



Food Webs & Habitats

Objectives and State Standards:

- ② Students will create a food web. (Science Standard 3.1)
- ② Students will describe the components of a habitat. (Science Standard 3.1)
- ② Students will describe the role of decomposers in the ecosystem. (Science Standard 3.3)

Activities for before your visit:

- ② **Habitat Comparisons:** Have students research different habitats. Have each student create a food web of their habitat on a poster board with at least 7 arthropods and 13 other animals and plants. The poster board should show who eats whom in their habitat. Have students present their food webs. After the presentations, break students into pairs with different habitats. Have the students compare how the food webs are the same and different in their habitats and how their food webs would change if the arthropods were gone. Bring students back together. Have them discuss their findings. Discuss the importance of arthropods in food webs of all habitats.
- ② **Insect Search:** Go to a local nature area. Pass out the insect search (see the download). Working in pairs, have students carefully collect creatures to complete the insect search. Each creature must be identified by the students and then shown to the teacher. Even though some insects can be used to answer more than one question, each catch can only be used once. Students should return the creature to where they found it after the teacher has marked it off their sheet. After returning to the classroom, have students collate the results of their search and graph the diversity of the arthropods that were observed.
- ② **Moon Colonists:** Imagine that scientists have called a conference on the topic of which group of arthropods should be the first colonists on the moon. They have asked you to speak. What would you say and how would you convince the scientists that your choice was the best choice? Which arthropod would have the best adaptations for survival and what are those adaptations?
- ② **IMP:** Research one local use of Integrated Pest Management. How is it being used? What is it being used on? What is the plan? What benefit does the use of the plan have on the environment?

Activities for after your visit:

- ② **Bottle Habitat:** Each student should create a habitat in a 2 liter pop bottle. Then they should create an arthropod to live in their habitat. The habitat should include the food, water, space, and shelter their arthropod needs to survive. The arthropod should have special adaptations that allow it to live in its environment. The students should write a diary entry, from the arthropod's point of view, about a day in its life.
- ② **Arthropod Review:** Review the characteristics of arthropods. Brainstorm the animals that you saw at the Butterfly Pavilion that were not arthropods and list them on the board. Have the students pick 5 animals from the list. Have them research what phylum each animal belongs to and at least two characteristics of the animals in that phylum.
- ② **Decomposers:** Lead a class discussion on the jobs and importance of decomposers. Who are decomposers? We all think of their job as being yucky. Imagine that one morning all the decomposers went on strike because they agreed that their job was yucky. You are a reporter. Write a story about the strike or about an interview with one of the decomposers. How does the strike affect the world?
- ② **Super Human:** If you could have any three arthropod adaptations what would they be? How would you look? (Have students draw a picture of themselves with the adaptations.) Write about how your life would change and how your adaptations would help you.

Resources:

The Practical Entomologist by Rick Imes

Meet the Arthropods by Ellen Doris

<http://www.nationalgeographic.com/geographyaction/habitats/>

<http://www.nhptv.org/natureworks/mwep11b.htm>

<http://www.qrg.northwestern.edu/projects/marssim/simhtml/info/whats-a-decomposer.html>

http://www.classbrain.com/artteensb/publish/bottle_biology_science_project.shtml