

THE GREAT BUTTERFLY MIGRATION

Summary

Students trace butterfly migration routes.

Grade Level: 5-8

Time: 1 class period

Subjects: science, geography

Skills: research, predicting, communicating

Learning Objectives:

Students will be able to:

- ✓ Define the term migration.
- ✓ Explain how and why some animals migrate.
- ✓ Trace North American butterfly migration routes.

Materials:

- ✓ Copies of blank maps of North America
- ✓ Research sources (internet or reference books)

Background

Approximately 13 species of North American butterflies migrate north in early spring and south in late summer. Most of these migrations go unnoticed, but they are truly spectacular considering the small size of the butterflies and the tremendous distances they travel.

These annual migrations rank high on the list of amazing insect accomplishments. Consider that the monarch butterfly can migrate 4,500 km from eastern Canada to their wintering sites in Mexico. For an animal with a body of about 3 cm (0.03 m), flying a distance of 4,500 km is about 150,000,000 body lengths for a monarch butterfly. An equivalent feat for a 1.8 m (6 ft) tall person would be 270,000 km or about 11 times around the earth. Each year hundreds of millions of butterflies make their way across North America. This is a truly amazing feat!

This activity will allow your students to examine several butterfly migration routes.

Procedure

1. Ask students what they know about migration. *What is it? Which animals do they know of that migrate?* (Examples: whales, many songbirds, zebras, butterflies, caribou, whooping cranes, hummingbirds, manatees.) Make a list on the board.

2. If students do not mention it themselves, point out that several species of butterflies migrate very long distances. *How is this possible? Why would they want to do that?* Make a list of reasons on the board. Be sure to touch on: temperature, climate, food sources, and habitat conditions.

3. Give students blank maps of North America (on pg.16), and a choice of migratory butterflies. (Common buckeye, red admiral, painted lady, mourning cloak, monarch, gulf fritillary, question mark, cloudless giant sulphur, pipevine swallowtail, dwarf yellow, Mexican yellow, sleepy orange, and long-tailed skipper.) Have students conduct research on their butterfly of choice to determine where this species spends its summer and winter, and map out its approximate route along the way. Students should mark these routes on their maps.

4. Ask students, *What threats do these animals face on their migrations? What threats would migratory insects face that might*



not affect other migratory animals? Why would migratory insects face greater threats than animals that do not migrate?

5. Have students study the migratory routes they mapped out and research some of the locations through which their butterfly species travels. *Are there any major cities along these routes? Areas of large human population? Large agricultural areas?* Have students mark these places on their maps as well. *What challenges do the butterflies face along their migratory route?* Have students conduct research and prepare posters showing their butterfly routes and the challenges faced on these routes as they attempt to meet all their habitat needs for food, water, cover, and places to raise young. *Are any of these butterflies considered endangered? Why might that be?*

6. Ask each small group of students to give a poster presentation, explaining their findings to the class.

Note: To participate in an actual migration-monitoring project, visit [The Journey North](http://TheJourneyNorth.org), www.learner.org/jnorth, where students can report their sightings and communicate with other students nationwide. You may also want to visit www.monarchwatch.org for

more information on tracking butterfly migrations.

Extension

✓ Create a large outline map of North America on the ground in a large outdoor area. Using reference sheets you provide, have students create large-scale models of migratory butterfly species out of construction paper and assorted craft materials. Provide student groups with butterfly migration map outlines. (Visit www.monarchwatch.org/tagmig/index.htm for monarchs. Other species require more in depth research and you may need to draw up the map yourself after some research.) Have students trace identified migration routes by walking over the approximate route, demonstrating to others where the butterflies go in spring and fall. If possible, have a couple of students stand still in key locations to show where major cities are located in North America. Ask students volunteers to explain where these butterflies will find food, water, cover, and place for their young along their migration routes.

Assessment

✓ Have students write creative “breaking news” newspaper stories about their migratory butterflies’ arrival, departure, or journey through their key locations, including challenges they face along the way and what they are looking forward to at each location.



WORKSHEET

NORTH AMERICA MAP

Directions:

Mark the migration route of your chosen butterfly on the map. Mark any major cities, large agriculture areas, and other important landmarks along the butterfly's route.

