



# Lesson 7: Milkweed Monitoring

## Key Concepts:

- The health of a species is dependent upon the health of its resources. In this case the monarch population is dependent upon the health of the milkweed population.
- Much can be learned about the overall health of the monarch population by monitoring the eggs and larvae on milkweed plants over time.
- Many species of insects are found on a single milkweed plant. The populations of insects and the milkweed plant change throughout the growing season.
- Non-scientists can contribute valuable data to scientists to help foster understanding of organisms in the world.

## Skills:

- Identify plants and organisms.
- Make observations.

## Materials:

- Site where you have seen milkweed in the past
- *Milkweed Monitoring Data Sheet* (student handout page: one for the entire class, or for individual students who are doing the monitoring)
- Ruler
- Insect field guide
- Plant tags, like string or flagging

## Objective

Students will record the growth and development of milkweed plants, tracking their appearance in the spring, and the rate at which they grow. If desired, they can track the use of these plants by insect herbivores.

## Background

The return of monarchs to their northern breeding grounds is closely tied to the emergence of their larval hostplants, members of the milkweed family. Common milkweeds are perennial plants with very long taproots, and once the new plants poke through the ground, the stored nutrients in their taproots allow them to grow quickly. During most years, monarchs appear very shortly after milkweed emerges, but in some years monarchs get to an area before or several days after there is milkweed. If you know a location that contained milkweed last fall, it is very likely that it will be there again in the spring. As the temperatures rise in the month of May visit the site for the emergence of milkweed. Once the plants are visible, monarchs should be migrating to the area soon. You can have students begin to collect data as soon as the plants are visible. Monitoring the appearance, growth, and condition of these plants will help to reinforce the close connections between monarchs and their environment. Don't be discouraged if the milkweed seems slow in coming; it usually appears after many other perennials, but should come up eventually if the area hasn't been disturbed.



For information on milkweed, you can use the section on this topic in the Monarch Biology section of this curriculum, the *Monarch Watch* website (<http://www.MonarchWatch.org>), or plant field guides.

## Procedure

1. Watch for milkweed plants where you saw them last fall. Choose several new plants to monitor, and use sticks or flagging to mark them. You may want to choose a few sites to monitor, and compare growth rates in different locations.
2. Data from 3 plants over six separate monitoring dates can be recorded on each Data Sheet. Record the date that you see the first sign of each new plant.
3. At regular intervals (every 2-5 days) record the height and number of

leaves on your plants.

4. Look for insects or spiders on the plant, and any signs of damage. Use a field guide to identify the insects that you observe on the milkweed, and record your observations on the data sheet.
5. Use the data to graph growth over time. You could graph height, or estimate the area of leaf material on each plant, for each time you observe it. If you are keeping track of weather conditions, relate milkweed growth rates to temperature, rainfall, and cloud cover.
6. If desired, send your data and comments to us at:

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## Extension

Use this data sheet to observe other plants and their inhabitants in your area over time.

# Milkweed Monitoring Data Sheet

Plant # _____ Date First Seen _____						
Date						
Plant Height						
# Leaves on plant						
Insects or other animals seen on plant						
Plant # _____ Date First Seen _____						
Date						
Plant Height						
# Leaves on plant						
Insects or other animals seen on plant						
Plant # _____ Date First Seen _____						
Date						
Plant Height						
# Leaves on plant						
Insects or other animals seen on plant						