

RESOURCE LIBRARY
ACTIVITY : 50 MINS

Monarch Butterfly Life Cycle and Migration

Students watch a time-lapse video of the monarch butterfly life cycle. They illustrate and label the life cycle, and then research and take notes on survival techniques and preparation for migration at each stage.

GRADES

5 - 10

SUBJECTS

Biology, Experiential Learning

CONTENTS

2 PDFs, 1 Video, 5 Images, 1 Link

OVERVIEW

Students watch a time-lapse video of the monarch butterfly life cycle. They illustrate and label the life cycle, and then research and take notes on survival techniques and preparation for migration at each stage.

For the complete activity with media resources, visit:

<http://www.nationalgeographic.org/activity/monarch-butterfly-life-cycle-and-migration/>

Program

NATIONAL GEOGRAPHIC CHANNEL
GREAT
MIGRATIONS

DIRECTIONS

1. Activate prior knowledge about the life cycle of a butterfly.

Explain to students that they are going to play a game called "pass the ball" to review the concept and vocabulary of a butterfly metamorphosis and life cycle. Briefly summarize the rules: You will begin the game by holding a small, soft ball and describing a stage in the life cycle of a butterfly. Any student that has further information or vocabulary to share should say "pass the ball." The student holding the ball volunteers the information, any other student can add to it by saying "pass the ball," and so on. Start the game by holding the ball and stating: *A monarch butterfly lays an egg on a milkweed plant.* When possible, prompt students to use relevant vocabulary terms. Note areas where students might need help to better understand the butterfly life cycle.

2. Show students the video clip from *Great Migrations*.

Divide students into small groups. Distribute a copy of the worksheet Butterfly Migration Note Taking to each group. Read aloud the directions and answer any questions students may have. Tell students that they will watch a time-lapse video of a butterfly actually going through its life stages. Make sure they understand they will be able to watch the whole process happening. Show "Monarch Life Cycle" to the class.

3. Provide groups with enough time to complete column 1 of the worksheet.

After the video, have groups draw and label illustrations of the four life stages of a butterfly in column 1 of the worksheet. If needed, show the video again, or click through the photo gallery Butterfly Life Cycle.

4. Have groups research monarch butterflies and take notes.

Have each small group designate a note taker. Have the other students take turns reading aloud the provided webpage and any additional library or Internet resources. As groups read, encourage all group members to identify facts about survival techniques or animal migration for the note taker to record.

5. Have a whole-class discussion to review groups' worksheets.

Use the provided answer key to review groups' facts about survival techniques and migration.

OBJECTIVES

Subjects & Disciplines

Biology

- Experiential Learning

Learning Objectives

Students will:

- demonstrate prior knowledge of the butterfly life cycle
- use factual information from a time-lapse video to illustrate and label the butterfly life cycle
- analyze information about the butterfly life cycle in order to identify survival techniques related to migration

Teaching Approach

- Learning-for-use

Teaching Methods

- Cooperative learning
- Discussions
- Hands-on learning
- Information organization
- Multimedia instruction
- Reading
- Research

Skills Summary

This activity targets the following skills:

- Critical Thinking Skills
 - Analyzing
 - Remembering

- Understanding

National Standards, Principles, and Practices

NATIONAL SCIENCE EDUCATION STANDARDS

- (5-8) Standard C-1:

Structure and function in living systems

- (5-8) Standard C-5:

Diversity and adaptations of organisms

Preparation

What You'll Need

MATERIALS YOU PROVIDE

- 1 small, soft ball
- Pencils
- Pens

REQUIRED TECHNOLOGY

- Internet Access: Required
- Tech Setup: 1 computer per small group, Projector, Speakers
- Plug-Ins: Flash

PHYSICAL SPACE

- Classroom

GROUPING

- Small-group instruction

BACKGROUND & VOCABULARY

Background Information

Monarch butterflies begin life as eggs laid on the leaves of milkweed plants. They hatch as larvae and eat the milkweed leaves. The larvae grow into colorful caterpillars. When they are ready, the caterpillars create a chrysalis, or hard protective case, around themselves for the pupa stage. Later, the caterpillars emerge from this chrysalis as black, orange, and white adult butterflies. At each stage of the life cycle, monarch butterflies have different survival techniques related to the migration they will undertake as butterflies.

Prior Knowledge

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Recommended Prior Activities

- None

Vocabulary

Term	Part of Speech	Definition
animal migration	<i>noun</i>	process where a community of animals leaves a habitat for part of the year or part of their lives, and moves to habitats that are more hospitable.
butterfly	<i>noun</i>	type of flying insect with large, colorful wings.
caterpillar	<i>noun</i>	larva of a butterfly or moth.
chrysalis	<i>noun</i>	pupa (development stage between larva and adult) of a moth or butterfly, where the worm-like insect is encased in a hard skin.
larva	<i>noun</i>	a new or immature insect or other type of invertebrate.
life cycle	<i>noun</i>	process of changes undertaken by an organism or group of organisms over the course of their existence. Birth, growth, and death usually characterize the life cycle of animals.
metamorphosis	<i>noun</i>	complete change in form and structure from one part of the life cycle to the next, such as caterpillar to pupa, and pupa to butterfly.

For Further Exploration

Articles & Profiles

- [National Geographic Magazine: Animal Migrations](#)

Audio & Video

- [National Geographic Channel: Growing Up Butterfly](#)

Interactives

- [National Geographic Animals: Migrations Quiz](#)
- [National Geographic Channel: Great Migrations—3D Animal Migration Globe](#)

Websites

- [National Geographic Animals: Monarch Butterfly](#)
- [Monarch Watch: Student Scientists](#)

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