3.D.5 Animal Life Cycles

Creating a diagram of an animal life cycle

Grade Level	3
Sessions	1 – 50 minutes
Seasonality	N/A
Instructional Mode(s)	Whole class, Individual
Team Size	N/A
WPS Benchmarks	03.SC.TE.04, 03.SC.LS.07
MA Frameworks	3-5.TE.2.1, 3-5.LS.0.3
Key Words	Amphibian, Bird, Diagram, Fish, Insect, Mammal, Reptile

Summary

Students will learn to construct a diagram that demonstrates how animals change in a predictable pattern called a *life cycle*. In general, a diagram is a useful way to convey various types of information; this particular diagram will show the distinct stages through which an animal passes.

Learning Objectives

2002 Worcester Public Schools (WPS) Benchmarks for Grade 3

1. 03.SC.TE.04 Describe different ways in which a problem can be represented, e.g., sketches, diagrams, graphic organizers, and lists.
2. 03.SC.LS.07 Recognize that plants and animals go through life cycles that include birth, growth, development, reproduction and death.

2001 Massachusetts Frameworks for Grade 3

1. 3-5.TE.2.1 Describe different ways in which a problem can be represented, e.g., sketches, diagrams, graphic organizers, and lists.
2. 3-5.LS.0.3 Recognize that plants and animals go through predictable life cycles that include birth, growth, development, reproduction, and death.

Additional Learning Objectives

1. Students will work independently to solve the problem of representing an animal life cycle graphically.

Required Background Knowledge

1. A basic understanding of differences among various animal groups (mammals, reptiles, birds, fish, amphibians, and insects).
2. A solid understanding of the idea of a “life cycle”, which normally includes birth, growth, development, reproduction, and death.

Essential Questions

1. What is a diagram?
2. Why is a diagram useful?
3. How can a diagram show different stages of an animal’s life cycle?

Introduction / Motivation

Review with students the idea of an “animal life cycle”. Students should recall that various animal groups experience different life cycle stages that usually include: birth, growth, development, reproduction, and death.

Procedure

The instructor will:

1. Discuss as a class the purpose of a diagram (see Vocabulary with Definitions).
2. Ask each student to select one animal, either living or extinct.
3. Provide students with adequate time in their school library to research the life cycle of their chosen animal.
4. As a class, create an example diagram in a visible location (blackboard, whiteboard, etc.) that shows the life cycle of an animal (see Additional Resources for examples).
5. Ask students to create a diagram depicting the life cycle of the animal that they have researched (see “Animal Life Cycles”).

Materials List

Materials per student	Amount	Location
Animal Life Cycle Worksheet	One	End of lesson plan – print or photocopy

Vocabulary with Definitions

1. *Amphibian* – a cold-blooded vertebrate that hatches in the water as larva with gills. Larva eventually change, or metamorphize, into adults with lungs.
2. *Bird* – a warm-blooded, egg-laying, feathered vertebrate with wings.
3. *Diagram* – a visual representation of information that shows and explains relationships.
4. *Fish* – a cold-blooded aquatic vertebrate with fins, gills, and a skeleton made of bone or cartilage.
5. *Insect* – a small arthropod that, as an adult, has three pairs of legs and a segmented body (head, thorax, and abdomen).
6. *Mammal* – a warm-blooded vertebrate whose skin is covered with hair or fur; females possess mammary glands for feeding young.
7. *Reptile* – a cold-blooded vertebrate that usually lays eggs to bear young. Reptiles are covered with scales or plates and breathe through lungs.

Assessment / Evaluation of Students

The instructor may assess the students in any/all of the following manners:

1. Collect student worksheets to determine whether students understand the use, function, and proper construction of a “diagram”.
2. Collect student worksheets to determine whether students understand “animal life cycles”.

Lesson Extensions

1. Students might create a model of an animal’s life cycle or habitat. This may take the form of a diorama, topographical map, or other type of constructed representation.

Attachments

1. Animal Life Cycles

Troubleshooting Tips

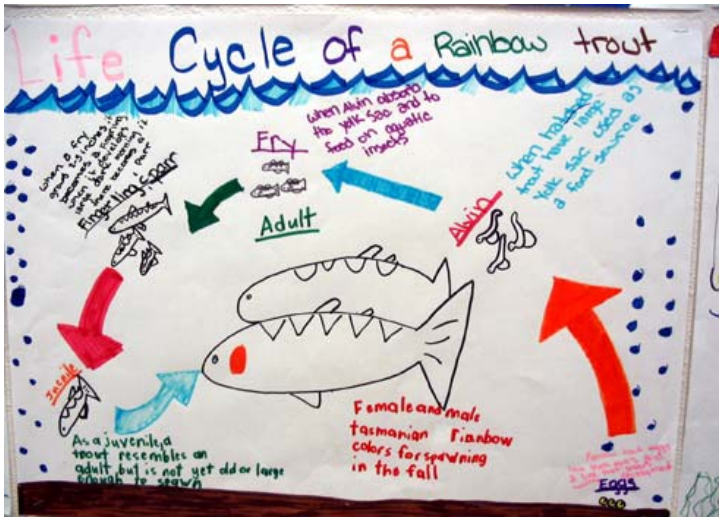
1. Students may need to be guided when selecting an animal. The instructor may offer a list of animals from which students may select one, or may ask the students to choose their “favorite” animal, the “strangest” animal, etc.
2. If students have difficulty understanding the purpose of a diagram, consider creating one as a class to represent a familiar concept (for example, the life cycle of a frog).

Safety Issues

None

Additional Resources

1. Children’s diagram of a Rainbow Trout life cycle http://ccsd.net/schools/neal/graphics/Events/Trout/troutlifecycle2.jpg (accessed 28 December 2005).



Animal Life Cycles

Name: _____ Date: _____

Directions: Use the information that you have collected an animal. Draw each stage of the animal's **life cycle**, beginning with birth. Label each stage in the **diagram**.

Birth	
Growth	

Development	
Reproduction	
Death	