

AMAZING MONARCHS



BIOLOGY

Grades:

Objectives: Through this game, students will learn the names of monarch butterfly body parts.

Sources: The National Wildlife Federation

BACKGROUND For TEACHERS

Monarchs are among the most easily recognizable of the butterfly species which call the Americas home. Monarch butterflies are bright orange with black and white markings. The body of the monarch is black. The head has a set of antennae. From the thorax come the wings are mostly orange with black veins running throughout. The outer edge of the wings has a thick black border. Within the black border are white spots. The white spots can range in size and they decorate the wings. At the upper corner of the top set of wings are orange spots. The underside of the monarch butterflies' wings can be seen when the butterfly is at rest or when it is feeding on a flower. Instead of bright orange, the underside is more drab and orange-brown.

Males and females can be told apart by looking at the top of their hind wings. Males have a black spot at the center of each hind wing, while the females do not. While the spots on males were once thought to be scent glands, they are actually vestigial and no longer serve that purpose. This is not the case for all butterfly species.

Size: Monarch butterflies have a wingspan of 3 ½ to 4 inches in length and weigh on average of 500 mg or 0.5g (about .02 oz.).

Lifespan: Most monarch butterflies do not live more than a few weeks. There are about four generations born each spring and summer and most of the offspring do not live beyond five weeks. The lone exception is the last generation born at the end of the summer.

The last generation of each year is the over-wintering generation that must make the journey back to Mexico. Rather than breeding immediately, the over-wintering monarchs fly back to Mexico and stay there until the following spring. In the early spring, they fly north to the southern United States and breed. Over-wintering monarch butterflies can live between 8 and 9 months.

STANDARDS

- ETS1-1 Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.
- ETS1-2 Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.

Monarch Recovery Gardens, The Monarch Mission



PARTS OF A BUTTERFLY PREPARATION

For this activity you will want to decide how you will have students create their butterfly using

- Natural objects, like pebbles and small twigs
- Manipulatives
- Paper cut-outs that can be glued together

You may want to sort the parts into envelopes, trays, etc. to make for easier distribution.

VOCABULARY

- head
- thorax
- abdomen
- antenna/antennae
- wings

PARTS OF A BUTTERFLY GAME: MATERIALS

- Handout – Roll a Butterfly (consider laminating)
- Dice – 1 per student
- Green construction paper – ½ page per student

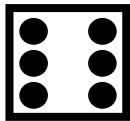
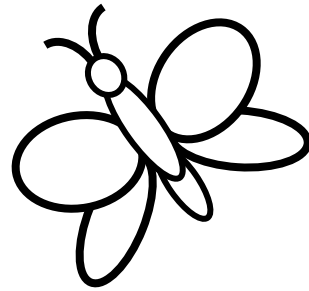
WHAT TO DO

1. Give each student a dice and a copy of the *Roll a Butterfly* handout and a green half sheet of construction paper.
2. Explain they will be rolling the dice to get each of the parts of the butterfly, head, thorax, abdomen, antennae, and both wings.
3. After each roll you will give each student the part they rolled. Students are to place their butterfly part onto the green construction paper.
4. If a student rolls and lands on a part they already have they must wait till the next group roll to see if they get a part of the butterfly they need.
5. As students begin to complete their butterfly, have them help you give other students their butterfly parts.

Note: Be sure to say the name and encourage students to do the same, of each part of the butterfly as they are given out.



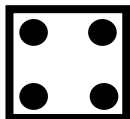
ROLL A BUTTERFLY



HEAD



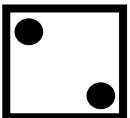
THORAX



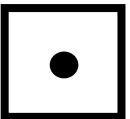
ABDOMEN



ANTENNAE



LEFT WINGS



RIGHT WINGS

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