

AMAZING MONARCHS



BIOLOGY: Life Cycle

Grades: K-4

Objectives: Students will learn about and be able to reconstruct the life cycle of a monarch butterfly.

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.



Butterfly Life Cycle

- Use the song, "The Butterfly Ballad" (pg 2.) to introduce students to a monarch butterfly's life cycle.
- NOTE from CILC Maker Space: You can also use the following resources from Learn Bright and PBS Learning Media to reinforce what they learn from singing and acting out the song.
 - <https://www.youtube.com/watch?v=PWd-dQ-FMB8>
 - <https://tpt.pbslearningmedia.org/resource/nat36-int-butterflylifecycle/butterfly-life-cycle/>
- Pass out the sets of the Life Cycle Cards (pp.3-6_ to students.
- Have each student work alone to construct the cycle in the correct order.
- Next have them describe or tell their neighbor why they put the cycle in that particular order. When the student is ready check their work.

Students will color, cut out, and put the monarch's life cycle in order using the handouts on pages 8-11.

Butterfly Vocabulary

hatch

egg

chrysalis

larva/larvae

Sing, *The Butterfly Ballad* to the tune of "Mary Had A Little Lamb". After students learn the words teach students to act it out.

The Butterfly Ballad

by Guy Belleranti: Sing to the tune of "Mary Had a Little Lamb."

Butterfly starts as an egg,
As an egg, as an egg
Butterfly starts as an egg,
Let's see what happens next.

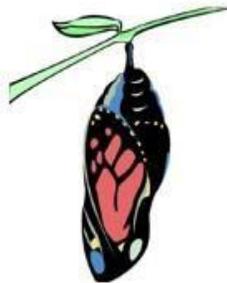
Caterpillar hatches out,
Hatches out, hatches out,
Caterpillar hatches out,
Let's see what happens next.

Caterpillar gobbles leaves,
Gobbles leaves, gobbles leaves,
Caterpillar gobbles leaves,
Let's see what happens next.

Caterpillar grows and sheds,
Grows and sheds, grows and sheds,
Caterpillar grows and sheds,
Let's see what happens next.

It becomes a chrysalis,
Chrysalis, chrysalis,
It becomes a chrysalis,
Let's see what happens next.

Butterfly comes out at last,
Out at last, out at last,
Butterfly comes out at last,
And then it flies away.



Act It Out

Verse 1

Roll up in a ball on the floor and cover your head.

Verse 2

Crawl like a caterpillar

Verse 3

Act like you are eating and gobbling up as much food as possible

Verse 4

Act like you are growing, stretch long and tall

Verse 5

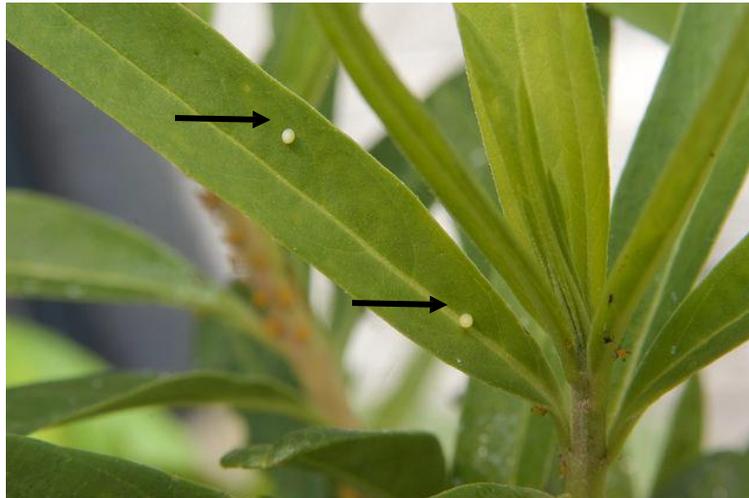
Pull your knees up to your chest and be as still as possible

Verse 6

Fly like a butterfly



LIFE CYCLE CARD 1



MONARCH BUTTERFLY EGGS



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LIFE CYCLE CARD 2



MONARCH
BUTTERFLY
CHRYSALIS



LIFE CYCLE CARD 3



MONARCH BUTTERFLY LARVAE



LIFE CYCLE CARD 4



ADULT MONARCH BUTTERFLY



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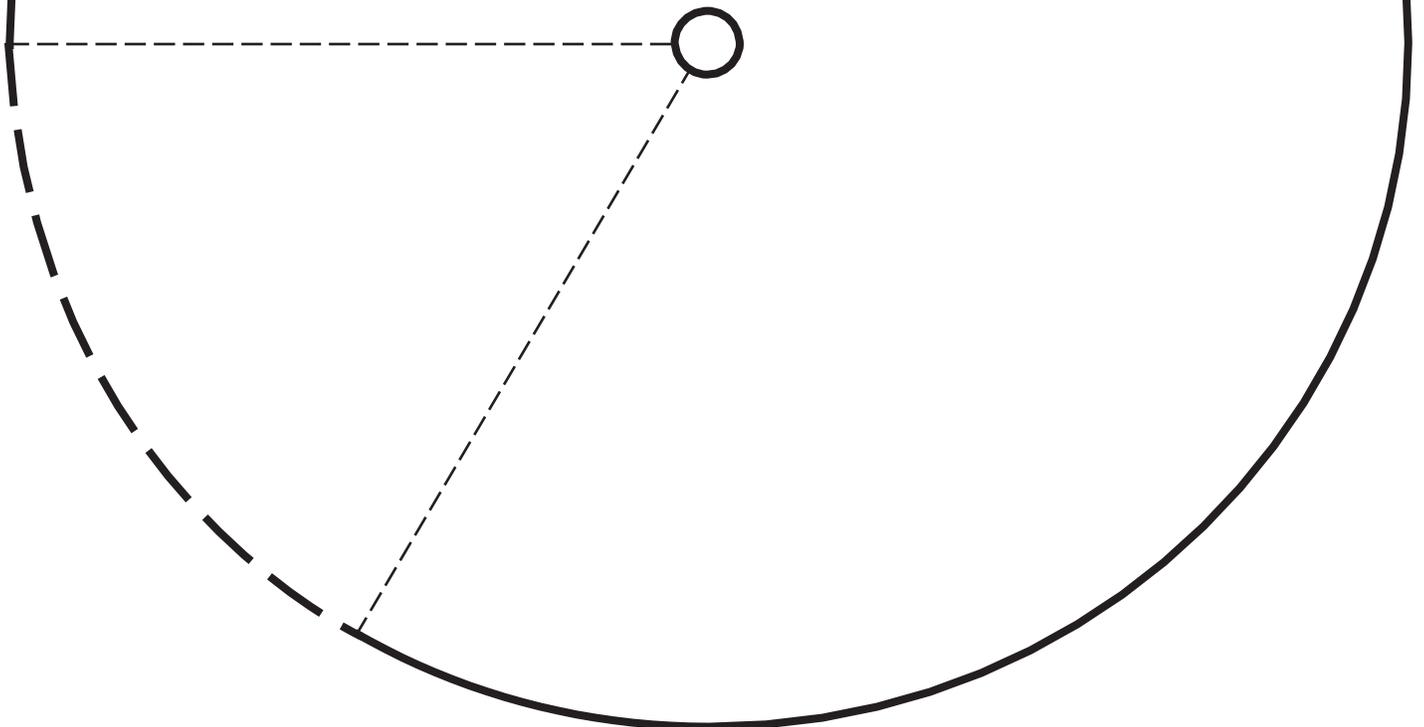


Images courtesy of the U.S. Fish and Wildlife Service Midwest Regional Center



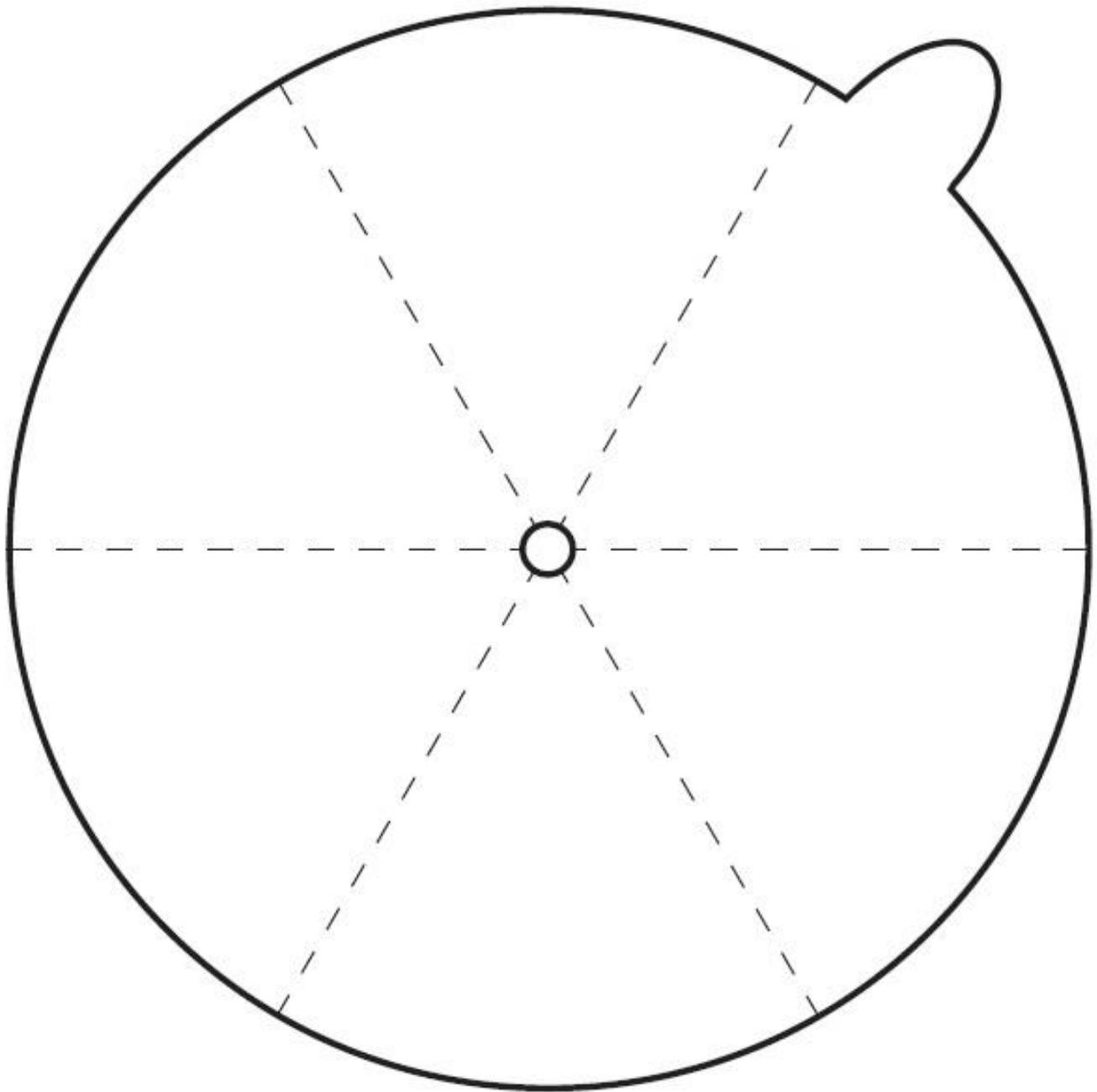
The Monarch Life Cycle

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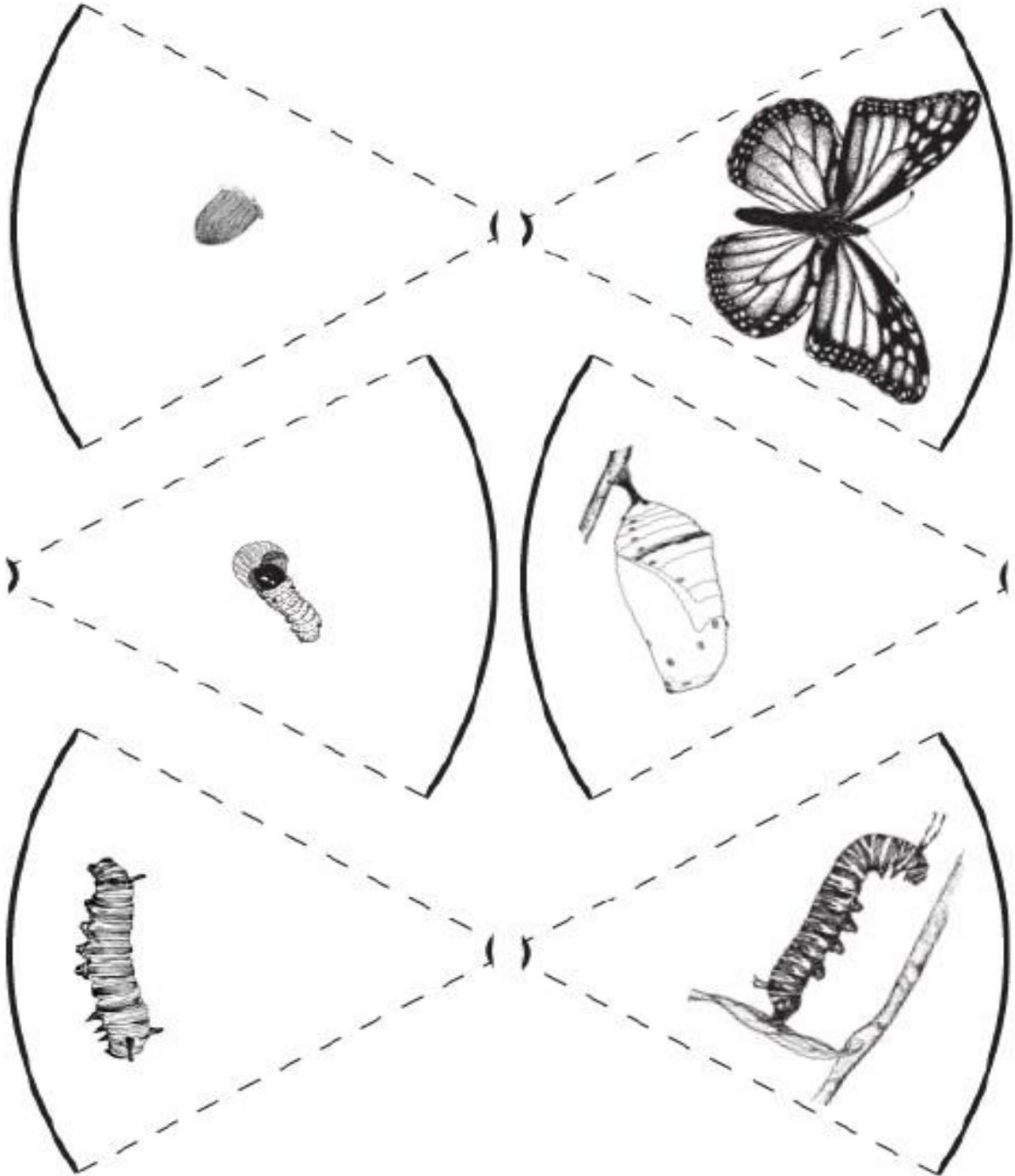
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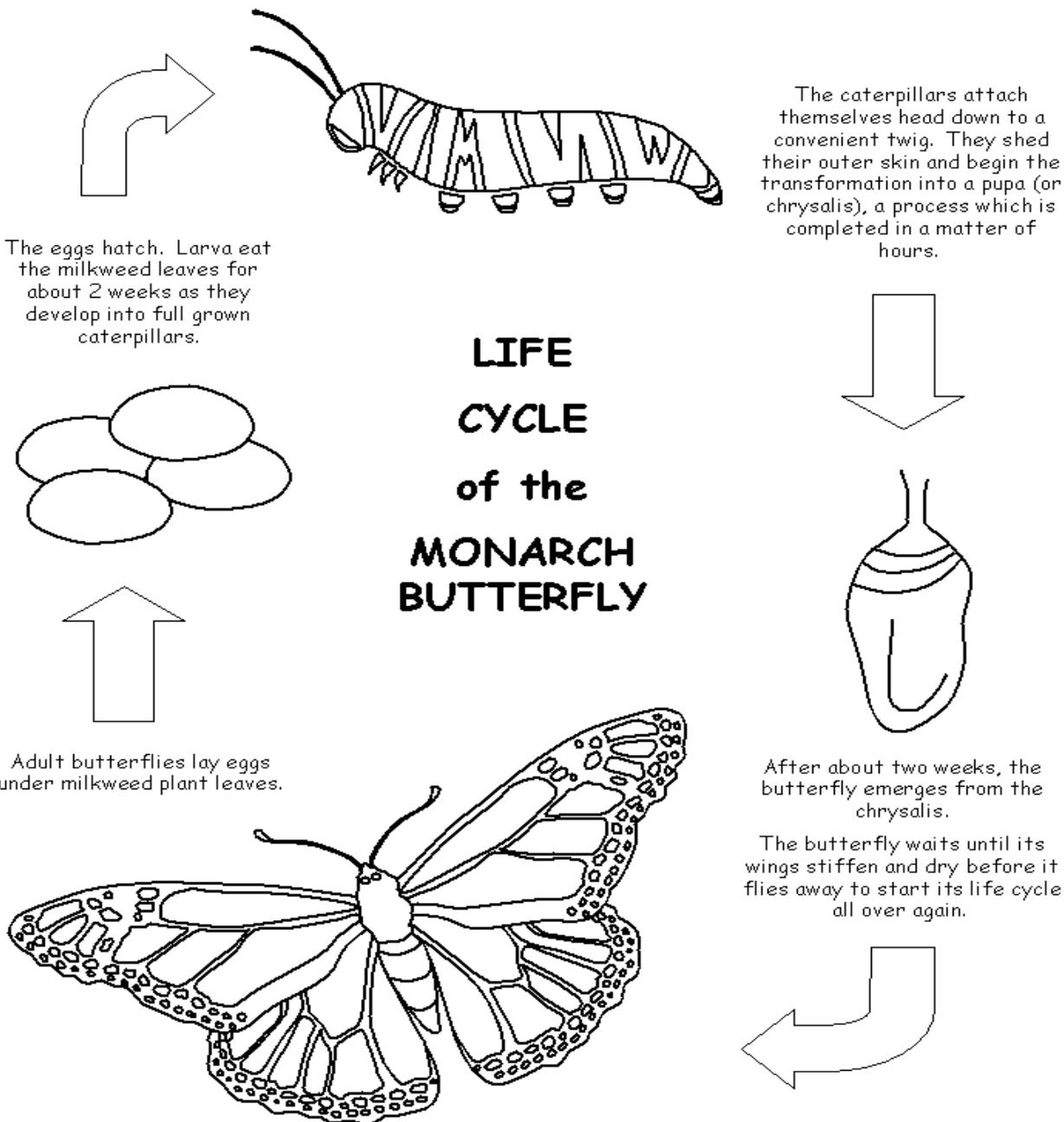
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www.kidzone.ws/animals/monarchlifecycle.htm Used with Permission.