

# JOURNEY WITH MONARCHS: LEARN, PLAY, EXPLORE

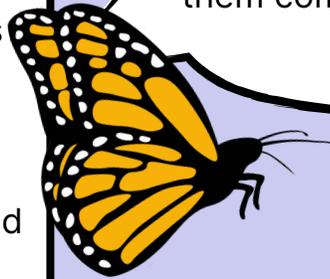
Background Materials and  
Supplemental Activities  
Migration: Grown-up Guide



MONARCH  
JOINT VENTURE

# WELCOME!

The **Journey with Monarchs Grown-up Guide** is a companion resource designed to help you support learners as they complete their **Journey with Monarchs Activity Book**. This interactive workbook introduces you to the wonders of monarch butterflies and their habitats through fun, hands-on learning. With your support, learners will build skills in observation, early math, fine motor development, Spanish language, and nature exploration. After completing the activity book, they'll be a part of the Monarch Discovery Corps, ready to continue discovering and protecting these incredible insects!



Hi my name is Monny,  
the monarch butterfly!  
In the kid's activity book, I will help by  
giving fun facts about my life as a  
monarch and instructions to help  
them complete the activities in the  
book.

## Included in this guide:

1. About the **Journey with Monarchs Activity Book for Kids: Why are Monarchs Important?**
2. Background Information and Migration of Monarchs
3. Tips and Tricks for Engaging with Kids Outdoors
4. Migration Focused Community Science Programs
5. Supplemental Activities
  - a. The Monarch's Journey
  - b. Hide a Butterfly
  - c. Symbolic Migration
  - d. Keeping a Nature Journal
  - e. Seed Balls
6. Book Lists (Butterfly and Nature Titles)



**MONARCH**  
JOINT VENTURE

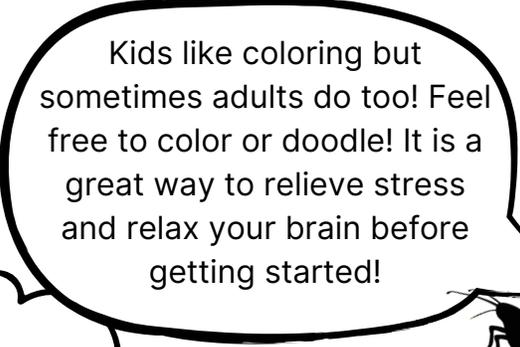
This activity book was created by the Monarch Joint Venture. For more information about monarchs and their habitat visit [MonarchJointVenture.org](http://MonarchJointVenture.org)

# About the Journey with Monarchs Activity Book for Kids

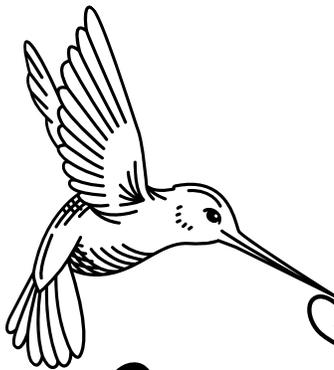
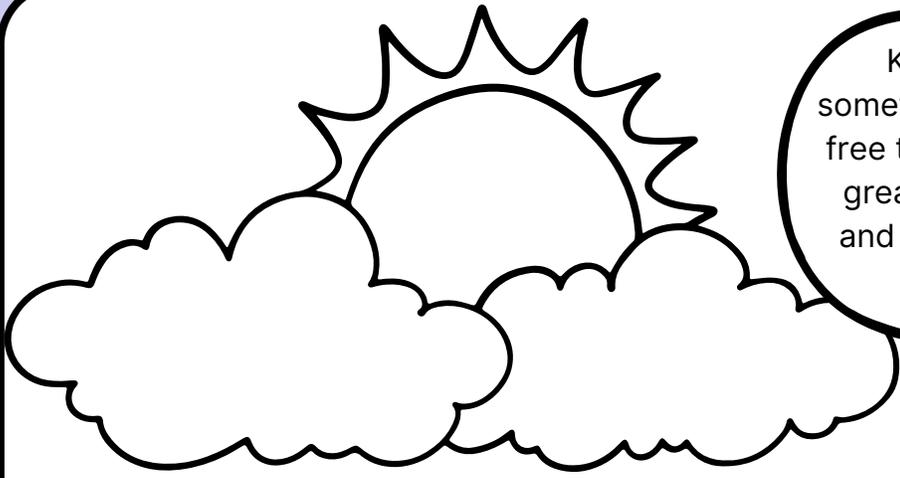
The Journey with Monarchs Activity Book is focused on the understanding of the monarch butterfly habitat and migration. This activity book introduces self-guided activities that focus on skill building for learners. Monny, the monarch butterfly guide, can be found throughout the booklet with pointers and facts to help with learning. This is the second volume of a series that promotes the understanding of monarchs, other pollinators, and their habitats.

Why monarchs? While monarchs are intrinsically important, conserving monarchs matters for more than just their own protection. Creating habitat for monarchs is one of the most important actions we can take to help stabilize their decreasing population. The monarch butterfly, and insects in general, have experienced steep population declines throughout North America. From sprawling prairies to backyard gardens, habitat projects scattered across the landscape provide a network of crucial habitat for monarchs. Fortunately, the habitat that monarchs use provides benefits to other species, including humans!

Monarch butterflies provide a jumping off point to introduce children to insects and the outdoors! Using this workbook and providing tangible supplemental outdoor activities is a way for young children to be a part of monarch conservation!



Kids like coloring but sometimes adults do too! Feel free to color or doodle! It is a great way to relieve stress and relax your brain before getting started!



Monarch butterflies live all over the world and need beautiful flowers that provide their food, nectar, to survive. Monny, has a special migration she wants to share it with you!

# Background on Monarch Lifecycle

All insects change as they grow; this process is called metamorphosis. There are two kinds of metamorphosis: incomplete (or simple) metamorphosis, and complete metamorphosis. An example of **incomplete metamorphosis** is found in grasshoppers or dragonflies. Typically this metamorphosis consists of 3 stages: egg, nymph, and adult. The nymph stage in incomplete metamorphosis looks like a mini adult. The wings develop externally, and there is no prolonged immobile (pupa) stage.

This is different for **complete metamorphosis**. Complete metamorphosis has 4 stages that each look very different from each other. Monarchs and other Lepidoptera (butterflies and moths) undergo complete metamorphosis, in which there are four distinct stages: **egg**, **larva** (caterpillar), **pupa** (chrysalis for butterflies, cocoon for moths), and **adult** (butterfly).

Monarchs develop from egg to adult in about a month. Most adult monarchs then live for an additional two to six weeks in the summer. The migrating generation of adult monarchs lives through the winter for about six to nine months.

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If you are looking to learn even more, check out the Monarch NECTAR Hub. This online course collective offers several self-paced and live Zoom courses for all age learners.

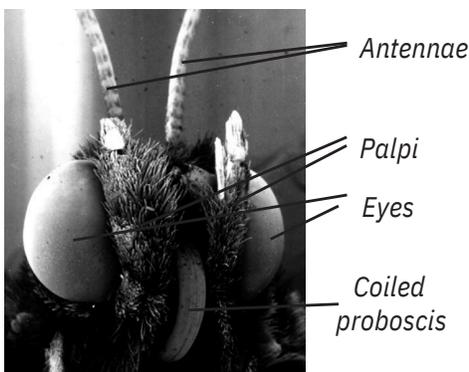




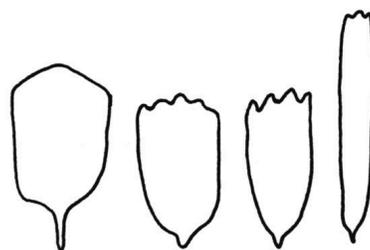
## Adult Monarch Body Parts

The body of an adult butterfly is divided into the same major parts as the larva—head, thorax, and **abdomen**. There are four main structures on the adult head: eyes, **antennae**, palpi, and a **proboscis**. A butterfly's relatively enormous compound eyes are made up of thousands of ommatidia, each of which senses light and images. The two antennae and the two palpi, which are densely covered with scales, sense molecules in the air and give butterflies a sense of smell. The proboscis is the butterfly mouthpart that looks like a straw and is used to absorb nectar and water for nourishment. When not in use, the butterfly curls up its proboscis.

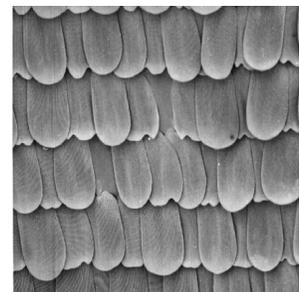
Three segments make up the thorax. Each segment has a pair of **legs** attached to it, while the second and third segments also have a pair of wings attached to them. The legs consist of six segments. They end in tarsi (singular, tarsus), which grip vegetation and flowers when the butterfly lands on a plant. Organs on the back of the tarsus “taste” plants to find appropriate food sources. Monarchs (and other butterflies in the family Nymphalidae) look like they only have four legs because the two front legs are tiny and curl up next to the thorax.



*SEM image of an adult monarch head*



*Butterfly scale shapes.*



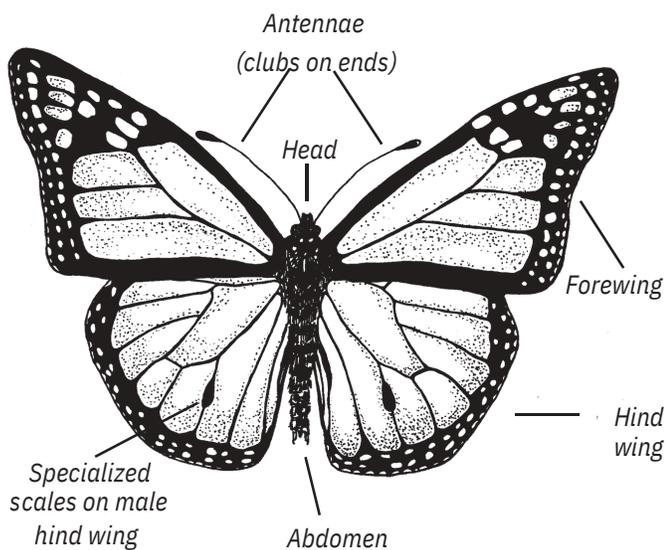
*SEM photograph of monarch scales.*



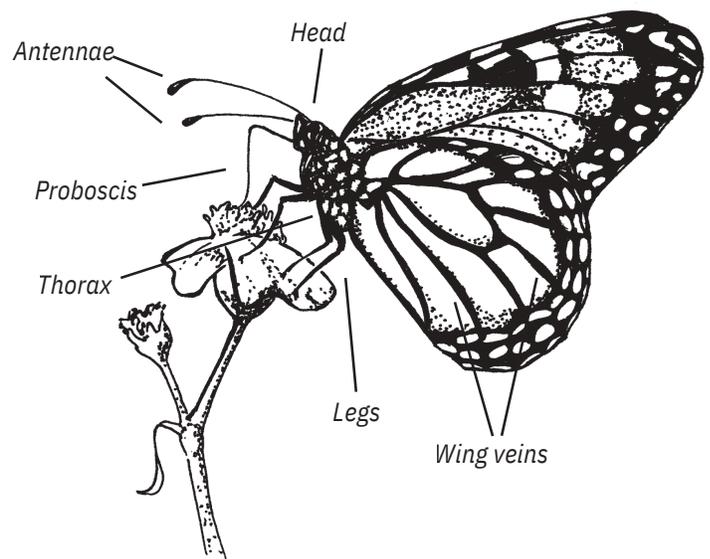
## Adult Monarch Body Parts

All butterflies and moths have four **wings**: two hind wings and two forewings. Small structures attach the wings to the thorax, and muscles attached to these structures move the wings. The butterfly can also move its wings by changing the shape of its thorax. Wing veins (tubes with thickened walls) contain tracheae, nerves, and space through which hemolymph moves. Veins give the wings structure, strength, and support.

The **abdomen** consists of eleven segments, the last two or three of which are joined. On male monarch butterflies you can see a pair of claspers on the end of the abdomen. These appendages grasp the female during mating. On the female abdomen, you can see a notch, called the ostium bursa, where the transfer of a spermatophore takes place during mating. The spermatophore contains genetic material (sperm) and additional nutrients for the female.



*Male monarch butterfly anatomy.*



*Nectaring monarch with abdomen hidden between hind wings.*



# Monarch Migration and Overwintering

Unlike most other insects in temperate climates, monarch butterflies cannot survive a long cold winter. Instead, they migrate and spend the winter in roosting sites. Western monarchs, whose population is west of the Rocky Mountains, travel primarily to small groves of trees along the California coast. Eastern monarchs, whose population is east of the Rocky Mountains, fly farther south to high-elevation **oyamel** fir forests in the mountains of central Mexico. The monarch's **migration** is driven by seasonal changes in their environment, such as day length, temperature, and senescing host plants.

The monarchs of North America have one of the longest and most unique butterfly migrations in the world, with some eastern monarchs traveling up to three thousand miles to reach their overwintering sites. While their complete round-trip migration is accomplished over multiple generations, they are the only butterflies to make such a long journey. Amazingly, they fly in masses to the same winter roosts used by monarchs for millennia.



*Monarchs clustering at their overwintering sites in Coastal California.*



## Fall Migration

Monarchs that emerge from their pupae in late summer and early fall are biologically and behaviorally different from those that emerge in the summer. The shorter days and cooler air of late summer trigger changes. In the northern part of their range, this occurs around the end of August.

Even though these butterflies look like summer adults, they will not mate or lay eggs until the following spring. Instead, they are in an arrested state of development called reproductive **diapause**. The reproductive organs of both males and females are undeveloped. Instead of expending energy on reproduction, their small bodies prepare for a strenuous flight. Otherwise solitary animals, they often cluster at night while moving southward. If they linger too long, they will not be able to make the journey; because they are ectotherms (cold-blooded), monarchs are unable to fly in cold weather.

Fat, stored in the abdomen, is critical to monarch survival during the winter. This fat not only fuels their migratory flight but must also last until the next spring when they begin the return journey. Monarchs conserve their energy in flight by gliding on air currents as they travel.



## Fall Migration

Scientists are still studying how monarchs four or five generations removed from the previous migration are able to find the same overwintering sites each year. Their navigational system is not yet fully understood, but research shows that monarchs can track the position of the sun and use this as a guide. This likely helps them to navigate in a general direction, but probably does not allow for the detailed navigation that is necessary to locate the same sites in **Mexico or California** every fall. For example, while both would generally fly south, a monarch starting in Maine would need to fly in a slightly different direction than one starting in Minnesota to reach the same location in Mexico.



*Routes monarchs follow during the fall migration to their overwintering sites in Central Mexico (west of Mexico City) and Coastal California.*



## Overwintering Sites

**Monarchs west of the Rocky Mountains migrate to the California coast, where they roost in eucalyptus trees, Monterey pines, Monterey cypress, and other trees.** Long ago, the monarchs roosted in native sycamores, but with the dramatic increase in southern California's human population, these trees were cut to make room for shopping malls, freeways, and houses, and have almost disappeared. The remaining overwintering sites lie along bays sheltered from wind, or farther inland where they are protected from storms. California hosts the vast majority of all overwintering western monarchs during the winter months, making it an extremely important region for conservation of the western population.

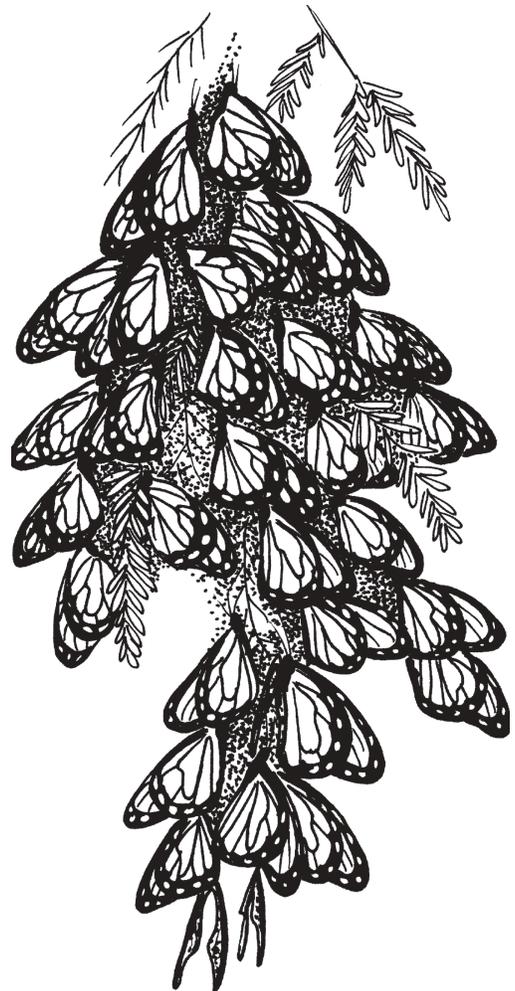
**Monarchs east of the Rockies migrate each year to the Transverse Neovolcanic Belt, a belt of volcanic mountain ranges that extends across central Mexico.** Millions of butterflies from the central and eastern Canadian provinces and the eastern and midwestern United States fly south to Mexico. Their flight pattern is shaped like a cone as they come together and pass over the state of Texas and then sweep up into the mountain ranges of central Mexico. In 1975 the scientific community tracked down the wintering sites of the monarch in Mexico through the work of Fred and Nora Urquhart and their Insect Migration Association, which recruited hundreds of volunteers ("community scientists") to tag and report monarch sightings. Until then, the overwintering sites had been unknown to scientists in the U.S., but well known to Mexican communities in the region.



## Overwintering Sites

Monarchs need the right climate and habitat to survive the winter. Cool temperatures (close to, but not quite freezing) allow butterflies to retain their energy reserves. There are few nectar sources available to monarchs during the overwintering months so lipids (fats) gained during the fall migration will need to last them all winter. Trees provide habitat for the monarchs to cluster together, covering whole tree trunks and branches.

The tall trees make a thick canopy and serve as a protective shield from the wind and other elements. On sunny days, monarchs will fly to nearby streams to drink water. These conditions are found in groves along the coast of California and oyamel fir forests, which occur in a very small area of mountain tops in central Mexico, about 3000 meters (almost two miles) above sea level.



*Cluster of overwintering monarchs on a fir branch.*



## Spring Migration

As winter ends and the days grow longer, the monarchs become more active, beginning to mate, forming less dense clusters, and beginning to spread to other locations. They begin to leave their California roosts in February and their Mexican roosts in early March, flying east and north looking for milkweed plants on which to lay their eggs. These monarchs, who have survived a long southward flight in the fall, a cold winter, predators, and other hazards, are responsible for producing a new generation of migrating monarchs. If they return too early before milkweed is up in the spring, they will not be able to lay their eggs and continue the cycle.

Migrating monarch females die after laying eggs on the milkweed plants they find. Soon, the first spring caterpillars hatch and metamorphose into butterflies. It is these newly emerged monarchs, the offspring of the butterflies that made the fall journey, that continue north and east to the summer breeding grounds. Summer monarchs have a brief life compared to the overwintering generation; their adult lifespan is only two to six weeks compared to the migratory generation that can live up to nine months.



## Spring Migration

Typically, there are three generations of breeding monarchs during the spring and summer months, each helping to grow the population. By summer's end, there are once again millions of monarchs all over the U.S. and southern Canada ready to make the journey to their overwintering grounds.



*Routes monarchs follow during the spring migration as they recolonize their breeding range.*



## Life Cycle: Habitats

Intrinsically linked to a butterfly's life cycle is the habitat in which they live! A good habitat requires food, water, shelter, and space. For a monarch this often takes form in a variety of nectar flowers, milkweed, trees and shrubs, and shallow water sources. A pollinator garden is a simple way to contribute to monarch conservation and is a wonderful teaching tool. A garden can increase access to nature and learning opportunities. It provides opportunities to explore different behaviors of a myriad of pollinators. With a pair of binoculars, a good field guide, a variety of flowers in bloom, and a sunny, calm day, you can sit outside and, with practice, identify many different butterfly species.

To get the most out of your garden, be sure to include both larval host plants and nectar plants. The host plants will encourage butterflies to linger and explore possible sites to lay eggs. It will also increase your chances of observing both mating and egg laying, as well as the complete butterfly life cycle from egg to adult. Finally, a variety of plants is good for many pollinators, supporting diverse and thriving ecosystems.

Other animals will benefit from these spaces as well. Flowering plants produce a lot of seeds which will be enjoyed by songbirds in the fall and winter.

A pollinator garden can be any size, from a window box to a raised bed, a container garden to a portion of your landscaped lawn, or a wild untended area.



# Pollination and Pollinators

Pollination occurs when a grain of pollen moves from the anther or male part of the flower to the stigma or the female part of the flower. Flowering plants require pollination in order to reproduce and grow. Not only is pollination a vital part our ecosystem, it is also critical to food production!

Animal pollinators can include bees, butterflies, birds, bats, beetles, wasps, flies, moths, and small mammals. These animals are visiting flowers drinking nectar or feeding on pollen. When eating and travelling, they transport the pollen grains from flower to flower. Other forms of pollination can include self-pollination, wind pollination, and water pollination.

We need pollinators because they help make many of the foods we eat, like apples, berries, and pumpkins! Not only that, but they can account for up to 1 out of every 3 bites of food we eat. In fact, pollinators provide this service to over 180,000 different plant species!

Pollinators also need our help. Their populations are in decline, primarily due to loss of habitat and food resources. They also are susceptible to pollution and pesticide use, disease, and changes in climate. It is crucial that we take steps to help add habitat, reduce our pesticide use, and make efforts to reduce our carbon footprint to support both the pollinators and the plant species that rely on them!

# Tips for Outdoor Teaching

## Why Outdoors?

The benefits of teaching and learning outdoors is well documented, and the body of research is still growing. Organizations like the Children & Nature Network and the North American Association for Environmental Education have extensive and easily searchable research libraries, but here are some starting points for the benefits of outdoor instruction:

## **Academic Outcomes** (summarized from Children & Nature Network paper):

- Learning outdoors and in natural environments can boost performance in reading, writing, math, science, and social studies and improve creativity, critical thinking, and problem solving.
- Just spending time outdoors can increase students' focus and attention and reduce symptoms of ADHD. Even just seeing nature from inside can help.
- The opportunities to regularly explore and discover outdoors can increase enthusiasm and engagement in learning.
- Behavior has also been shown to improve with nature-based learning, leading to more impulse control and less disruptive behavior.

## **Health and Wellness Outcomes:**

- Outdoor learning can help to improve relational skills between students and reduce anger and aggression.
- Outdoor play opportunities increase physical activity and reduce the risk of obesity.
- Children (and adults!) are better able to cope with stress when exposed to green spaces.
- Spending time in bright, natural light (sunlight) can reduce nearsightedness and increases vitamin D levels.

Taking kids outside to learn—whether it's your own children or a classroom of students—can feel unfamiliar at first. Managing learning outdoors is much different than managing it indoors, and the first few outings may feel a little chaotic, especially if outdoor learning is new. However, the more time kids spend outside, the more it becomes a natural part of their routine. It will still be exciting, but with practice, it becomes less overwhelming. Like any new experience, outdoor learning takes time and practice to feel comfortable. Here are some helpful tips to make your time outdoors more successful and enjoyable.

Learn more here: <https://www.childrenandnature.org/schools/learning-outside/>

# Tips for Outdoor Teaching

## **Before Heading Outside:**

- Establish a routine for outdoor learning to help kids know what to expect.
- Set clear expectations and communicate them beforehand to create a smooth experience.
- Scout the area in advance, even if it's familiar—outdoor spaces can change with the seasons.
- If possible, enlist help from volunteers, parents, or other staff members.
- Check to see if your school has a protocol for being outside with your students and make sure your school admin and leadership know your plans.

## **Once You're Outside:**

- Establish clear boundaries so kids know where they can and can't go.
- Use a consistent recall signal, like a code word or sound, and teach kids how to respond (e.g., circle up or line up).
- When speaking to the group, position yourself with the sun in your eyes—not theirs—to minimize distractions.
- Keep kids engaged on longer walks by planning stops, rotating line leaders, or incorporating scavenger hunts.
- Protect your voice by projecting from your diaphragm rather than yelling from your throat.

## **Additional tips and tricks:**

- It is more than okay to not know everything! This is a good opportunity to model curiosity. Take pictures if you can and look things up when you get back. There is no need to provide all the answers – and it is more fun for the kids if they can figure them out on their own.
- Related to the above – take advantage of teachable moments! Someone may observe something that has nothing to do with your topic for the day. Dismissing it can discourage their drive to be curious but taking a minute or two to observe it as a group won't diminish the lesson you are trying to teach.
- A bag or backpack with outdoor teaching supplies can be a handy tool. Include a first aid kit, extra pencils and tools, containers to collect specimens, hand sanitizer or wet wipes, extra outdoor gear like mittens and hats and scarves, and a water bottle.
- Some sort of mat for sitting or kneeling on can help younger students find focus and help keep clothes clean if that's a concern.
- Kids may feel nervous about outdoor learning too! Talk with them beforehand about what to expect. Listen to their concerns and reassure them by addressing any fears you can.

# Migration Focused Community Science Programs

Community science is a great way to get involved with monarch conservation. It is an even better way to get kids involved in science and research. Several community science programs focus on different aspects of monarch biology, including migration, population dispersal, parasitism, and overwintering. **\*\*Handling of monarchs not allowed in CA without permit**



Community Science Opportunities

What interests you?	What time can you spend?	Where are you?	When can you participate?	What would you like to do?	Check out this program!*
 Adults	30 min +		At least once during fall migration	Safely handle and tag wild or reared adult monarchs**	 Education • Conservation • Research 

### **Monarch Watch:**



Provides information on timing and pace of the migration and origins of monarchs and success in reaching Mexico. Coded tags are placed on the hind wings of wild or reared monarchs in the eastern U.S. Tagging kits, available online, include instructions with data sheet. **Training:** Online. **Data submission:** Online or mail. [monarchwatch.org](http://monarchwatch.org) This is a program from the University of Kansas.

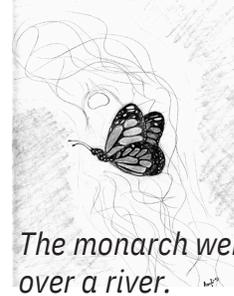
### **Southwest Monarch Study:**



Tracks migrating and breeding patterns of monarchs in AZ, CA, NV, NM, UT, and western CO by tagging monarchs during fall migration and winter. Order small, lightweight stickers with unique identifying numbers and place them carefully on wings of wild or reared monarchs. **Training:** In person or online. **Data submission:** Email or mobile iOS app (iPhone, iPad, etc.).

[swmonarchs.org/request-tags.php](http://swmonarchs.org/request-tags.php)

# The Monarch's Journey



## Materials:

- Blank paper or worksheet for each students
- Markers or crayons
- Optional: The Great Monarch Butterfly Chase by R.W.N. Prior

## Objective

- Students will use simple sentences to describe things that monarchs might see and do during their annual fall migration to Mexico or California. If desired, you can show them a map that helps them to visualize some of these experiences.
- Monarchs experience many different locations during their migration to Mexico or coastal California each fall.

## Procedure

1. Discuss the route monarchs take from your state or province, and have students think of some of the things they may encounter on their journey. If it is available, The Great Monarch Butterfly Chase is a good introduction for this lesson. In this story, two boys follow a monarch butterfly across their town and then down the east coast and all the way to Mexico.
2. Display position words (over, under, across, through, up, down, etc.) on the board or use word cards. Use words that the students are familiar with or have been learning. Have the children read the words one at a time. Keep the words on display.
3. **Brainstorm places or things that monarchs might pass on their journey.**
4. List ideas on a large chart. Provide sentence starters:
  - a. The monarch went \_\_\_\_\_.
  - b. The monarch went \_\_\_\_\_.
  - c. The monarch went \_\_\_\_\_.
  - d. The monarch flew to Mexico.

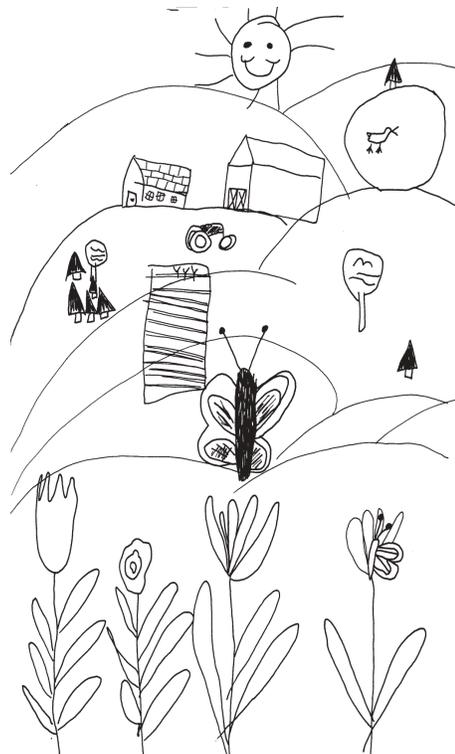
# The Monarch's Journey

## Procedure (continued)

5. Have a student come up and point to the words and read them.
6. After all the sentences are complete ask students for suggestions to fill in the blanks. Students should choose a position word from the list on the board or word cards and a place from the brainstormed lists. They should then say the complete sentence. Do sentences orally until all students have had a chance to "read" a sentence.
7. Students should then write the sentences using a position word and a location of their choice to create a story. They should write three different sentences and then copy the last sentence.
8. Have students illustrate their story. They could use story paper with the sentences at the bottom of the page and the pictures at the top or the pictures could be drawn on a separate paper. Here are two examples of student stories:

The monarch went over the stadium.  
The monarch went through a prairie.  
The monarch went under an arch.  
The monarch flew to Mexico.

The monarch went in a cloud.  
The monarch went across the lakes.  
The monarch went up a mountain.  
The monarch flew to California.



# The Monarch's Journey

Complete the sentences using a position word and a place or thing that monarchs might pass on their journey. Draw your story.

**The monarch went** \_\_\_\_\_ **.**  
**(position)** **(location)**

**The monarch went** \_\_\_\_\_ **.**  
**(position)** **(location)**

**The monarch went** \_\_\_\_\_ **.**  
**(position)** **(location)**

**The monarch flew to Mexico.**

# Hide a Butterfly

Students learn about the adult monarch in their workbook. Using the concept of camouflage, students will design their own butterfly and hide it for family or classmates to find.



## Materials:

- Crayons, colored pencils, or markers
- One clipboard per student
- Butterfly outline that students can color inside
- Optional: *How to Hide a Butterfly* by Ruth Heller

## Instructions:

1. Introduce the focus question:
  - a. Ask: Has anyone observed a butterfly or a moth in our schoolyard? Call on a few students to share out.
  - b. Ask: What kinds of animals do you think might try to find and eat a butterfly or moth? Students might say birds, lizards, or even some small mammals.
  - c. Write the focus question on the board and read it aloud: **How does a butterfly or a moth protect itself from getting eaten by an animal?** Call on a few students to share their ideas.
2. Optional: read and discuss *How to Hide a Butterfly* by Ruth Heller.
3. Discuss what camouflage is. Ask students if they have ever heard the word camouflage. Write it on the board. Ask them to explain what camouflage is in their own words. Explain that butterflies and moths use camouflage as one strategy to avoid getting eaten by predators like birds.
4. Show students images of butterflies and moths by projecting the images found [here](#) and [here](#), or with the QR codes provided on the next page. Ask students to predict what kind of habitat each butterfly might live in, based on its colors. For example, they might predict that a brown or tan butterfly or moth would spend a lot of time on a tree trunk whereas a bright green butterfly or moth might spend a lot of time on leaves.
5. **Explain the challenge.** Each student will choose one habitat outside. They will observe the colors present in that particular habitat. Then they will create a butterfly or a moth that camouflages with their chosen habitat.
6. Go outside and explain how to choose a habitat. Remind students that right now they are just choosing one habitat — or one part of a habitat. For example, they could choose a particular tree trunk or a particular leaf.
7. Release students to choose a habitat. Give students about five minutes to explore the schoolyard and choose one habitat. Call students back and form a large circle.

# Hide a Butterfly

## Instructions continued

8. Distribute a set of colored pencils/crayons/markers to each student, a clipboard, and a blank piece of paper with a butterfly outline that students can color.
9. Students make a camouflaged butterfly or moth for their chosen habitat. Release students to begin making their camouflaged butterfly or moth in the schoolyard habitat of their choice. Rotate around and encourage students to do their best to use colors that will help their butterfly or moth stay hidden from potential predators.
10. Weatherize butterflies. Weatherize each butterfly by dipping in beeswax or laminating.

## Next day:

1. **Hide Butterflies.** Explain to students that they will hide their butterfly in their habitat. They should hide it so that at least half of the butterfly is visible. Make tape available so students can tape their butterflies in place, if necessary. Explain that once all the butterflies have been hidden, students will search for their classmates' camouflaged butterflies in the schoolyard. Explain that it might be wise when each student is hiding their butterfly to walk around to a few different places in the schoolyard and then discreetly hide their butterfly in its habitat so that other students won't know where they hid their butterfly. Tell students that they will have 10 minutes to hide their butterfly in its habitat. Release them.
2. **Students search for camouflaged butterflies.** When all the butterflies are in place, call students back. Explain that now they will search for each other's camouflaged butterflies. Once they find a butterfly, they should leave it there and continue looking for others. Collect them all at the end of class.

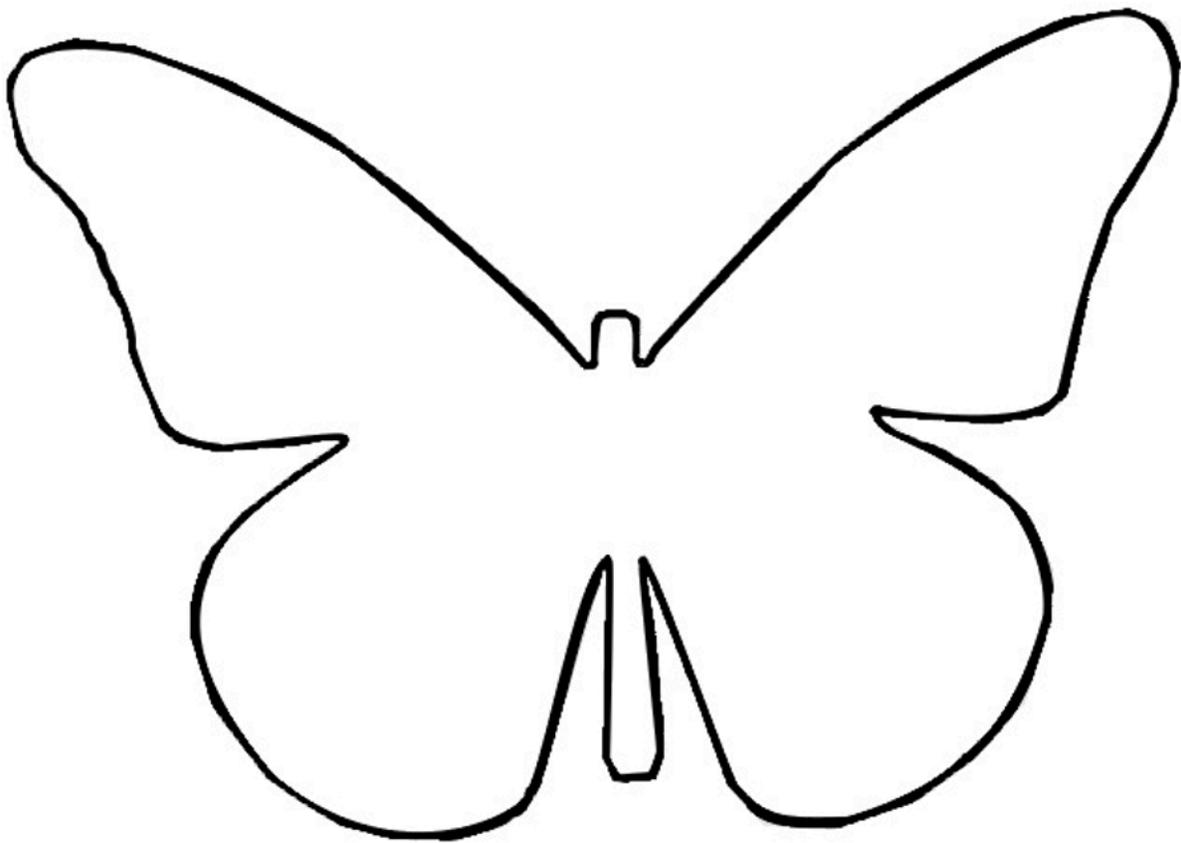
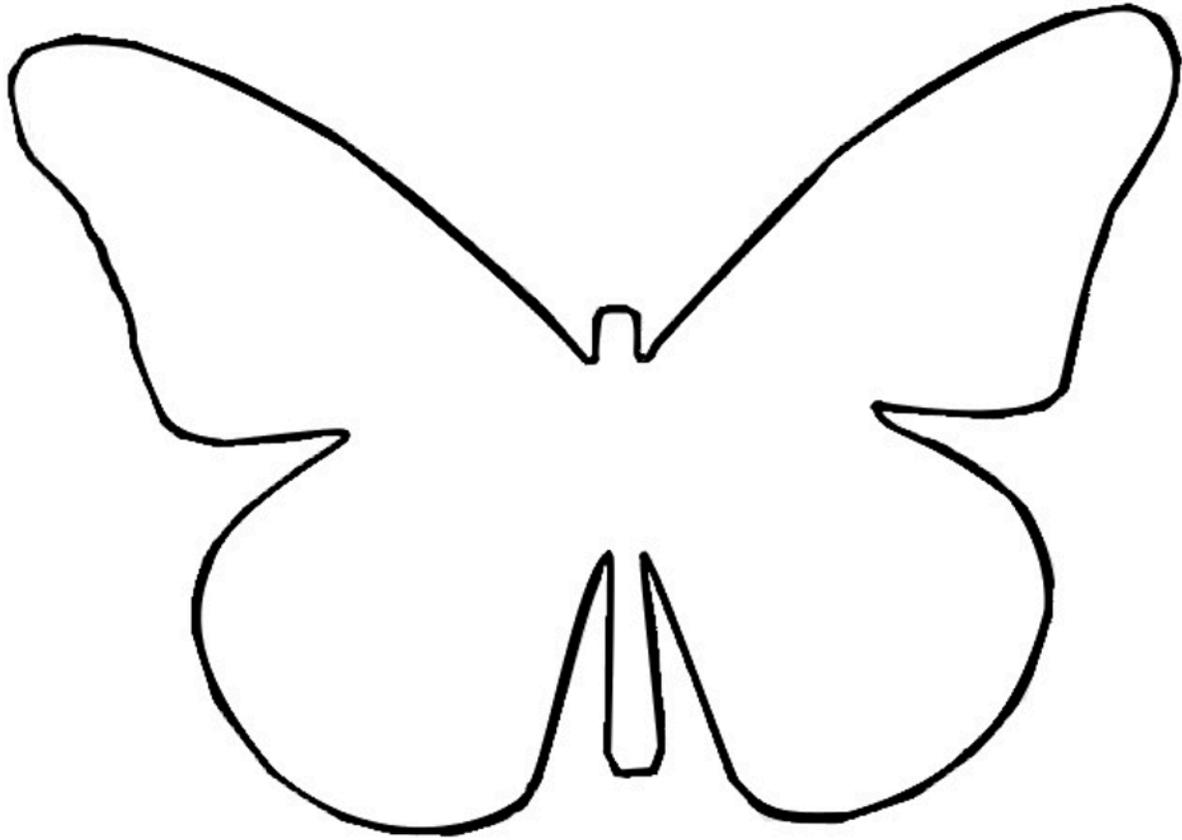


*Adaptable,  
Beautiful, and  
Misunderstood  
Moths*



*These Butterfly  
Wings Are  
Beautiful for a  
Reason*

# Hide a Butterfly Templates



# Symbolic Monarch Migration

In this activity, kids will learn to keep a nature journal. They will make detailed observations and illustrations. They can also write or dictate sentences to accompany the illustrations.

## Objective:

Kids will create a nature journal to record their outdoor observations of monarchs, pollinators, and their habitat. Through detailed drawings and written descriptions, they will practice making careful observations and documenting what they see in nature. This activity encourages curiosity, strengthens observation skills, and helps kids connect with the environment around them.

## Materials:

- Student journals
- Pencils, colored pencils, and other drawing supplies
- Monarch life stages with the appropriate food source and containers

## Procedure :

1. Provide each child with a journal and encourage them to observe and document what they see outside, focusing on monarchs, pollinators, plants, and other signs of nature. Have them create detailed drawings of their observations, paying close attention to colors, patterns, and movement.
2. If desired and if they are able, students can add sentences to explain their pictures. As a group, discuss what they observed and write sentences on the board for younger students to copy. Those who are able can write their own descriptions.
3. This journal will serve as a record of their discoveries, helping them notice patterns, track changes over time, and develop the skills of a scientist—careful observation and accurate record-keeping.



# Keeping a Nature Journal

In this activity, kids will learn to keep a nature journal. They will make detailed observations and illustrations. They can also write or dictate sentences to accompany the illustrations.

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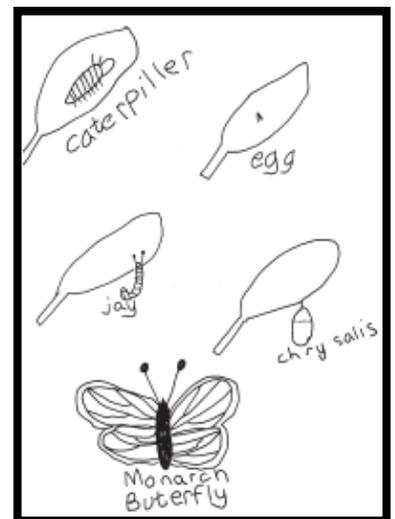
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# Seed Balls

Seed balls are a fun activity to make for your native garden that support pollinators, improve water and habitat quality, and attract predators of plant pests!

Seed balls are small, compostable balls made of clay, soil, and seeds. They protect seeds until they are ready to grow. Over time, exposure to sun, air, and weather helps break down the clay, allowing the seeds to go through natural processes like stratification (a cold period that helps them sprout) and scarification (softening or cracking of the seed coat). Once conditions are right, the seeds will begin to grow. Get ready—this activity can get a little messy! it might be best to make the seed balls outside.

## Materials:

- Powdered Clay (you can find this at craft/art supply stores)
- Variety of native seeds from your area: milkweeds and native wildflowers if possible
- Compost/dirt
- Water



## Instructions:

1. In a bowl or bucket, mix clay, dirt, and seeds well.  
(4 parts clay, 1 part dirt, 1 part seeds)
2. Slowly add water, a teaspoon at a time, and mix until a moist but not wet mud forms and can be pressed together. If you add too much water, add more clay to get the proper consistency.
3. Throw your seed ball into a sunny area OR plant it in a garden!



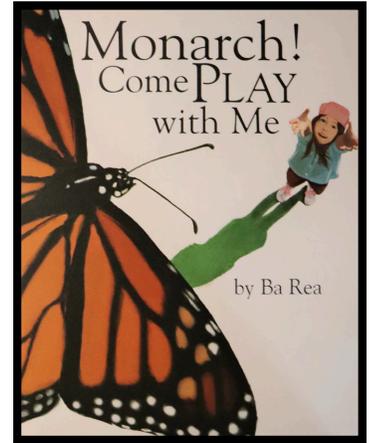
# Butterfly Book List

## Butterfly Books

- *Monarch Come Play with Me* by Ba Rea (available in English and Spanish)
- *Señorita Mariposa* by Mister G
- \**Monarch Butterflies* by Ann Hobbie
- *Wings of Magic* by Sandy McCartney Ehlers
- *Winged Wonders: Solving the Monarch Migration Mystery* by Meeg Pincus
- *Monarch and Milkweed* by Helen Frost, illustrated by Leonid Gore
- *When Butterflies Cross the Sky: The Monarch Butterfly Migration* by Sharon Katz Cooper
- *Maria the Monarch* by Homero Aridjis
- *Gotta Go! Gotta Go!* By Sam Swope
- *An Extraordinary Life - The story of a Monarch Butterfly* by Laurence Pringle
- *Monarch Butterfly* by Gail Gibbons
- \**Milkweed Visitors* by Mary Holland
- *Butterfly House* by Eve Bunting
- *Waiting for Wings* by Lois Ehlert
- \**Butterfly Birthday* by Lori Stralow Harris
- *The Butterfly Counting Book* by Jerry Pallotta
- *The Perfect Place* by Stephanie Turcotte Edenhalm (Western Monarchs)
- *Starting Life: Butterfly* by Claire Llewellyn and Simon Mendez
- *Ghost Wings* by Barbara Joosse
- *An Extraordinary Life - The story of a Monarch Butterfly* by Laurence Pringle

## Nature Books

- *The Rabbit and the Moon* by Doug Wood (Native American tale)
- *On Beyond Bugs! All About Insects (Cat in the Hat)* by Tish Rabe
- \**The Garden Next Door* by Collin Pine
- *Some Bugs* by Angela DiTerlizzi (board book)
- *A Quiet Place* by Doug Wood



\*available on the MJV store



# MONARCH JOINT VENTURE



Thank you for letting me learn,  
play, and explore with you!  
Visit the Monarch Joint  
Venture website and the  
Monarch NECTAR Hub for  
more resources!

This activity book was created by the Monarch Joint Venture.  
[MonarchJointVenture.org](http://MonarchJointVenture.org)