

Girl Scouts Monarch Patch:

REQUIREMENTS:

- Complete the three starred (*) activities AND
- Daisies add 1 activity
- Brownies add 2 activities
- Juniors add 3 activities
- Girl Scouts 11+ add 4 activities



DISCOVER:

- * Every year millions of monarch butterflies fly up to 2200 miles to their wintering grounds in Mexico. Environmental problems throughout the monarch's vast range have turned this wondrous passage into an endangered biological phenomenon. Find out about the migration of the monarch. Draw migration paths on the map of North America below. Label the countries and states for extra credit.
- Investigate the life cycle of a monarch. Starting with the courtship, mating, egg laying, caterpillar stage and finally their emergence as a beautiful butterfly. Create one of the following:
 - A poster or art piece depicting the life cycle.
 - A poem or story depicting an individual life cycle.
- Label all the parts of a monarch using the image below. Include antenna, head, abdomen, forewing, hindwing, legs, proboscis, and eyes.
- How are butterflies different from moths? Research both physical and behavioral differences. Either diagram or chart the differences.

CONNECT:

- * Learn a little more about the problems that the monarch faces. What is a host plant? Which plant is the host plant for the monarch? Why does having only one host plant lead to some challenges? What do monarchs eat in their larval stage and in their butterfly or adult stage? Discuss these issues with a friend or family member.
- Research the monarch's adaptations. What natural obstacles do monarchs face? What eats them as larva and as adults? What adaptations do monarchs have that help them stay alive?
- Research where you can go in New Mexico to see or learn more about butterflies. Make a list of possible places to visit, like the Pollinator Garden at the ABQ BioPark Botanic Garden.

TAKE ACTION:

- * Adult monarchs and other butterflies eat the nectar from a variety of native flowers. Research what types of flowers would be beneficial for the monarch and other native butterflies in your area of New Mexico.
- When will monarchs or other local butterflies be in your neighborhood? Research options for a butterfly garden. Design a butterfly garden landscape using a butterfly plant list. If available, plant your design in the backyard or with your troop. Document (photos or data collection) if any butterflies or other insects visit your feeder or garden. Download the BioPark's [Butterfly Photo Identification Guide](https://www.cabq.gov/culturalservices/biopark/documents/Butterfly%20Pavilion%20Picture%20IDs.pdf) to help you identify different butterfly species.
- Make a butterfly feeder. Research different designs and food options. Place in your yard or patio. Download the BioPark's [Butterfly Photo Identification Guide](https://www.cabq.gov/culturalservices/biopark/documents/Butterfly%20Pavilion%20Picture%20IDs.pdf) to help you identify different butterfly species that visit your feeder.
- Visit Tingley Beach and the Botanic Garden and find the Monarch Way Stations. What season did you visit? Describe what you saw and explain how it is helping the monarch butterflies.

PATCHES ARE AVAILABLE FOR PURCHASE AT THE GIRL SCOUT SHOP, LA TIENDA, FOR \$2.00 EACH.

Migratory Maps

Draw migration paths of the Monarch Butterfly on the map of North America below. Label the countries and states for extra credit.



Label the Butterfly

Read the definitions and then label the diagram below.

Definitions:

Abdomen - The abdomen is the segmented tail area of an insect that contains the heart, Malpighian tubules, reproductive organs, and most of the digestive system.

Antenna - An antenna is a sensory appendage that is attached to the head of adult insects. Antennae are used for the sense of smell and balance. Butterflies have two antennae with clubs at the end.

Compound Eye - Insect compound eyes are made up of many hexagonal lenses.

Fore wing - The fore wings are the two upper wings.

Head - The head is the part of the insect that contains the brain, two compound eyes, the proboscis, and the pharynx (the start of the digestive system). The two antennae are attached to the head.

Hind wing - The hind wings are the two lower wings.

Leg - All adult butterflies have six legs. The two forelegs of some butterfly species are tiny.

Proboscis - Adult butterflies sip nectar and other liquids using a spiral, straw-like proboscis located on their head.

Thorax - The thorax is the body section between the head and the abdomen. The legs and wings attach to the thorax.

