
TEKS 1.10 Organisms and environments. The student knows that organisms resemble their parents and have structures and processes that help them survive within their environments. The student is expected to:

(C) compare ways that young animals resemble their parents; and

(D) observe and record life cycles of animals such as a chicken, frog, or fish.

Background Knowledge

Most animals have a simple life cycle. They are either born alive from their mother or they hatch from an egg. These animals grow in three stages: newborn, young, and adult. The young are similar to their parents, just smaller. Examples of these are dogs, cats, chickens, snakes, and fish.

Other animals have a more complicated life cycle. They undergo a metamorphosis or a change. A frog begins as an egg and develops into a tadpole, a form that looks more like a fish than a frog. Once hatched, the tadpole's body gradually changes to that of an adult frog. The tadpole does not resemble an adult frog, and the tadpole grows and lives entirely in the water. Adult frogs spend some time in the water and some time on land.

Insects have four stage life cycles and the insect looks different in each stage of development. An insect begins as an egg. Next is the larva stage. The larva hatches from the egg and is usually worm-like in appearance. Larvae spend most of their time feeding and growing. The next stage, the pupa stage, is a time of inactivity when the insect encases itself in a chrysalis or a cocoon as its body changes to the adult form. The last stage occurs when the insect emerges from the chrysalis or cocoon as an adult. During this time, adults mate and the females lay eggs.

Essential Knowledge

At the end of the lesson, the students should be able to describe characteristics of young and adult animals and explain how they are alike. They should be able to explain a simple life cycle.

Students should also be able to identify the stages of a more complicated life cycle in animals such as frogs and insects.

Essential Questions

What are some ways baby animals look like their parents?

Why do baby animals look like their parents?

What are the stages in the life cycle of a frog? A fish? A chicken? A butterfly?

Key Vocabulary:

Life cycle, stages, larva, pupa, egg, adult

Are You My Mother?

Objective:

To match baby and adult animal pictures and discuss how they are alike.

Materials:

Depending on the number of students in the class:

- Pictures of adult animals and pictures of matching baby animals, one picture per student. (E.g., One student may have a picture of an adult elephant while another student has a picture of a baby elephant.) These should be available in books from the library or by searching online.

How to Conduct:

- Randomly hand out the pictures to students.
- Have students move around the room to match the baby picture to the adult picture.
- When all are matched ask, “How could you tell which baby went with which adult?” Choose one of the animals and ask, “What are some ways the baby looks like the adult?” List several characteristics supplied by the students. Repeat with as many animals as you have time to discuss. Guide students to conclude, that with many animals, the baby and the young animal look like or resemble the adult. They have the same basic characteristics.

Comparing Life Cycles

Objective:

To compare the life cycles of several different animals.

Materials:

- Two paper plates per student (one has $\frac{1}{4}$ th of the plate cut away).
- Markers or crayons
- One brass brad per student

How to Conduct:

- Using a marker, divide the whole paper plate into four quarters.
- Give each student one whole paper plate with divided areas and one paper plate with a quarter cut out of it.
- Put students in groups of three.
- Have each student in the group draw the life cycle of one of the three animals: frog, fish, chicken.
- Attach the cut out paper plate to the top of the four stages paper plate using the brass brad.
- Have each student tell the life cycle of his/her animal to the others in the group.
- Lead them to discuss the similarities and differences in each life cycle.
- If time permits, have a student describe the life cycle of his/her animal and do this for each type of animal.
- Compare and contrast the different life cycles with the class.

Egg Carton Butterfly Life Cycle

Objective:

To construct and identify the stages in the life cycle of a butterfly.

Materials:

- One dozen-egg cardboard carton per 4 students
- Markers
- Large piece of construction paper per 4 students
- Glue
- Scissors

How to Conduct:

- Divide students in groups of four.
- Have one student in the group cut the bottom half of an egg carton into two strips with six cups in each strip.
- Then cut the strips apart to create the following pieces:
 - 1 cup = egg
 - 4 cups = caterpillar
 - 2 cups glued together = cocoon
 - 3 cups = body of butterfly
- Have students work together to glue the egg carton pieces to the construction paper to show the four stages in the life cycle of a butterfly. They should be in order in a straight line or in a circle. Students can then decorate the egg carton pieces and add arrows and labels to each stage.
- Have several students present their life cycle to the class and tell about each stage.

