

Life Cycles: A Never-Ending Story

Second Grade Science Lesson

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E & E IPM Standard: 4.7.4 A, B

Learning Objectives:

Students will be able to describe the sequence of events in the life cycles of a butterfly, frog, and white-tailed deer.

Students will observe the similarities and differences between parents and babies.

Students will discover that at different life stages, some animals can be harmful and helpful.

Materials:

Copies of the following worksheets:

Deer

Frog

Butterfly

2 paper plates for each child in class

1 brass paper fastener for each child

crayons

Timeline:

One class period

Procedure:

Upon observing the frog life cycle paper, ask students to discuss what they see happening in each life stage and whether they think frogs are harmful, helpful, or both to our environment. Be sure the following concepts are covered:

Frogs hatch from eggs as tadpoles.

The young tadpole does not look like the mature frog and breathes using gills.

The tadpole grows legs and lungs as it matures into a frog.

The mature frog lays eggs and starts the cycle again.

Frogs eat insects.

Observe the picture of the butterfly life cycle. Again, ask for student observations.

Cover the following concepts:

Butterflies begin as eggs that hatch into caterpillars. The caterpillars do not look like a butterfly.

As caterpillars grow, they eat a tremendous amount of plant life and cause damage to our food sources and forests.

The caterpillar turns into a chrysalis from which a butterfly emerges.

The butterfly lays eggs and begins the cycle again.

Butterflies help to pollinate flowers and fruit trees.

Lastly, observe the picture of the white-tailed deer's life cycle. List student observations and views about whether this animal is harmful, helpful, or both. The following concepts should be covered:

Because it is a mammal, the young fawn is born alive from its mother's body and looks much like its parent.

The fawn does not move much the first ten weeks so the mother comes to it to nurse.

As it grows, the fawn, like its parents, eats a great deal of vegetation. If near farmland, the deer can do much damage to crops and orchards.

When it reaches maturity, the adult deer has offspring and the cycle begins again.

In some areas, deer are a food source for people.

Analysis:

Prior to lesson, mark a paper plate into four equal sections for each child. Also, cut a one-fourth section from a second set of plates. Students will choose a life cycle of an animal and illustrate a stage of its life in each section of the whole plate. Be sure they draw arrows between each section. On the cut plates, they will write "The Life Cycle of _____". Attach the two plates in the center with a brass paper fastener, being sure to place the cut plate on top of the whole plate.

Discussion:

1. Do all parents and their babies look alike?
2. What are two ways babies can be born?
3. Depending on the stage of their life cycle, can an animal sometimes be harmful and sometimes helpful throughout its life? Give an example. Determine which of the three animals discussed undergo harmful stages during their life cycles.
4. How could we reduce the damage caused by these animals without destroying their species? Ideas: fences or barriers, repellents around the plants, scare away the deer with sound or mechanical devices.

Web Sites:

www.haldago.org/colorbl.html (picture pages of wild animals to print and color)

<http://kidsartcrafts.about.com/kids/kidsartcrafts/cs/coloringgeneral/index.html> (coloring pages of animals and crafts)

www.enchantedlearning.com (great place for information and pictures of animals)