

## Focus on: Spider Life Cycle

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. If you need background information about spiders, there are several videos you can preview found near the end of the lesson.

### 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.

### 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 Sac  
-Spiderling  
-Adult  
-Venomous

### Focus Question(s):

How does the life cycle of a spider compare with the life cycle of another animal you have studied?

## Materials:

School Garden

Garden Gloves to wear while exploring the garden especially if looking for spiders. However, even with gloves on, spiders should be looked at and **not touched**. They will not bother you if you do not bother them. Either way, if your hands are protected, you will be safe.

Science Notebooks

## Activities:

1. Tell students that today you are going on a safari! You are going on a spider hunt to photograph spiders and to see if you can see any of their different life cycles. Reminder: spiders are arachnids; they are not insects.

	Legs	Wings	Antennae	Body Sections
Insects	6	usually	yes	3 parts
Spiders	8	never	no	2 parts

2. Tell students that spiders are GREAT bug hunters and we love to have them in the garden!!! (Please say it like you mean it. This is science class. Try not to project any negative opinions you may have about spiders onto the students.) Discuss that some people are afraid of spiders, but if you do not bother a spider, he/she will not bother you. AND without spiders, bad bugs would take over the world. Spiders are VERY important critters in our garden ecosystem. However, in NC we have a few species of venomous spiders such as the black widow that can hurt us so we NEVER touch a spider. If you ever see a venomous spider, tell an adult so they can get rid of it. Most spiders can bite even if they are not venomous, so do not pick them up; however, most spiders are not venomous so they should just be left alone to do their job of ridding the world of bad bugs!
3. FYI: Spiders are venomous because their “poison” is in their bite. Poisonous creatures cause harm by being ingested or having their poison absorbed – like through touching- (ex.: a poison dart frog will kill/harm any animal that touches/eats it). Venom is always delivered through a bite, so snakes and spiders are venomous.
4. Ask: *What are some tips for helping us to find the most spiders?* (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, on stems, everywhere! Check out this website for some photos of spiders, egg sac and spiderlings: <http://mothernature2014.blogspot.com/2014/04/spiders-spiders-spiders-and-more-spiders.html>
5. Head to the garden to search for spiders.
6. When one is found, there will be a rush of other students who want to see it too. Remind them to walk and take turns looking at it without pushing. We don't want to harm the people, the animals or the plants in the garden.
7. When students find a spider, egg sac or spiderlings, they should sketch it in their science notebooks and write a bit about it.
8. Return to the class to discuss your findings.
9. Following are some videos which will support your study and help to highlight some things you may not have seen on your trip to the garden.
10. Spider life cycle video:

<http://app.discoveryeducation.com/player/view/assetGuid/DF5AED62->

## Guiding Questions:

- What stages of the life cycle did we find in the garden?
- What stages didn't we find?
- Where did you find them?
  
- What did they look like?
- What did you learn from the videos?
- In what ways are the different stages the same?
- In what ways are the different stages different?
- How does this life cycle compare to other animal life cycles?
- Is this animal beneficial to have in our school garden? Why or why not?

[8326-4757-9350-5CEF8146F559](https://www.youtube.com/watch?v=6rdEknudh5A)

11. Argiope Spider Creating Egg Sac at Willow Springs Elementary:  
<https://www.youtube.com/watch?v=6rdEknudh5A>
12. Newly Hatched Argiope Spiderlings:  
<https://www.youtube.com/watch?v=D8og97mEFps>
13. Wolf Spider with Egg Sac:  
<https://www.youtube.com/watch?v=jQ4861QCUCc>
14. Wolf Spider with Babies on Its Back:  
<https://www.youtube.com/watch?v=dhuAIxklse0>
15. Fun spider facts: <https://www.youtube.com/watch?v=Ty-tZ7-TzSM>
16. Discuss the videos and the students' findings from their science notebooks from their visit to the garden. Use the Guiding Questions and encourage the use of the Key Vocabulary.