

**2008
Winning Lesson Plan
from Harrodsburg,
Kentucky**

Lifecycles

by Ellie Vandivier
Mercer County
Elementary School

Subject: Science and
Reading
Grade Level: Kindergarten
Duration: Ten 30-Minute
Class Periods (2 Weeks)

Overview and Purpose

Students will learn about the lifecycles of the insect and the pumpkin plant. Students will get hands-on experiences as they learn to sequence different stages of animal and plant lifecycles. Students will understand that all living things have lifecycles, and that living things change over time.

This unit is relevant to students' lives and it is hands on—they get to see a caterpillar change into a butterfly, they get to examine insects with magnifying lenses and microscopes and they get to see the entire lifecycle of the pumpkin when we visit the pumpkin patch. The pumpkin plant lesson incorporates technology and encourages inquiry. (The plant lesson can be used by any teacher of young children, even if they don't have access to a pumpkin patch.)

Educational Standards

KY Core Content

- SC-EP-3.4.4: Students will describe a variety of plant and animal lifecycles to understand patterns of the growth, development of an organism. Plants and animals have lifecycles that include the beginning of life, growth and development. The details of a lifecycle are different for different organisms. Observations of different lifecycles should be made in order to identify patterns and recognize similarities and differences.
- SC-P-UD-S-5: Students will use scientific tools (hand lens/magnifier) to observe and make comparisons of organisms; and to classify organisms using one or more of their external characteristics.
- SC-P-UD-S-7: Students will ask questions that can be investigated, and communicate their findings to others.

KY Lerner Goals

- 1.3: Students make sense of the various things they observe.
- 2.4: Students use the concept of scale and scientific models to explain the organization and functioning of living and nonliving things and predict other characteristics that can be observed.
- 2.6: Students understand how living and nonliving things change over time and the factors that influence the changes.
- 6.1: Students connect knowledge and experiences from different subject areas.
- 6.2: Students use what they already know to acquire new knowledge, develop new skills, or interpret new experiences.
- 6.3: Students expand their understanding of existing knowledge by making connections with new knowledge, skill, and experiences.

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Week 1 – Lifecycle of the Butterfly

Lesson Objectives

Students will:

- be able to identify how a butterfly changes during its lifecycle.
- correctly sequence the lifecycle of the butterfly.
- understand that insects have 3-body parts, 6 legs and that they sometimes have wings.
- create their own model of the butterfly lifecycle to add meaning.

Materials

(These books are good to use over the course of the unit.)

Butterfly, Butterfly

by Perry O'Brien

Butterflies

by Melvin and Gilda Berger

Insects

by Sarah O'Neil (Accelerated Reader test)

Fly, Butterfly

by Brenda Parkes

What is an Insect?

by Lola M. Schaefer (Accelerated Reader test)

The Very Hungry Caterpillar

by Eric Carle (Accelerated Reader test)

Photo Library butterfly cards

Butterfly lifecycle sequence cards (eggs, caterpillar, chrysalis butterfly) (teacher created)

Procedures

Day 1

The teacher will introduce students to the unit on insects and teach them the following poem:

I is for insects.
They can fly, hop or sting.
They have three body parts, 6 legs,
And they sometimes have wings.

The teacher will read about insects to the students. I like to use Insects.

The teacher will discuss the body structure of an insect—3 body parts, 6 legs, and may have wings.

The teacher will show students pictures of real insects.

The students will discuss similarities/differences in the pictures.

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Week 1 – Lifecycle of the Butterfly (Cont'd)

Procedures (Cont'd)

Day 2

The teacher will read The Very Hungry Caterpillar.

The students will discuss the sequence of events in the story.

The teacher will have the students (in groups of 4) hold pieces of the butterfly lifecycle and sequence them correctly.

Day 3

The teacher will read The Very Hungry Caterpillar.

The students will make their own “Very Hungry Caterpillar” books (teacher made accordion books to look like the caterpillar in the story).

Students will sequence the lifecycle inside the book.

Day 4

The students will review the body structure of an insect.

The students will create their own insects and write about its characteristics.

Day 5

The students will independently sequence the lifecycle of the butterfly and explain it to the teacher or assistant.

The students will complete Accelerated Reader tests on the computer.

Extensions

I find (or purchase) caterpillars so that the students get to observe the lifecycle of the butterfly. They are always truly amazed. We release the butterflies in our center courtyard.

I bring in (as well as the students) dead (and sometimes alive) insects for the students to observe under the magnifying lens and the microscope. This is one of their favorite activities, and it continues all year. We compare body structures and spend time measuring insect bodies and wings.



Week 2 – *The Lifecycle of the Pumpkin Plant*

Lesson Objectives

Students will correctly sequence and label the lifecycle of the pumpkin plant.

Materials

Pumpkin, Pumpkin by Jeanne Titherington (Accelerated Reader test)

I'm a Seed by Mean Marzollo (Accelerated Reader test)

Growing Pumpkins by Melvin Berger

A Pumpkin Grows by Patricia Ann Park

Photo Library plant cards

“The lifecycle of the Pumpkin Plant” PowerPoint (teacher created, see page 6)

Life cycle of the pumpkin plant cards (real pictures taken by the teacher)

Individual pieces of the pumpkin lifecycle (cut out of construction paper)

Procedures

Day 1

The teacher will introduce students to the unit on plants and teach them the following poem:

P is for pumpkin
And the stages it takes.
Seed, sprout, vine, flower,
And a pumpkin it makes.

The teacher will read I'm a Seed to the students, and discuss the fact that pumpkins and other plants go through a lifecycle (like people and insects).

The teacher will read Pumpkin, Pumpkin. The class will discuss the story and the lifecycle of the pumpkin plant.

The students will orally sequence the activities in the story.

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Week 2 – *The Lifecycle of the Pumpkin Plant (Cont'd)*

Procedures (Cont'd)

Day 2

The students will watch and participate in a PowerPoint presentation on the lifecycle of the pumpkin plant (to work on reading skills).

The students will sequence the lifecycle of the pumpkin plant on the easel with real pictures.

The students will sequence the lifecycle of the pumpkin plant individually.

Day 3

The students will participate in a field trip to the pumpkin patch to find the lifecycle of the pumpkin plant.

Day 4

Student will make a model of the lifecycle of the pumpkin plant.

Day 5

Students will complete Accelerated Reader tests on the pumpkin lifecycle.

Extensions

The students will have the opportunity throughout the week to observe a pumpkin seed, pulp, and pumpkin shell under the microscope. Students will also integrate math by estimating and weighing the pumpkin, by measuring its circumference and taking the seeds out and counting them.



PowerPoint

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