

Name: _____

Date: _____



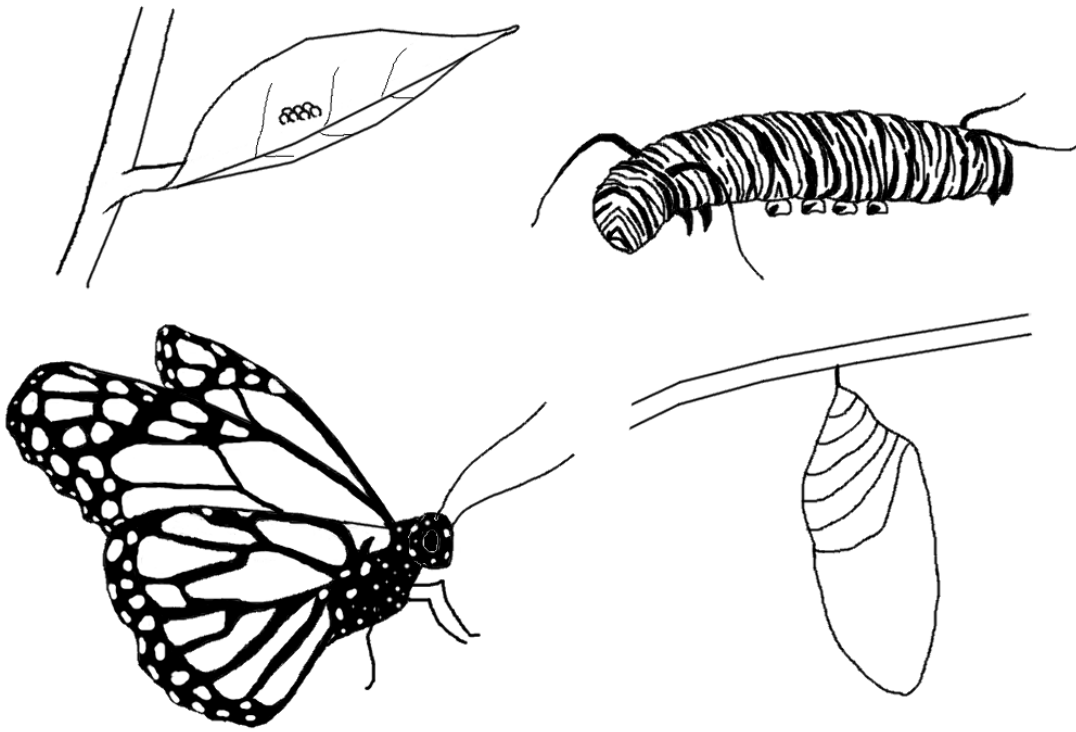
Got to Go! Got to Go! Let's Protect the Monarch Butterflies

K What I know	W What I wonder	L What I learned

Name: _____

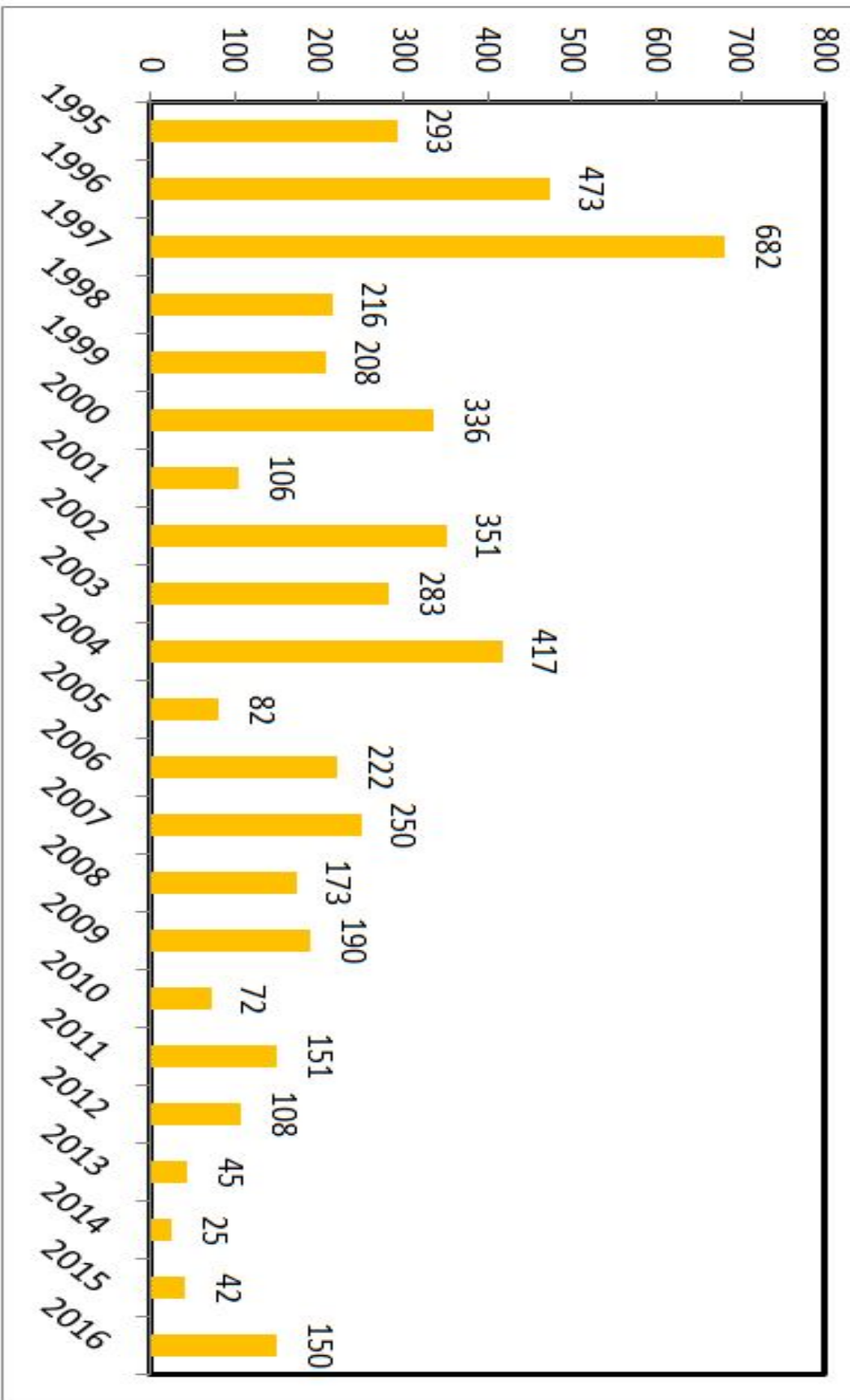
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Butterfly Life Cycle



Directions: In your own words, explain the life cycle of a monarch butterfly.

Monarch Population in Millions



Information for Teacher:

Monarch Population in Millions according to Biological Diversity

“The increase in monarch numbers is great news for sure, but the bottom line is that these butterflies must reach a much larger population size to be resilient to ever-increasing threats,” said Tierra Curry, a senior scientist at the Center for Biological Diversity. “So this much-loved butterfly still needs Endangered Species Act protection to make sure its amazing migration will endure for generations to come.”

“Monarch populations are still severely jeopardized by milkweed loss in their summer breeding grounds due to increasing herbicide use on genetically engineered crops,” said George Kimbrell, a senior attorney at Center for Food Safety. “Only Endangered Species Act protection will provide the scientific and legal blueprint that is needed to ensure the butterfly’s future.”

Monarchs need a very large population size to be resilient to threats from severe weather events, pesticides and climate change. A single winter storm in 2002 killed an estimated 500 million of the butterflies, more than two times the size of the current population even with this year’s boost. Severe weather is expected to take a toll on the population later this winter due to the strong El Niño this year.

Climate change and logging in their Mexican habitat also threaten monarchs, whose dramatic decline has been driven in large part by the widespread planting of genetically engineered crops in the Midwest, where most monarchs are born. The vast majority of genetically engineered crop acreage is planted in varieties made to be resistant to Monsanto’s Roundup herbicide, a potent killer of milkweed, which is the monarch caterpillar’s only food. The dramatic surge in the use of Roundup and other herbicides with the same active ingredient (glyphosate) with Roundup Ready crops has virtually wiped out milkweed plants in the Midwest’s corn and soybean fields. In the past 20 years, it’s estimated, these once-common, iconic orange-and-black butterflies may have lost more than 165 million acres of habitat — an area about the size of Texas — including nearly one-third of their summer breeding grounds.

https://www.biologicaldiversity.org/news/press_releases/2016/monarch-butterfly-02-26-2016.html



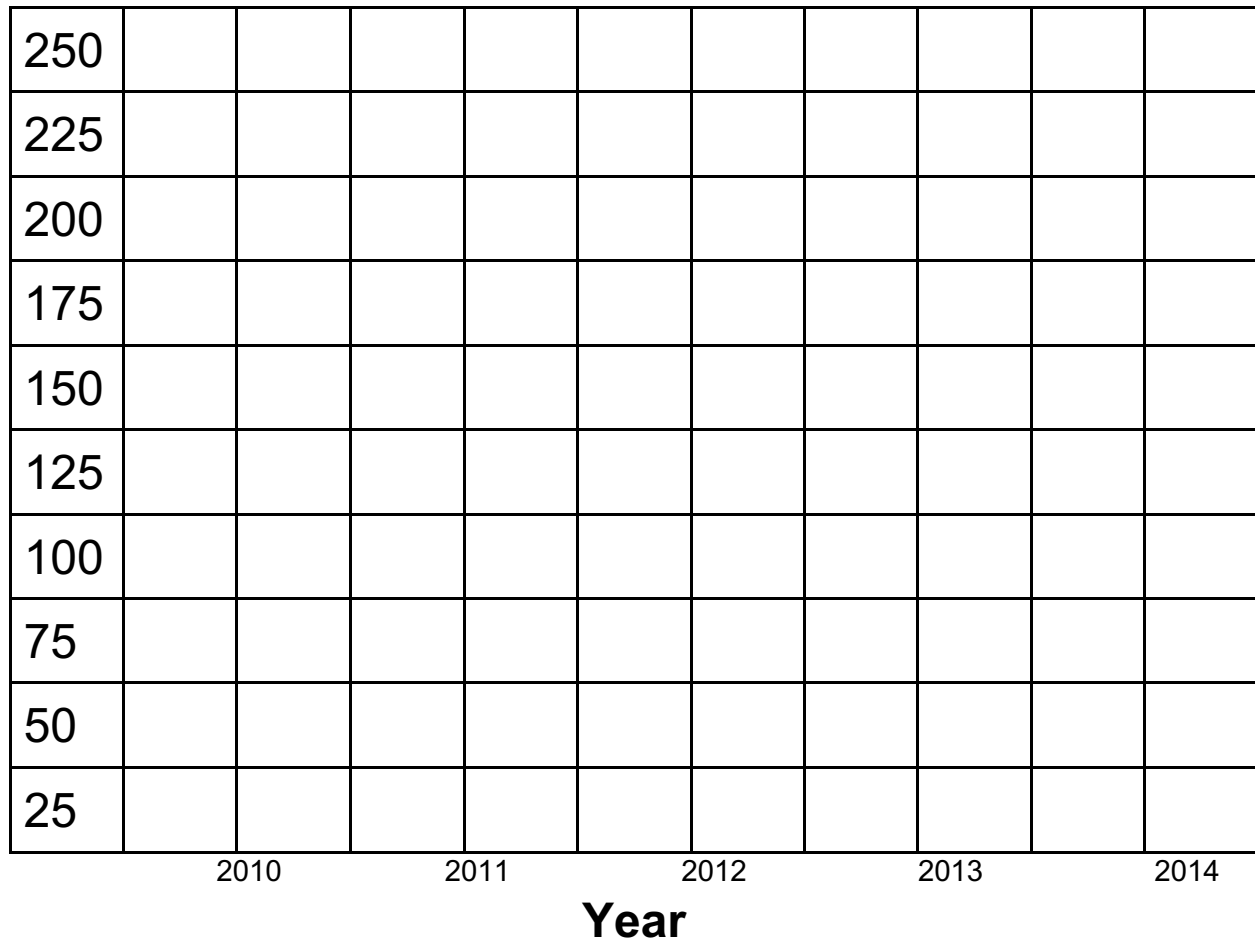
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Monarch Population in the Forests of Michoacán, México

Data from [www. Biologicaldiversity.org/](http://www.Biologicaldiversity.org/) (rounded to nearest 25)

Millions



Data to Graph

In 2010, there were 75 million monarchs in the forest.

In 2011, there were 150 million monarchs.

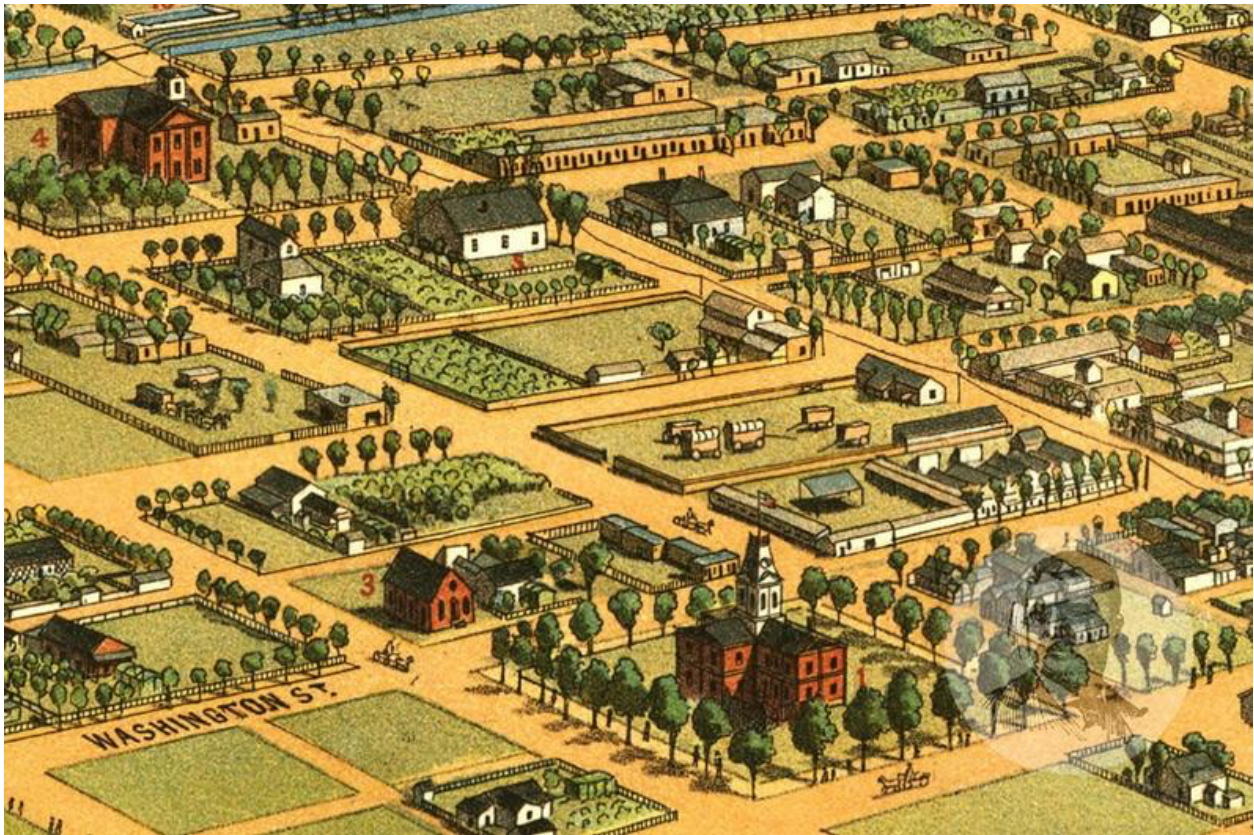
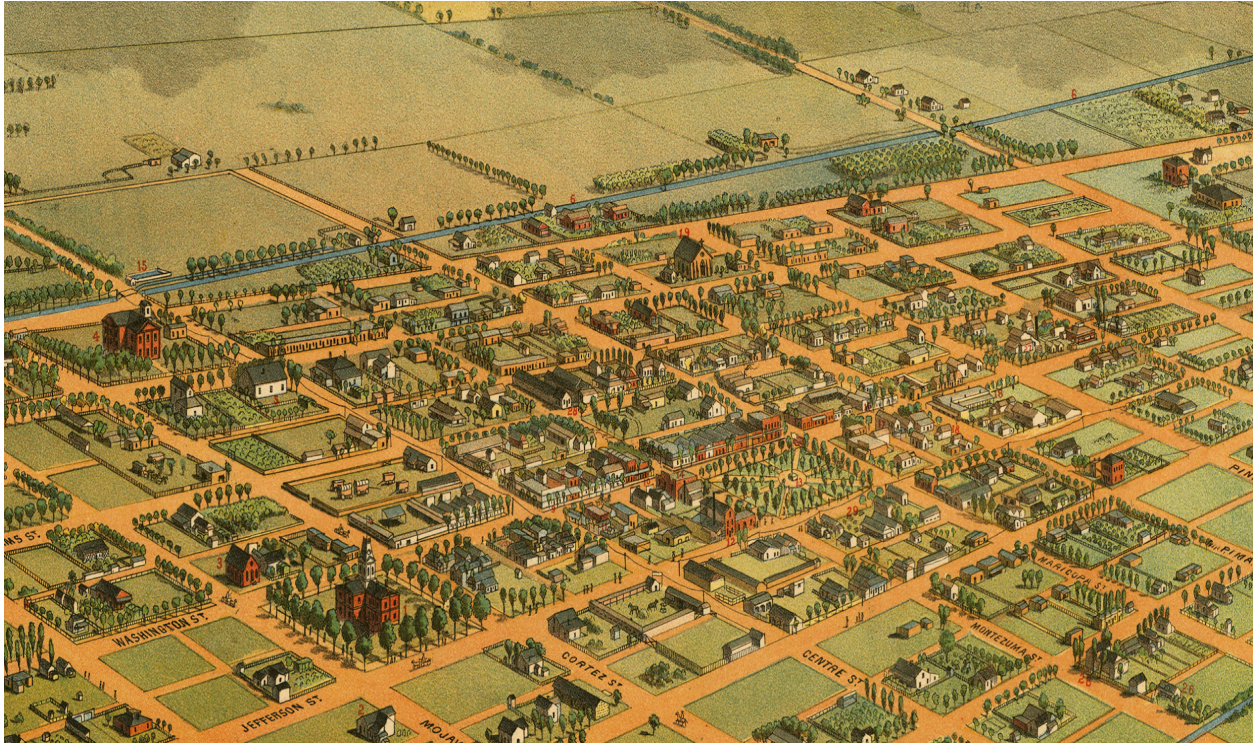
In 2012, there were 100 million monarchs.

In 2013, there were 50 million monarchs.

In 2014, there were 25 million monarchs.

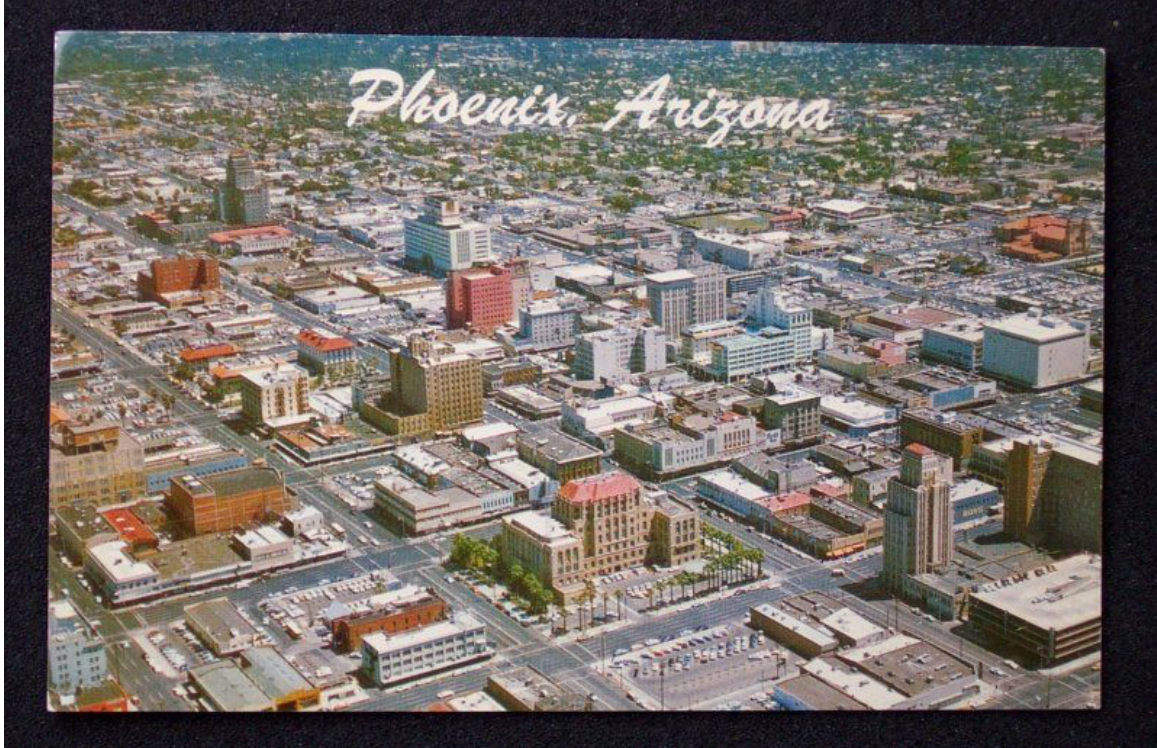
Is the population of monarch butterflies increasing (going up) or decreasing (going down)?

Bird's Eye View Map of Downtown Phoenix (130 YEARS AGO)



Aerial Pictures of Downtown Phoenix

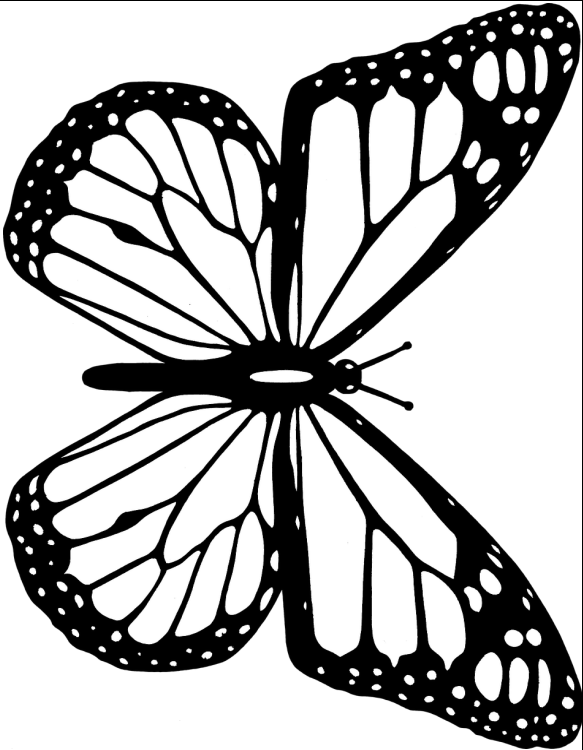
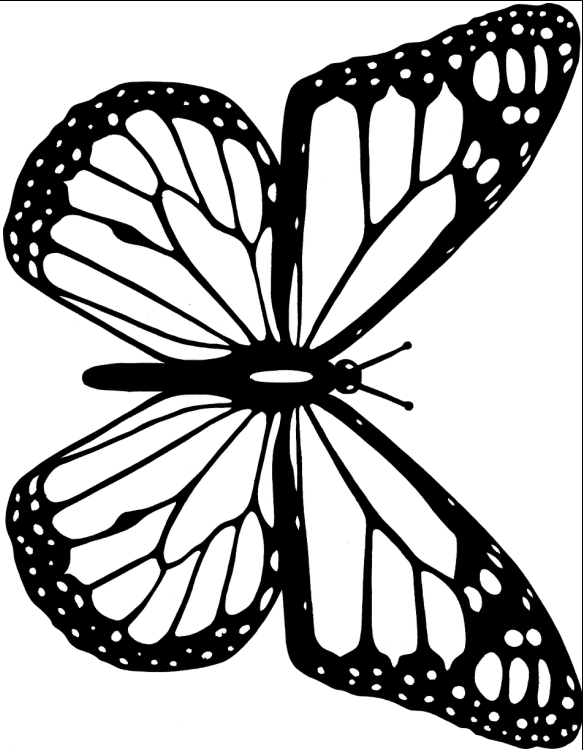
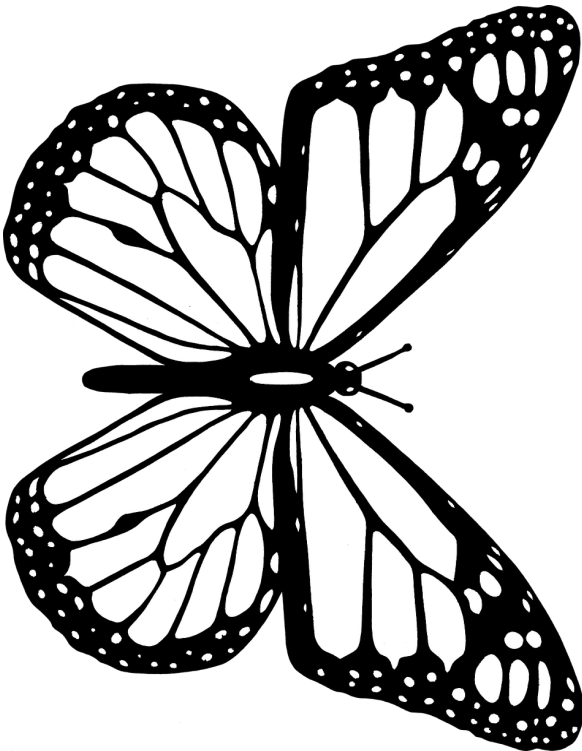
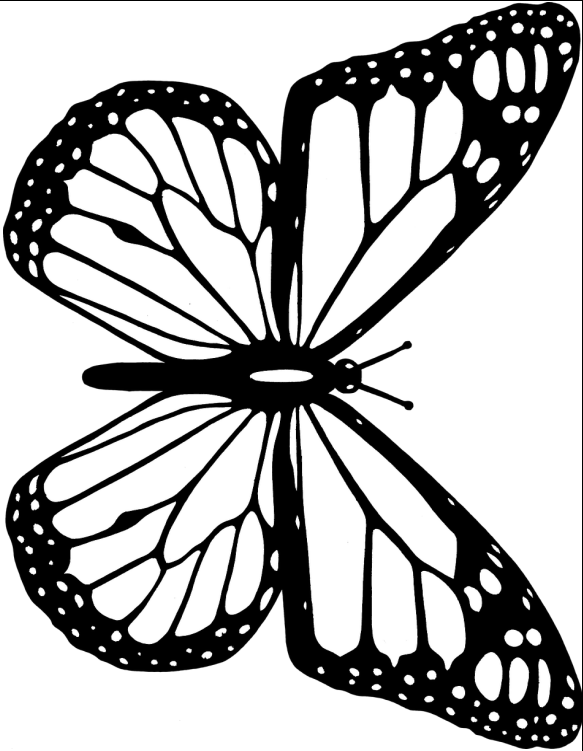
60 YEARS AGO



3 YEARS AGO



Monarch Cutout for Making Large Line Graph



Sentence Frames (Session One)



The word _____ means _____.

An example of _____ is _____.

The spelling of the word _____ is _____.

Another word to say _____ is _____.

An explanation of _____ is _____.

I know that the concept of _____.

Sentence Frames (Session Two)



I notice in the video that _____.

The text says _____.

First, the female monarch _____.

The second stage is _____.

The third stage is _____.

The last stage is _____.

To summarize, _____.

I know that _____ because _____.

Name: _____ Date: _____

Exit Ticket

3 things I learned from this lesson:

2 things I found interesting:

1 question I still have:

Names: _____ **Date:** _____



Planting Checklist & Flag

Directions: Mark (X) each square as you follow the right order in planting seeds.

	We dug a small hole in the soil.
	We put 2 seeds inside the hole.
	We covered the seeds with soil.
	We watered the area.
	We put a small flag with our names on the planting spot.
	We worked collaboratively.
	We answered the question below.

How will these plants help the butterflies? _____

Flag



Names: _____
