

## Teaching Science with Journey North - <http://www.learner.org/jnorth/>



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The **Journey North main page** shows the animals and plants that are tracked and studied: Hummingbirds, Monarch Butterflies, American Robins, Tulips, Gray whales, Earthworms, Songbird migration, Bald Eagles, Whooping Cranes, Orioles, Red-winged Blackbird, Common Loons, Barn Swallow, and Frogs. **Additional events include:** Live wildlife Cameras, Mystery classes, Sunlight & Seasons, Leaf-Out, Ice-Out, and the [Symbolic Monarch Migration Project](#).

### [Monarch Butterflies](#)

The main Monarch page is devoted to migration information, looking at the current state of the Monarch butterflies that migrated in their *journey south* in the fall of the previous year – for now 2017. Elementary classroom teachers can register with Journey North and then they can [Report Sightings](#) as they teach the science to their students. Updates on the migration times and locations for the Monarchs are published monthly allowing the teacher to use this information in connecting the migrations to using maps and gathering data on the butterflies.

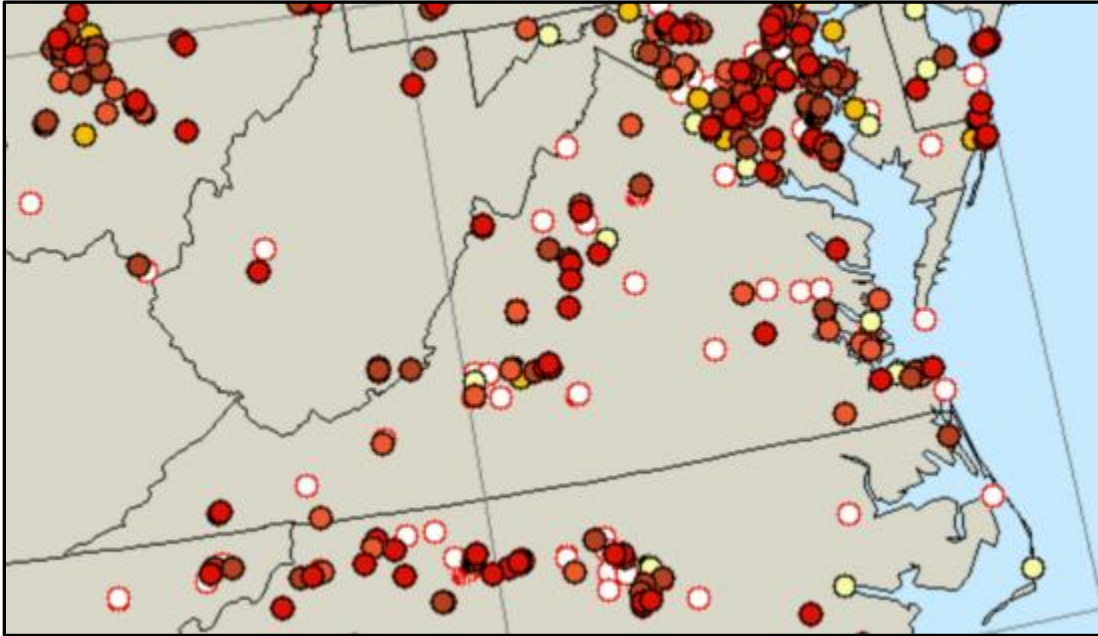
smithterryk@gmail.com Sightings

	Date	Town	State/Province	Latitude	Longitude	Number	Image
1	04/10/17	Radford	VA	37.1	-80.5		
2	09/30/16	Radford	VA	37.1	-80.6	5	

The [Overwintering link](#) shows what happens month-by-month while the Monarchs are in Mexico. They spend the winter in a very small region that's only 73 miles wide. Within the region, only 12 places have the habitat the butterflies need to survive. The sites are at a high elevation of 10,000 feet. There the Oyamel forest habitat provides the microclimate conditions the monarchs need. The butterflies arrive in November and depart in March on their *Journey North*.

[Interactive Maps](#) – help students understand how data gathering (in what we call *Citizen Science*) is converted to points on a map to show migration movement as the seasons change. The maps are used to show progress of milkweed growth, caterpillar sightings, eggs on milkweed, and the first Monarch butterflies of the season. Teachers and students send in their reports and the data is shown on the maps. Clicking on map icons displays information on the name and location and details of what was sent in.

Here is the link to an interactive map from Fall 2017 when the Monarch were migrating south from North America to Mexico. [Migration 2017](#).



Virginia: The darkest dots show Monarch sightings from the week of October 3, 2017

**Teach:** latitude, longitude, cardinal directions, major landforms, bodies of water, distances across continents, zones of temperatures north/south. You can use Journey North maps along with the excellent material from [Biodiversitymapping.org](http://Biodiversitymapping.org) that we used in our biodiversity lesson.

### [Resources](#) for Studying Monarchs



**What Do  
Monarch  
Larvae Do?**

### [Photo gallery and explanation of growth, respiration, and movement](#)

Photos of the life cycle of the Monarch butterfly from [egg to adult](#). [Teaching suggestions](#) about the Monarch population, [reproduction](#), background knowledge, using Math, key concepts, Monarch literature, [charts and graphing](#).

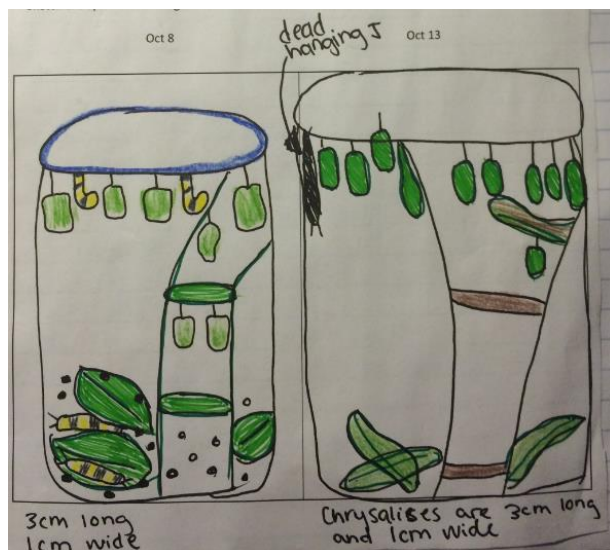
[How do a Monarch's wings change over time?](#) When spring arrives, monarchs that spent the winter in Mexico have been alive for 6-8 months. Their wings have changed dramatically. What do wings look like as they get older and what causes the changes?

## Raising Monarchs in the Classroom

Ordering caterpillars: <http://monarchwatch.org/order/index.htm>

Supplies: <https://monarchbutterflygarden.net/raising-monarch-butterflies-resources/>

Teachers can either find Monarch caterpillars in the wild in areas where milkweed is growing, or they can buy them by ordering from a laboratory. Ordering from a scientific laboratory usually results in the best results as far as the caterpillars thriving in the class room and surviving through the life cycle to adult butterflies. There are several sites where you can order caterpillars and supplies for raising them. Mainly, a teacher needs small clear containers with either tiny air holes punches in the top, or screen tops so that the caterpillars can breathe. A fresh milkweed supply has to be available to feed the caterpillars every day. As the caterpillars grow and change, students can make observations and measurements and sketches in science notebooks. At the same time, the teacher can be doing science lessons on the life cycle using the Journey North site. **Classes usually release the butterflies at adulthood and send them on their way to Mexico.**



Student sketches of caterpillars and chrysalises in the classroom butterfly cage.



Example of clear container, caterpillars on milkweed, student using observation sheet.



A local supply of milkweed must be available to feed the caterpillars. Learning about the milkweed food source is an important part of the study.





At the end of the project of raising Monarchs in the classroom, students take the butterflies outside at school and release them. It is a magical moment for the students to understand that the Journey south is just beginning for their migrating butterflies.

**Smithclass.org – Releasing Monarchs Video**  
<http://www.smithclass.org/monmex/mex.htm>

**Symbolic Migration** - <http://www.learner.org/jnorth/symbolic-migration>

### About the Symbolic Migration Project

The Symbolic Migration unites children across North America through the migration of symbolic ambassador butterflies. In fall 2017, 60,000 students across the globe will create symbolic monarch butterflies and send them to Mexico. Children who live beside the monarchs' winter sanctuaries in Mexico will protect the paper butterflies and return them in the spring.

Using the **Teacher Packet** from the Journey North site, classrooms can create paper "symbolic" representations of Monarch butterflies and send the paper butterflies to Mexico. This process imitates the real life migration – students send paper butterflies in the fall, and then in the spring, an envelope returns to them with new butterflies from students all across North America and from Mexico. The Symbolic site has photos and videos of the students in Mexico. This is an excellent opportunity for North American students to learn more about **Mexican culture** while tracking the geographic progress of the Monarchs to their overwintering site in Angangueo, Mexico. [Sample Ambassador butterflies.](#) [Video of Monarchs in Mexico with Students.](#)



#### **Hello Friends,**

We made this Symbolic Monarch for you at our school in \_\_\_\_\_ (town, state/province).

#### **Hola Amigos,**

Hicimos esta monarca simbólica para Uds. en nuestra escuela en \_\_\_\_\_ de \_\_\_\_\_ (pueblo, estado/provincia).



Example message of friendship for students to attach to the paper Symbolic Monarchs.