Focus on: Animal Life Cycles

This lesson is meant to support the unit on Structures and Functions of Living Organisms. 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 butterfly unit to meet the objective of comparing a variety of animal life cycles. How you guide your students will depend on the information you have already taught and the information you want to introduce. Please remember that many gardens run on a yearly cycle and it will be easier to find more animals in the garden during the peak growing season.

Clarifying Objectives:

2.L.1.1 Summarize the life cycle of animals including:

- Birth
- Developing into an adult
- Reproducing
- Aging and death

2.L.1.2 Compare life cycles of different animals such as, but not limited to, mealworms, ladybugs, crickets, guppies or frogs.

2.L.2.1 Identify ways in which many plants and animals closely resemble their parents in observed appearance and ways that they are different.

2.L.2.2 Recognize that there is variation among individuals that are related.

Key Vocabulary:

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

-Summarize
-Life Cycle
-Birth
-Developing
-Reproducing
-Aging
-Death
-Compare
-Plant Parents
-Observed
-Appearance
-Variation
-Individuals
-Related
-Egg
-Larva
-Nymph
-Chrysalis
-Pupa
-Adult

Focus Question(s):

What animal life cycles can we find in the garden? How are the life cycle stages the same? How are they different?

Materials:

School Garden
Garden Gloves to wear while exploring the garden especially if touching plants, soil, lifting pots, etc.
Science Notebooks
Camera and device to take photographs of animals and research to identify the animal

Activities:

1. Tell students we are going to be scientists exploring a garden ecosystem to see how many different animal life cycles we can find in the garden.
2. Review some examples of animal life cycles. Be sure students understand that all animals are part of an animal life cycle and that we will be trying to identify the life cycle stage of the animals we find. (If your garden has a life cycle sign, review it.)
3. Ask: *What are some tips for helping us to find the most animals?* (Move slowly, speak quietly, be patient, look closely, etc.) Remind students they will have to look VERY closely in the garden to find the life cycles. Encourage students to look on leaves, under leaves, in the soil, at the base of plants, everywhere!
4. Head to the garden to search for animals. Tell students we are going to "capture" the animals with our camera and by drawing them in our student notebooks. We will NOT be capturing them with our hands. Look, but don't touch! The garden animals are VERY busy doing their jobs in our school garden so let's let them be!
5. When one animal is found, there will be a rush of other students who want to see the animal too. Remind them to walk and take turns looking at the animal without pushing. We don't want to harm the people, the animals or the plants in the garden.
6. When students find a living thing, they should sketch it in their student notebooks and write a bit about it to describe it. They should also try to predict the life cycle stage of the animal. They can also photograph it or have the teacher photograph it. If there is time, do a Google search to identify it. (ex. Large black beetle with 2 spots North Carolina)
7. When students are looking at the animal ask them Guiding Questions and encourage the use of the Key Vocabulary.
8. Find as many animals as possible in the time permitted.
9. When you return to the room or during the next lesson, display the photographs of the animals that were found in the garden. Have students compare the animals and their life cycle stages to find similarities and differences. Use the Guiding Questions to assist the discussion.

Guiding Questions:

- What animal did you find?
- Do you know what it is? Are you sure? (If they are not sure, that is ok, it may be possible to identify it with the help of the internet, garden coordinator or other garden expert.)
- What stage of the life cycle do you think this animal is in right now?
- What makes you think that?
- What other animal do you know that you can compare this animal to?
- What does this remind you of?
- What makes you think it is an egg?
- What makes you think it is a larva?
- What makes you think this is a pupa?
- What makes you think this is a nymph?
- What makes you think this is an adult?
- How can we find out?
- Do all larva stages look like caterpillars?
- How are the adults the same?
- How are they different?
- How are the eggs the same?
- How are they different?
- How many different animals did we find?
- How many different life cycle stages did we find?
- Is it easy to find the life cycle stages of all the animals?
- Why can't we see them easily?
- What would happen if the eggs, larva, pupas were easy to find?
- Who else could find them?