Teacher's Guide

"Insects and Spiders"

Chattahoochee NATURE CENTER
Where Nature Comes Alive!

Grade Level:
2nd

GSE Reference:
S2L1 a, d; S3L1 a, b; S4L1a, b, c;

Summary:
This spring program explores the world of the insects to learn how important these animals are to the environment. Students discover the characteristics and adaptations of insects by scientifically sampling a habitat.

Objective:
To introduce students to the diversity of insects and to demonstrate knowledge of field collection techniques.

Essential Questions

- What is an insect?
- How do insects change throughout their life cycle?
- Why are there so many types of insects?
- What roles do insects play in or ecosystem?

Vocabulary

Entomology - the study of insects
Arthropod - an invertebrate having a hardened exoskeleton, segmented body, and jointed appendages
Insects - are a class within the arthropods that have a chitinous exoskeleton, a three-part body (head, thorax, and abdomen), three pairs of jointed legs, compound eyes, and two antennae
Arachnid - any of a class (Arachnida) of arthropods, including the spiders, scorpions, mites, and ticks, and having a segmented body divided into two parts, four pairs of legs but no antennae
Metamorphosis - change in form of an organism as it develops from egg to adult
Biodiversity - the number and variety of species in an ecosystem

Pre-Visit Activities

- Read a book from the suggested reading list
- **Bug Brainstorm**—with your class, think of all the types of insects that you know or have seen. What do these insects have in common? Where have you found these insects? What stages of an insects' life cycle have you observed?
- **Many Mouthparts**—

Post visit activities

- **Insect Interviews**—insects play important roles in our ecosystem. Have students list jobs that insects do for us in nature (decomposers, recyclers, soil aerators, pollinators, predators, food chain members, etc). Then have students list different types of insects. Pair students—one student is type of insect interviewing for a job while the other is the employer. Students should model an interview to determine what job would suit the insect for success in nature!
- **Schoolyard (or classroom) Sampling**—after your program with the Chattahoochee Nature Center, use the techniques you learned to search for insects around your school's campus. Have students compare and contrast what was found. Why would you see different organisms at CNC versus at school?

Suggesting Reading

Allen, Judy and Tudor Humphries. Are You a Grasshopper? New York: Kingfisher. 2002.
Allen Judy and Tudor Humphries. Are You a Ladybug? New York: Kingfisher. 2000.
Carle, Eric. The Very Quiet Cricket. New York: Philomel Books. 1990.
Ehlert, Lois. Waiting for Wings. New York: Harcourt, Inc. 2001.
Feltwell, John. Butterflies and Moths. New York: Dowling Kindersley, Inc. 1997.
Fowler, Allan. It's a Good Thing There Are Insects. Chicago: Childrens Press. 1990.
Heller, Ruth. How to Hide a Butterfly & Other Insects. New York: Putnam Publishing Group. 1985.
Murawski, Darlyne A. Bug Faces. Washington, D.C.: National Geographic Society. 2000.
Oppenheim, Joanne. Have You Seen Bugs? New York: Scholastic Press. 1998
Pallotta, Jerry. The Icky Bug Alphabet Book. Watertown, MA: Charlesbridge Publishing. 1986.
Parker, Nancy Winslow and Joan Richards Wright. Bugs. New York: Mulberry Books. 1987.
Parker, Steve. Insects. New York: Dorling Kindersley, Inc. 1992.
Rockwell, Anne. Bugs Are Insects. New York: Harper Collins Publishers, Inc. 2001.
Ross, Michael Elsohm. Cricketology. Minneapolis: Carolrhoda Books, Inc. 1996.
Silver, Donald M. One Small Square Backyard. New York: Learning Triangle Press. 1993.
Silverstein, Alvin and Virginia. Life In A Bucket of Soil. Mineola, NY: Dover Publications, Inc. 1972.
Stone, Lynn M. Homes and Habits of Insects. Vero Beach, FL: The Rourke Book Company, Inc. 2001.
Taylor, Barbara. Animal Close-Ups, Insects. Columbus, OH: Peter Bedrick Books. 2002.
Zim, H. S. Golden Guide to Insects. New York: St. Martin's Press. 2001.

Suggested Websites

http://www.earthlife.net/insects/six.html
http://nationalzoo.si.edu/Animals/Invertebrates/Facts/insects/default.cfm
http://blog.modernmechanix.com/insects-teach-man-secrets-of-invention/
http://www.biocontrol.entomology.cornell.edu/kids.php

Further Investigations!

You have found two crawling creatures! One is an arachnid, one is an insect. What would they look like under a magnifying glass? Draw what you would observe!

This is an insect. I know because

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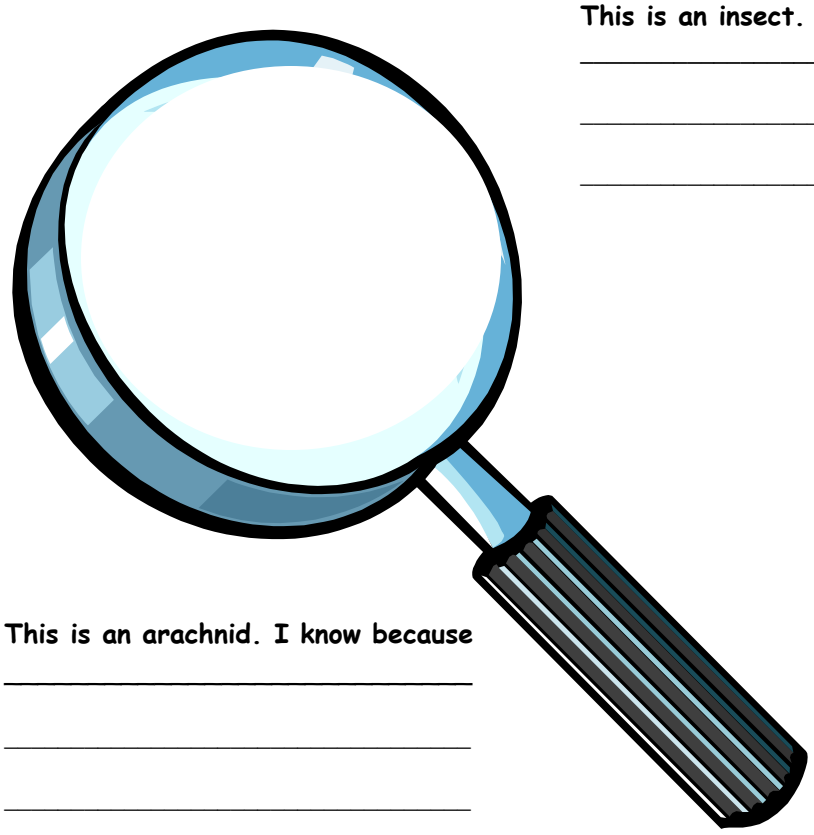

This is an arachnid. I know because

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