

PRIMARILY for U.S.*

GRADES 2-3

* Understanding Science

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Monarch Migration



What is a migration?

Where do Monarch butterflies go each year?

Why do Monarchs migrate?

How can you help the Monarchs?

How can you help the Monarchs?

An animal's habitat is the environment where the animal lives. The habitat contains everything the species needs to survive. Unfortunately, the Monarchs' habitat is being destroyed by people. Here are some things that threaten the Monarch:



Housing developments are replacing farms and ranches.



Farmers are growing new crops on the Monarch habitat.



When grass along roadsides is cut to make commuting easier, milkweed plants are destroyed.

Herbicides are killing roadside plants, including milkweed.

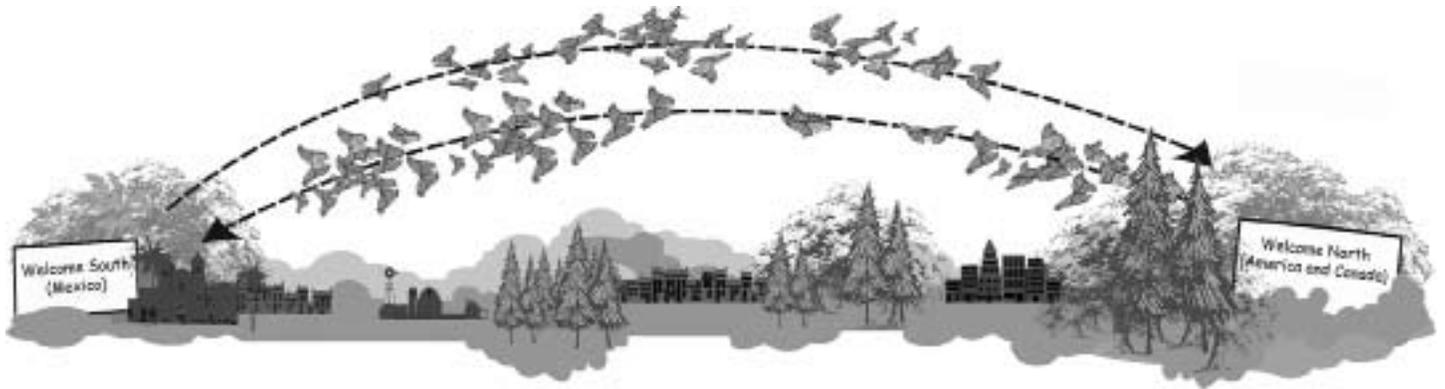


You are helping the Monarch butterfly just by reading this newsletter. Tell your friends and family members about these amazing animals. Monarchs Across Georgia is a group that teaches about Monarchs and their migration. Their website is www.monarchsacrossga.org.

What is a migration?

Where do Monarchs go each year?

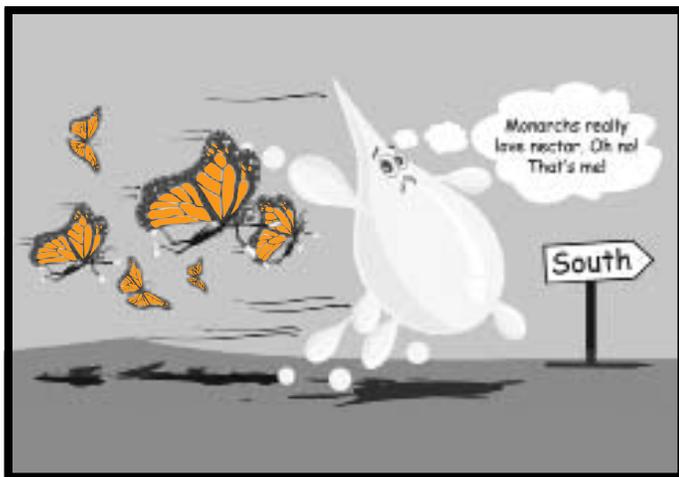
To migrate means to move to a new place.



When animals migrate, they move to a new place, and then move back again—each year! In winter, millions of Monarchs fly south to Mexico. In spring, they fly back north. Monarchs can travel 3,000 miles without getting lost.

Why Do Monarchs Migrate?

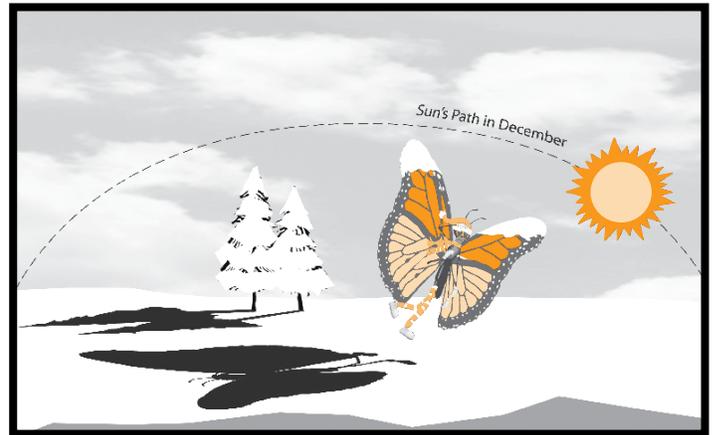
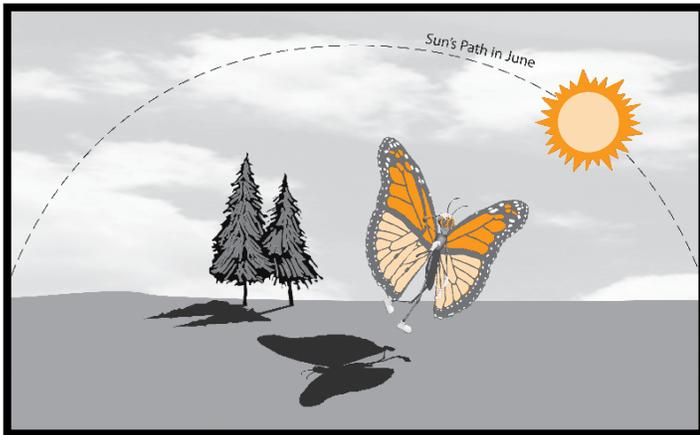
Scientists have different ideas, or theories, about why Monarch butterflies migrate. They know that migration follows the seasons of the year.



One idea is that Monarchs “follow” their food. They eat plants that contain nectar, a sweet liquid.

Because Mexican winters are warm, plants with nectar grow there even when the weather is cold in the United States. In Mexico, Monarchs always find a meal in the winter. Perhaps Monarchs look for a habitat with just the right temperature, humidity and amount of water.

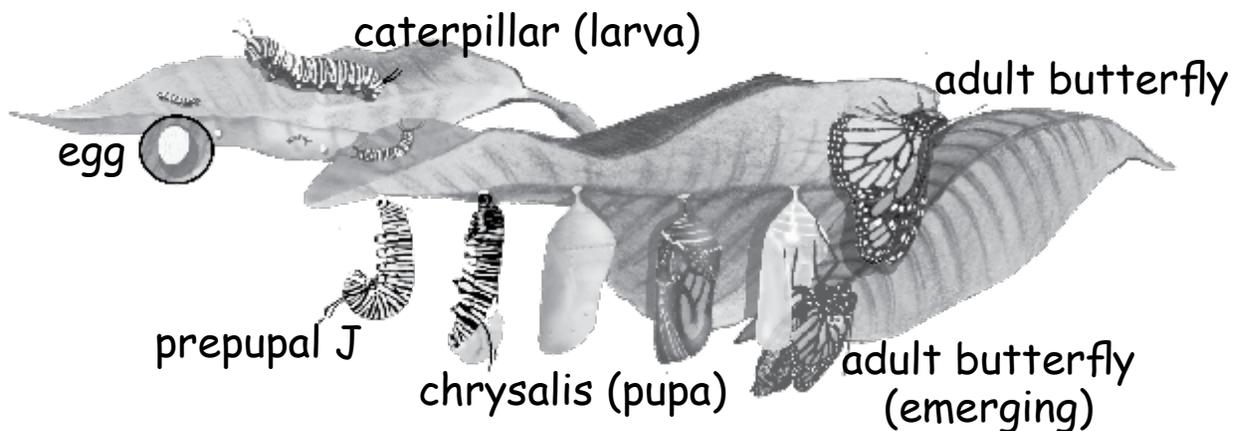
Another idea is that Monarchs follow the angle of the sun, which changes as winter approaches.



What do scientists do when they don't understand why something happens?*

* Answer: Research. Many scientists do research on Monarchs.

Life Cycle of the Monarch Butterfly

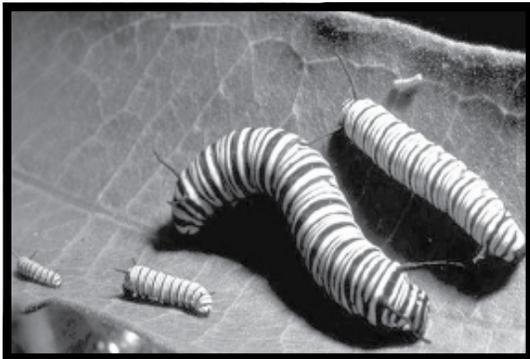


An organism's life cycle is the series of changes the organism passes through from birth to adulthood. Organisms look different and have different needs at different times of their life cycles.

Insects have four stages in their life cycle: egg, larva, pupa, and adult. Female Monarchs lay their eggs on milkweed plants. One female can lay as many as 400 eggs! The mother Monarch lays only one egg on each milkweed plant. The eggs will hatch in about four days.

The larva is a caterpillar. When it leaves the egg, it is only about 2 mm long. How long is that?*

Right away, it sits down to dinner—it eats its own egg case! After that, Monarch larvae eat only milkweed leaves. Milkweeds are very important to Monarchs.



Monarch instars

For the next few weeks, the Monarch caterpillar grows. This is the instar stage. As it grows, it sheds its outer layer. This is called molting. Monarchs can grow to be 2,000 times their original size! If a human baby grew that much, it would be as big as a school bus!

Next, the Monarch caterpillar makes a silk pad. It hangs upside down in a "J" shape. Inside, big changes are going on as butterfly organs start to form. Now the Monarch is a pupa.

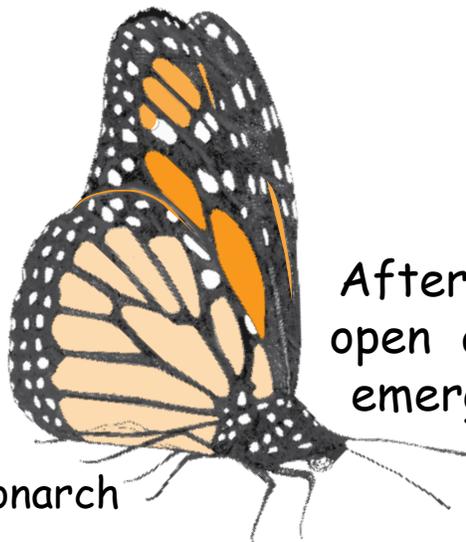


Caterpillar in "J" shape

The chrysalis forms very quickly. If you don't watch carefully, you may miss it!



Monarch in chrysalis



Adult Monarch

After two weeks, the chrysalis splits open and a beautiful adult Monarch emerges. It is ready to migrate!

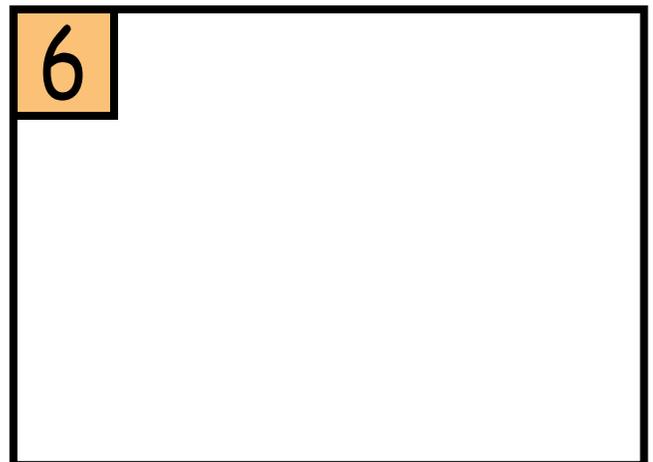
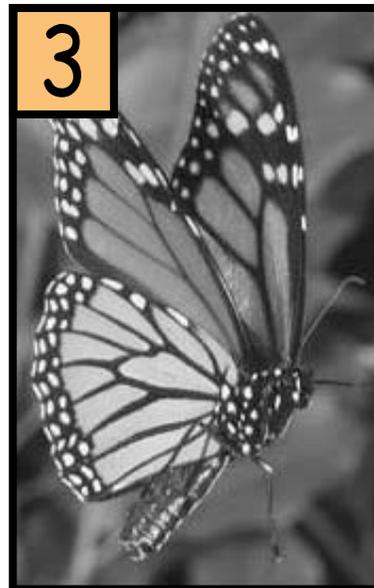
*Answer: About as long as the horizontal line on this letter "t".

Monarchs need Milkweed!

Monarchs will only lay their eggs on milkweed plants. But they are not the only insects that need milkweed to survive.

Here are some insects that you might see on a milkweed plant. Draw a line from the name of each insect to its picture. The numbers will help you find the right pictures.

In the empty box marked "6," draw your favorite insect. Then write its name on the line.

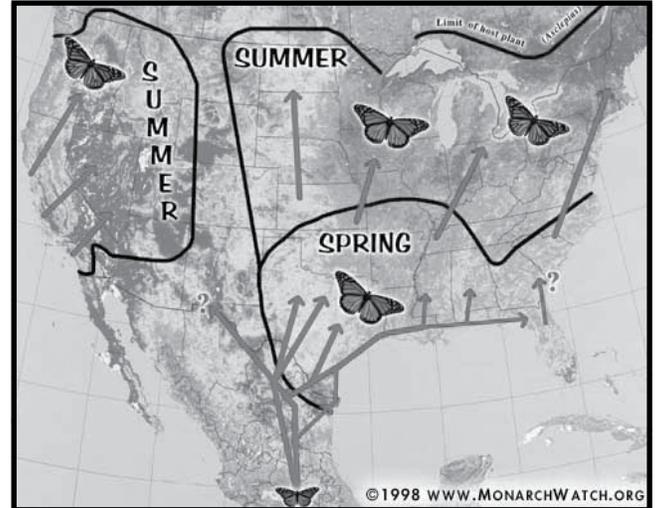


3. Monarch Butterfly 4. White-lined Sphinx Moth 1. Paper Wasp
2. Convergent Ladybug Beetle 5. Spined Soldier Bug
6. _____ is my favorite insect.

Teachers' Corner

Track the Monarchs!

The new migration season began on February 8, 2008. The Monarchs will be in Mexico for several more weeks, but will begin to make their way north in March.



Your students can follow this spring's Monarch migration at <http://www.learner.org/jnorth/monarch/News.html>.

Journey North is a group that studies Monarchs and follows their migrations. You can report Monarch sightings at <http://www.learner.org/cgi-bin/jnorth/jn-sightings>.

Q. A Monarch flies 3,000 miles on its migration. If it flies 20 miles each day, how many days does the Monarch need to complete the migration?*

A. _____ days.



*Answer: 150 days.

New Words

migrate

theory (theories)

nectar

life cycle

egg

larva

pupa

adult

instar

caterpillar

molting

chrysalis

stage

habitat

species

pollinators

Parents' Corner

Visit the Butterfly and Hummingbird Garden at Fernbank Science Center!

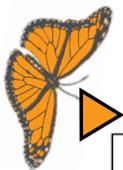
Our garden is Pollinator Certified, which means butterflies, bees, hummingbirds, and other pollinators can call it home. Our garden is a Monarch Waystation, which is a place where Monarchs can find the milkweed and nectar that they need to continue their migration.



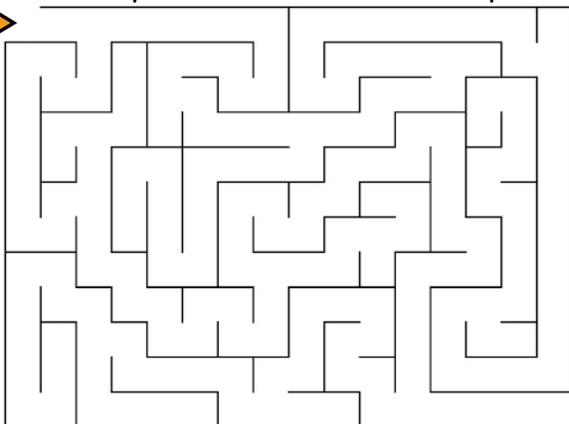
Fernbank Science Center
Butterfly and
Hummingbird Garden

Create your own Monarch Waystation!

Milkweeds and nectar plants are threatened. To help Monarchs migrate successfully, you can order a Monarch Waystation Seed Kit from http://www.monarchwatch.org/waystations/seed_kit.html. The kit contains seeds for six milkweeds and six nectar plants, as well as the instructions you need to get started. Fernbank Science Center also has milkweed for sale at their spring and fall plant sales.



This Monarch is ready to lay her eggs.
Help her find the milkweed plant.



This issue addresses the following GPS:

Science	Math	Lang Arts	Soc Studies
S2CS3	M2M1	ELA2R3	SS3G1
S2E2	M2G3	ELA2R4	
S2L1	M3N4	ELA3R2	
S3CS3	M3M2	ELA3R3	
S3L1	M3P5		
S3L2			

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