



Objectives and State Standards:

- ② Students will list the four stages of a butterfly's life cycle. (Science Standard 3.3)
- ② Students will name two characteristics of insects and two characteristics of arachnids. (Science Standard 3.1)
- ② Students will name two arachnid adaptations. (Science Standard 3.1)

Activities for before your visit:

- ② **Insect Fun:** Discuss with students what makes an insect an insect? Now read "The Bugliest Bug" by Carol Digory Shields. In this book, there are all kinds of bugs. Have a class discussion about the different characteristics of the bugs in the book. All insects have six legs and three body parts; but they have many things that make them unique. Have students create and write about their own "bugliest" bug, using whatever art supplies are available. Bugs should have six legs and the wings and legs should be connected to the thorax.
- ② **Life Cycles:** To start a discussion on a butterfly's life cycle, put a picture of a butterfly egg on a transparency and show it to students on an overhead. (See Butterfly Egg download.) Ask students to name this mysterious object. After they have had a chance to brainstorm, tell them it is a butterfly egg and that butterfly eggs come in many different shapes. After hatching, the caterpillar will eat the egg case to ingest its nutrients. Ask students what comes next in the butterfly's life cycle. Make sure that they know that a butterfly caterpillar makes a chrysalis and only some moth caterpillars make cocoons. Have students draw pictures of the four stages of the butterfly's life cycle. Have them raise Painted Ladies to see the life cycle first hand.
- ② **Super Bug:** Write a class story about a day in the life of Super Bug. What special powers does he have? Does he protect other bugs? How does he protect them? What does he look like? What adventures does he have? Have the students draw pictures of Super Bug.
- ② **Flutterby:** Have the Butterfly Pavilion's "Flutterby" outreach program come to your classroom to teach you about butterflies, moths, and life cycles. For more information on this program, call (303) 469-5441, ex. 1862.

Activities for after your visit:

- ② **Area Observation:** Give each student a hula-hoop or a nine-foot piece of string and a chart with three columns titled spiders, insects, and something else. Take the students out to the playground and explain to them that their job is to find a place that they would like to explore but you have to be able to see them. Once they find their place, they should lay down their hula-hoop or their string in a closed shape. This is their study area. Now they are to get down close to the ground and very carefully observe their area. Every time they find something alive, they should mark it down under the correct place on their chart. When you get back to class, have everyone add up their finds. Discuss why some locations might have been better places to find animals than other places. Ask them if they were a critter on the playground, where would they want to live and why?
- ② **Camouflage:** Explain that, like insects, spiders hide to avoid being eaten by predators and to avoid being seen by their prey. Camouflage coloration and shape can help a spider or insect hide. Give students craft supplies and explain that they are going to build a spider and hide it in plain sight in the classroom. Spiders should have two body parts and the eight legs should be connected to the cephalothorax. Suggest that they have a hiding place in mind as they design their spiders. Have them hide the spiders. Take a tour of the classroom. See how many spiders the students can find without pointing them out to each other. Discuss the results. What made some spiders harder to find than others? Remind students that sometimes animals do have bright, warning coloration because they want to be seen and warn others that they are dangerous.
- ② **Insect/Spider Dioramas:** With adult help, have students research a favorite spider or insect. Have them build a diorama and write a short report. They should include where the animal lives, what makes it unusual, what it eats, what eats it, how it catches its food, what adaptations it uses to survive, and something really cool about it.

Resources:

Very Quiet Cricket by Eric Carle
The Bugliest Bug by Carol Digory
Insects and Spiders by Dorling Kindersley
Ranger Rick Nature Scope Incredible Insects
www.carolina.com