

Focus on: Animal Behaviors – Pupa

This lesson is meant to support the unit on Life in Changing Habitats. It can be done to generate background knowledge prior to teaching the unit, during the unit to reinforce lessons, or as a follow up to the unit to increase the retention of information. How you guide your students will depend on the information you have already taught and the information you want to introduce. This lesson will be most successful if you have already found a few insects in the pupa stage in the garden. Ladybugs and butterflies are two of the most common insects whose pupa stage can be found in a garden.

Clarifying Objectives:

4.L.1.2 Explain how animals meet their needs by using behaviors in response to information received from the environment.

4.L.1.4 Explain how difference among animals of the same population sometimes give individuals an advantage in surviving and reproducing in changing habitats.

Key Vocabulary:

Definitions can be found at <http://learnersdictionary.com>

- Animals
- Needs
- Behaviors
- Response
- Information Received
- Environment
- Difference
- Population
- Advantage
- Surviving
- Reproducing
- Habitats

Focus Question(s):

What is the behavior response of an insect in the pupa stage when it is touched? Why do you think they react in that way?

Materials:

School Garden with squash plants
Garden Gloves to protect hands while looking for insects in the pupa stage
Science Notebooks

Activities:

1. Watch the following video clip and discuss.
<https://www.youtube.com/watch?v=sYMIWDdaVyU>
2. Suggest going to the garden to find insects in the pupa stage.
3. Have students work in groups to plan a procedure to test the reaction of insects in the pupa stage. (They may want to repeat the paint brush test and that is okay.)
4. Students should include a hypothesis and procedure.
5. Visit the garden to search for pupas. (Ladybugs and butterflies are 2 common insects to find in the pupa stage.)
6. Implement the procedure.
7. Students should observe and record results in their science notebooks.

Guiding Questions:

- What is a pupa?
- What are examples of a pupa? (chrysalis)
- How does the pupa react to being touched?
- Why do you think pupas react that way?
- What benefit does the pupa get from reacting in that way? (scares predators away)
- How can that type of movement help the pupa?
- What is a possible explanation for a pupa not

8. Discuss results and make a conclusion. (Not all pupas will have movements as dramatic as those seen in the video, but most should move when touched.)

moving? (death or perhaps different species do not move)