new generation.

Plates are glued together here

Monarch Life Cycle

Harris County Department of Education

Bean Life Cycle