Key Concepts:
- Descriptive writing based upon observations
- Drawings communicate observations
- Record observations as evidence

Skills:
- Make detailed observations
- Make illustrations of observations in a journal
- Write or dictate sentences to accompany the illustrations

Materials:
- Student journals
- Pencils, colored pencils, and other drawing supplies
- Monarch life stages with the appropriate food source and containers

Objective
Create a journal based on students' observations of all stages of the monarch lifecycle. Detailed illustrations of observations will serve as the basis of the journal, though written sentences may be used to accompany and explain pictures. The journal can then be used to describe the life cycle of individual monarchs.

Background
Two of the most important things that a scientist does are to 1) make careful observations and 2) keep detailed and accurate records of these observations. In this lesson, students will practice these skills with their monarchs. In effect, students will be collecting data (singular datum): factual information that can be used as a basis for understanding something. They should be encouraged to be as accurate as possible in their observations.

There are multiple ways to collect data. The Keeping a Monarch Calendar and How Much do Caterpillars Eat in One Day lessons offer additional ways for students to practice collecting and recording data. There is no specific order to these lessons on data collection. You may prefer to use only one or use all three. In any case, they should be started during the larval stage, and continued until the adults are released.

Procedure
1. Give each child a journal and have them make detailed drawings of their monarchs at one or two day intervals. Encourage them to look closely at the patterns of stripes, and other features.
2. If desired, sentences can be added to explain their pictures. As a group, have children dictate sentences that could be put on the board. Children could then copy the sentences.
3. Children who are able can write their own sentences.