



Learning Activity:

MONARCH BUTTERFLY REST STOP

Activity Type	Arts and Crafts—Outdoor Fun
Focus Area	Arts Education
Duration	35–45 minutes

Overview

In this craft activity, students will create a butterfly feeder while learning about monarch butterflies and their long migratory journey. Students will learn not only of the monarch’s epic migration pattern, but also of the threats facing these butterflies, and how building a simple butterfly feeder can benefit these insects.

Learning Objective

At the completion of the activity, students should be able to:

- Understand the migratory route of monarch butterflies.
- Recognize the importance of pollinators such as butterflies and how they affect the world’s food production processes.
- Discover the different threats that monarchs face in the wild.

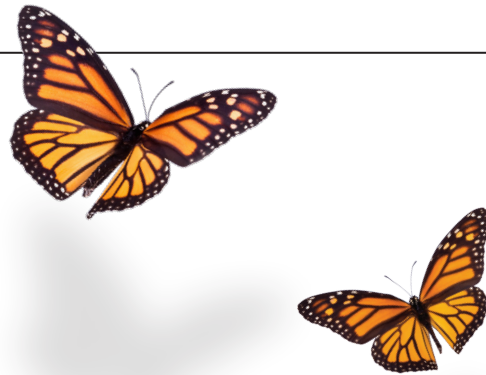


Monarch butterfly roost, El Rosario, Mexico.



● Materials Needed

- Wooden stick, two to four feet in length
- Recycled bottle cap
- Recycled plastic milk jug
- Permanent markers
- Scissors
- Tack, drawing pin, or similar
- Glue
- Cotton ball
- Sugar water



● Vocabulary

- **Ecosystem:** the living (plants, animals, other organisms) and nonliving (air, water, soil) components of an area that interact with each other in an interconnected way
- **Habitat loss:** the disappearance of natural environments (required for plants' and animals' survival) due to harvesting for human consumption and/or clearing to make way for agriculture, housing, roads, pipelines, and other forms of industrial development
- **Herbicide:** a chemical substance used to destroy or stop plant growth
- **Metamorphosis:** a process of changes by which a young insect or animal develops into an adult form
- **Migration:** the act of passing periodically from one region or climate to another for feeding or breeding
- **Pollination:** the transfer of pollen from male to female plant parts to fertilize



A monarch butterfly lands on goldenrod, an important food source, Iowa, United States.



● Activity Procedure

Part 1: Introduction and Preparation

- Ask the students to define “migration” and to brainstorm a list of species that migrate.
- Use the definitions and examples to launch into a discussion about one migratory species, the monarch butterfly.
- Educate students about the extensive journey of the monarch migration.
 - Every year, at the end of the summer, a monarch butterfly generation born in southern Canada and the northern United States undertakes one of the longest migratory journeys of any butterfly species. They migrate between 2,200 and 2,800 miles south, to their wintering habitat in the mountain forests of Mexico (the Monarch Butterfly Biosphere Reserve in Mexico). In March, once the temperature rises, the butterflies mate and start migrating back north. This first generation of monarchs is the only group of butterflies in the world that live for up to eight months, and that is why some people call these monarchs the “super generation.”
 - When the super generation arrives in the United States, the females lay their eggs on milkweed and die. The following monarch butterfly generations, which will live for four to five weeks, continue the migration north. As adults, they feed from nectar plants, mature, mate, lay their eggs on milkweed plants, and then die. It will take three to five generations until they reach the northern United States and southern Canada, where the next super generation will emerge and start the long migration south at the end of the summer.
 - When they arrive in Mexico, the butterflies find the same sites in the mountain forests of Mexico where their great, great, grandparents arrived the year before.
- One reason monarch butterflies are important to biodiversity is because, like bees, birds, and many other insects, they are pollinators. Start a discussion with your students on the role of pollinators in the environment and how they contribute to our world’s food production.
 - Pollinators carry pollen from one flowering plant to another, fertilizing them and supporting their ability to produce seeds and fruit.
 - Pollinated plants produce 35% of the world’s food supply.
- Lead a class discussion on the threats facing monarchs and their migratory journey, and how we would be affected if we lost monarch butterflies.
 - One of the main threats to monarchs is loss of milkweed and nectar plants.
 - Milkweed is the only plant on which monarchs lay their eggs and where a series of transformations, called “metamorphosis,” takes place. Caterpillars emerge from the eggs and feed on the milkweed leaves. Each caterpillar then turns into a chrysalis before emerging as an adult monarch butterfly.



- An estimated 90% of milkweed has disappeared due to poorly planned agriculture, development, and excessive herbicide use. Milkweed and many other plants can be found throughout the United States in grasslands, which are also disappearing at an alarming rate.
- With fewer milkweed and nectar plants available, it is harder for monarchs to make their migratory journey.
- Monarch butterflies are also threatened by forest loss in their winter habitat in Mexico.
 - Oyamel fir and pine forests in Mexico provide the right climate and humid conditions for monarchs to shelter during the winter.
 - Unsustainable use of forests, conversion to agriculture, and illegal logging in the monarch butterfly region have been diminishing the Mexican forests.
 - Cutting down trees modifies climate conditions, humidity, and other factors that butterflies need to hibernate during the winter.
 - Fortunately, illegal forest development in the Monarch Butterfly Biosphere Reserve has decreased over time.
- Climate change affects the monarchs' migratory pattern.
 - Colder, wetter winters threaten a monarch's ability to survive. Hotter, drier summers could push them further north.

Part 2: Activity

1. Cut the top off of the recycled milk jug so that the bottom two-thirds of the jug can be used to make the flower shape for the feeder. Have the students cut out a circle of plastic on one of the sides of the jug to use as the flower. The size of the circle depends on how big the students would like to make their flowers. Make sure that an adult helps the students with this task.
2. Using permanent markers, have the students decorate the circle to resemble a flower. Encourage students to be creative to make the flower unique.



Monarch butterflies wintering from November to March in Oyamel pine forests, Monarch Butterfly Biosphere Reserve, Mexico.



3. Place the bottle cap in the middle of the plastic flower shape. Push a tack through the bottle cap and the plastic flower shape so the point of the tack comes through the bottom of the cap. Make sure that an adult helps the students with this task.
4. Place a small amount of glue on one end of the wooden stick to keep the flower from falling off.
5. Push the plastic flower and bottle cap (with the tack point first) onto the glued end of the wooden stick to finish constructing the feeder.
6. Have students find a place outside to place their butterfly feeders by inserting the stick end into the ground. Add a small amount of the cotton ball into the bottle cap and drip some of the sugar water onto the cotton ball. This can be done at school or when the students return home with their feeders.
7. Enjoy watching butterflies visit the feeders. Be sure to refill the feeder regularly with sugar syrup so that more butterflies come to the feeder.



Part 3: Discussion and Assessment

- After the students have completed constructing their monarch butterfly feeders, remind them that creating a space for monarchs to rest and feed can help them on their long migratory journey. The butterfly feeders can benefit other species of butterflies and pollinators as well. Have the students identify other types of pollinators, such as bumblebees, honeybees, and certain types of wasps, moths, birds, ants, and bats.
- Review the threats to monarchs, focusing on forest loss and loss of food resources.
- Have students brainstorm with their classmates about other ways they can protect monarchs and other pollinators.
 - Avoid wasting food, taking only as much food as needed. Eat leftovers another time or share them with a friend.
 - Eat a balanced diet and follow recommended nutritional guidelines. The manufacture of products with ingredients such as beef, chicken, or pork typically requires more resources than those made from vegetables and fruits. Not eating more than what is recommended for various food groups can help conserve resources and habitats.
 - Create a pollinator garden. Planting milkweed and nectar plants in the garden provides a critical area for monarchs to lay their eggs and feed during their long migration. Check the [WWF website](#) about the right type of milkweed to plant in your area.
- After the monarch feeders have been up for some time, have students report if they have seen any monarchs or other wildlife visit their feeders.





Extended Learning Options

- Pollinators play a critical role in healthy ecosystems and are essential for our food production. Have students take an inventory of the food in their house pantry. How many items come from pollinated plants? Record the results so that students see the importance of pollinators and the food they help provide.
- There are many types of animals that migrate. Ask students to identify different migratory species and then pick one for further research. Have them answer these questions: What is the reason for migration? What is the migratory route, from start to finish? What are potential threats to the migratory routes? What would happen to the species if they were not able to migrate? Have the students share their findings in class or with other classmates.
- Use a tablet or smartphone (if available) to download the [WWF Together app](#). Encourage students to explore the monarch segment to learn more.

Additional Background Information

- Article: [WWF Featured Species: Monarchs](#)
- Toolkit: [Monarch Toolkit](#)
- Article: [How to Bee Friendly](#)
- Video: [The Mystic Migration of the Monarch Butterfly](#)

For more fun classroom activities with a focus on wild species and conservation, visit wildclassroom.org.

