



## Beautiful Monarchs

We have been learning about animal adaptations and life cycles. Now it's time to study the lifecycle of a most unique insect, the monarch butterfly.

Why?

They are in danger! We need to figure out what we can do to save them.

Here is evidence that they are in danger. Take a look at this graph. What do you notice? Turn and talk to your partner. We'll share what we have noticed.

<http://www.learner.org/jnorth/images/graphics/mexico/PopulationEstimate.gif>

You will have to decide whether to:

- help monarch butterflies remain in the wild, letting them take their chances on survival or
- capture them and raise them in a safe environment, like a laboratory (or classroom!).

Let's begin your job as a *lepidopterist*, a scientist who studies butterflies and moths.

1. A) The monarch butterfly, like all butterflies, has a **life cycle** that involves *metamorphosis*. This means that it changes how it looks and acts as it grows. Click on the link below to find the information to complete **Task 1**.

[http://www.tgfl.org.uk/tgfl/custom/resourcesftp/netmedia\\_II/ks1/science/hamshall/life\\_cycles/images/lifecycleflash.swf](http://www.tgfl.org.uk/tgfl/custom/resourcesftp/netmedia_II/ks1/science/hamshall/life_cycles/images/lifecycleflash.swf)

Use the link below to check your work: Be sure that you have labeled each stage.

[http://www.learner.org/jnorth/monarch/spring2013/c041113\\_dvmt.html](http://www.learner.org/jnorth/monarch/spring2013/c041113_dvmt.html)

How long does it take for the monarch to complete its lifecycle? Turn and talk to your partner, then write down your answer on the bottom of your Task 1 journal sheet.

1. B) Hmm... the butterfly looks very different at each stage of its metamorphosis - talk to your partner and then write down what you think it might eat during each of its stages.

2. A) Click on the link below to watch a video of what hatches from the butterfly's egg. Observe and record what happens.

[http://www.learner.org/jnorth/tm/monarch/jr/Egg\\_Hatch.html](http://www.learner.org/jnorth/tm/monarch/jr/Egg_Hatch.html)

2. B) Click on the link below and look at the picture. Can you discover how much the tiny caterpillar grows in **2 weeks**? (We'll be using the word "caterpillar", though some scientists use the word "larva".)

[http://www.learner.org/jnorth/images/graphics/monarch/html/Monarch\\_Summer2002\\_049.html](http://www.learner.org/jnorth/images/graphics/monarch/html/Monarch_Summer2002_049.html)

2. C) How big does the monarch caterpillar get? To find out, click below, and then scroll down until you see the fat caterpillar. Draw the caterpillar above the ruler in your journal to measure it.

[http://www.kidzone.ws/animals/monarch\\_butterfly.htm](http://www.kidzone.ws/animals/monarch_butterfly.htm)

3. A) Monarchs are also called "milkweed butterflies". In their caterpillar stage of metamorphosis, they are VERY picky eaters. You can see them eating **milkweed**, the **ONLY** thing they eat, by clicking on the link below and watching the video.

<http://www.learner.org/jnorth/tm/monarch/CaterpillarFeast.html>

3. B) Use the photos on the link below to observe the milkweed plant up close. You will need to know what it looks like to search for monarch eggs and caterpillars.

<http://www.monarchbutterflyusa.com/Egg.htm>

4. A) When the monarch metamorphoses into stage 3 of its life cycle, it forms a chrysalis or pupa, (an outer covering) and seems to disappear! Click below to observe the changes over time.

<http://www.kidzone.ws/animals/butterflypics/monarchpicstory.html>

4. B) Now, watch as the butterfly emerges!

<http://www.learner.org/jnorth/tm/monarch/ChrysalisEcloseClip1.html>

5. A) How does an adult monarch butterfly eat? Click [here](#) to learn about some of the parts of its body that help it find food and eat.

5. B) Now, watch how the proboscis works!

<http://safeshare.tv/w/NfPWRcUfcw>

[http://www.youtube.com/watch?v=MYWPWTme\\_YI&feature=endscreen&NR=1](http://www.youtube.com/watch?v=MYWPWTme_YI&feature=endscreen&NR=1)

5. C) Click on the link below to see sunflowers, purple coneflower, orange marigolds and other flowers that provide nectar for butterflies, including the monarch. You may want to plant some in your garden at home.

<http://www.monarchbutterflyusa.com/Garden.htm>

6. A) Monarch butterflies migrate all the way to Mexico when it gets cold. Click on the link below to see where they go.

[http://www.learner.org/jnorth/tm/monarch/Map\\_NASAglobeMX.html](http://www.learner.org/jnorth/tm/monarch/Map_NASAglobeMX.html)

6. B) But in the spring they make their way back up north. Do you think they could stay in Mexico? Why might they have to leave?

Turn and talk to your partner and write down your thinking.

Now click on the link below to learn what the experts say.

<http://www.learner.org/jnorth/tm/monarch/sl/5/0.html>

How did your thoughts compare with the experts? How were they alike, how were they different?

**Finish up....** Wow! You have learned so much about the life cycle and migration of monarch butterflies!

You've done a great job reading information on websites.

You've used the text features and photos on the websites just as you do when you use books.

You have used videos on web sites that have helped you observe actions, just as if you were a **lepidopterist** "out in the field"!

Now it's time for you to decide whether monarchs should spend their lifecycle in a safe environment, like a laboratory, or whether they should remain in the wild. What would you have to do to help them survive in each environment?

[Google Monarch migration tour](#)

[Journey North website](#)

---