

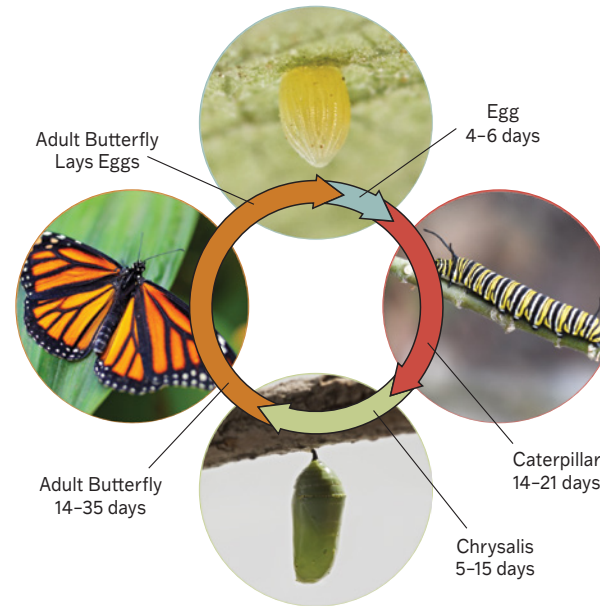


# DATA TALK Monarch Butterflies

10 minutes

This data was gathered from the United States Department of Agriculture and the US Forest Service.

## Life Cycle of a Monarch Butterfly



The graph shows the life cycle of a monarch butterfly, with the lengths of each segment proportional to the time spent in that stage. A life cycle is a series of stages, or changes, that a living thing goes through during its life. The last adult butterfly generation each year (born in the fall) migrates south for the winter. These adults live much longer than the 14–35 days typical of butterflies born in the summer; instead, they can live up to 9 months. Students may have varying degrees of knowledge about butterflies, from observing them in nature to growing them by using a butterfly garden kit.

Ask students what they notice and wonder about the data visualization.

Then facilitate a discussion that helps students understand and apply the data shown by the visualization. Let the discussion be guided by what students notice and wonder; it does not need to follow a specific path. If needed, stimulate conversation by selecting from the following sample questions.

### UNDERSTAND

#### What does this diagram show?

- What do the arrows tell you about the monarch butterfly life cycle?

### APPLY

#### Why might someone want to collect this data?

- If our class observed a monarch butterfly from egg to adulthood, how could this graph help us?

### REFLECT

#### What do you want to know more about?

- Did anything about this graph, or the data, surprise you? If so, what was it?

### Language Support

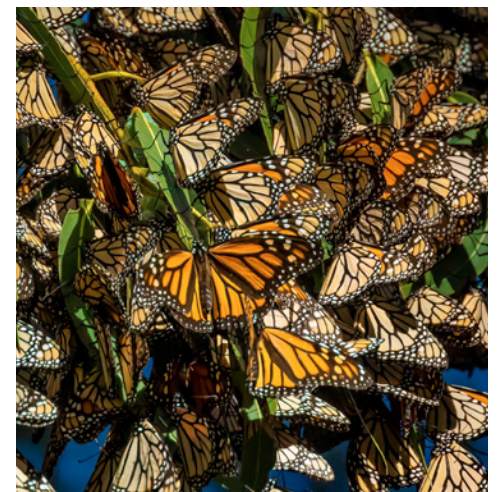
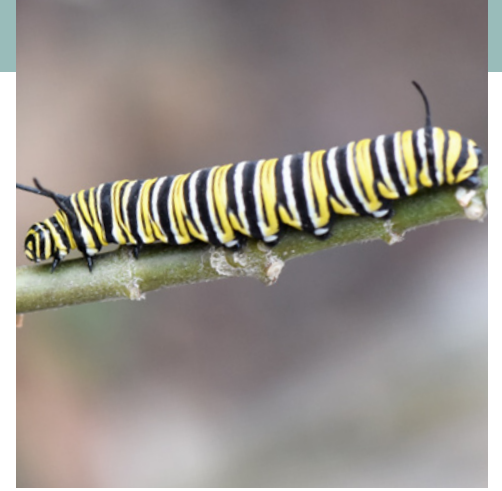
Consider supporting the meaning of the word *stage* by facilitating a class discussion with visuals or pictures to draw out students' knowledge of the word. Ask students to turn and talk about other meanings of the word *stage* that they are familiar with. If students mention performing on a stage, show a picture and label it. Contrast this with the Monarch diagram. Point to the arrows to highlight that this lesson will focus on *stage*, meaning "the different parts of a life cycle."

## DATA TALK | MORE

Each year, monarch butterflies migrate from the north to the south and back again. While it is common for birds to make a two-way migration, monarch butterflies are the only butterflies known to do so. Unlike other butterflies, monarchs cannot survive the winter, so they need to migrate south in the fall. When the weather begins to change, the monarchs begin their journey. North American monarch butterflies from the United States and Canada migrate to either Mexico or California.

The migration is a long journey, with some monarchs traveling as many as 3,000 miles. This journey can take up to two months. To travel such a long distance, monarchs travel between 50 and 100 miles per day. The record for the farthest distance traveled in one day is 265 miles.

The monarch butterflies who migrate south will mate, lay eggs, and then die. In the spring, their offspring begin the return journey north. However, they do not make the full trip back. They also mate, lay eggs, and then die, leaving their offspring to continue. It takes three to four generations of monarchs to reach the northern part of the United States and Canada.



## Works Cited

United States Department of Agriculture, U.S. Forest Service. “The Monarch Butterfly in North America.” Accessed October 2, 2023. [https://www.fs.usda.gov/wildflowers/pollinators/Monarch\\_Butterfly](https://www.fs.usda.gov/wildflowers/pollinators/Monarch_Butterfly).

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