



Grades: 3-8

TEKS:

3: 1B, 2A, 3C, 9A, 9C, 10A

4: 1B, 2A, 3C, 10A

5: 1B, 2B, 3C, 9A, 9C, 10A

6: 1B, 2A, 3D

7: 1B, 2A, 3D, 10A, 11B

8: 1B, 2A, 3D, 11A

Topics:

Adaptations

Basic Needs

Human Activity/Environmental Impacts

Migration/Hibernation

Predator/Prey

Methodologies:

Game

Setting: Classroom or large area

Activity Time: 45-60 minutes

Adapted from *The Great Migration Challenge* © Council for Environmental Education

Objective:

To explore the hazards and resources Monarch butterflies encounter on their long-distance journeys.

Materials:

**Provided**

Cards

Chart

Teacher Page

Materials Provided in Discovery Trunk:

Dice – one per group

Vocabulary:

adaptations, basic needs, inherited behavior, environment, migration, pollination, predator, prey, wildlife



# Monarch Migration Mayhem

## Background:

A monarch butterfly will migrate approximately 2,600 miles from Canada and the northern United States to their overwintering grounds in Mexico. They begin this long trip south in mid-August and usually arrive in Mexico in early November. It will take about two months, on average, for an individual monarch to make this journey. Once they have reached Mexico, they will hibernate for the winter months. During migration, they will face predators, human contact, and weather delays.

Beginning around the second week of March, the butterflies start their return journey to the United States and Canada. They move north with the warming temperatures and blooming flowers. Females will begin to lay their eggs as soon as they find fresh milkweed, and will then die, leaving further migration to the next generation of butterflies.

## Activity Preparation:

- Set out the Monarch Migration Mayhem Cards in order around the classroom, or select a large area indoors or outside.
- Print or replicate the *Monarch Migration Mayhem* chart.

## Procedure:

### Discussion

1. Engage students by asking each to imagine that he or she is a monarch butterfly. Then instruct the students to close their eyes, relax, and listen carefully as you read aloud this brief fantasy from *Keepers of the Earth*, by M.J. Caduto and J. Bruchae (1988).

### Winter is Coming

*It is fall. The sun is rising later and sets earlier every day. The days are cooler, and the morning air is cold. All around you, leaves are changing color. Fog forms over the ponds, lakes, and rivers as the sun rises. The mist disappears as the sun climbs high in the sky. You have a great need to eat as much food as you can find, and you are storing energy as you eat. Can you feel your body growing stronger?*

*As each day goes by, the nights grow longer and colder. Plants are turning brown and lifeless. Food is running low, yet you are using more food to keep warm. Winter is coming fast! Soon the North wind will blow, and food will be hard to find. You are a butterfly and winter is coming. What are you going to do to survive?*

2. Allow time for student responses and then read the information in the background section of the lesson to students.
3. Tell students that they are going to play a game to help them understand how difficult it is for monarchs to survive migration.

## Activity

1. Split the students into migration groups of 2-3 in each group. Provide each group with one die.
2. Explain the following instructions to students before their migration begins. If needed, answer any questions before the first group begins.
  - To start your journey, roll the die, and move forward the corresponding number of cards/spaces.
  - Follow the instructions on each card. When conditions are favorable, the card will tell you to move ahead. When you encounter a hazard, you may be delayed or have to go back. Sometimes, you will need to roll the die again.
  - Remember, not all monarchs survive migration. Some will live and some will die.
3. Tell students to return their die at the end of their journey and fill out their data on the class results chart.

## Wrap-up

1. Once the students have completed the challenge course, discuss the number of “monarchs” that survived migration and the number that did not. Continue the discussion to include why they did not survive or what obstacles were in the migration pathway. Ask the following questions.
  - How did human activity affect the well-being of monarchs? *Highways, polluted marshes, fireworks, power lines, and a girl using a net to catch them created danger. A wildlife refuge provided a place for rest. People who planted plants that provide nectar were helpful, and the butterflies had access to a field with rotting fruit.*
  - Can you identify basic needs that all monarchs share? *Food, water, shelter, and space*
  - What adaptations or body parts do monarchs have to help them with migration? *Wings, proboscis*
2. Ask students if they know what a steward is. Introduce or define the term as a person responsible for overseeing or protecting something, such as monarchs.  
What can we do to act as stewards for monarch habitats?
  - *Plant flower gardens for nectar*
  - *Plant milkweed for laying eggs and feeding larva*
  - *Keep water sources free of trash and pollutants*
  - *Avoid the use of pesticides*
4. Ask students what were the difficult obstacles the monarchs had to overcome? *Humans were not good stewards and predators. Weather conditions affected their ability to fly.*