



Being Part of a Food Web

Virtual Classroom Extension

Grade Levels

Grades 4-6

Objectives

This activity is designed to start your at home students in recognizing themselves as scientists and thinking critically about problem-solving. The goal is to instill concepts through discovery and to encourage using scientific thought processes.

Procedures

1. Begin by telling your at home students that they will be investigating how animals fit into a food web. Then after using what they learn, they will make their own food web.
2. Together, choose one animal or one animal group to focus on. Discuss the question:

What role or roles do (animal of choice) play in a food web? How might they affect the other animals around them?

3. Continue with the discussion and encourage the group to come up with ways that they could investigate the question and test their predictions (all suggestions are welcomed). Are there materials that would help them find the answer? What will they need to research? What will they do with the information once they have it? And how will they know that they've successfully answered the question? Allow a wide variety of ideas and encourage conversation to refine the details of their ideas.
4. Next, share the following information:

All living things are part of a food web. Animals living within a food web are often defined as either predator or prey, but these animals only represent a part of a full food web. A typical food web contains producers, consumers, and decomposers. Producers create their own food using energy from the sun and nutrients from the soil. Consumers are animals that eat other organisms in order to get energy. Decomposers break down decaying or dead material so that it can be used again as energy for the producers.
5. Tell your at home students that they will now get a chance to develop their own food web. It should include at least one producer, two consumers (one predator and one prey), and one decomposer.

6. To connect each part of their food web, at home students should think of a linking word (could be a verb, preposition, or short phrase) to connect and illustrate the relationship from one member of the food web to another. Example: A cat “eats” a mouse, an elephant “eats” tree bark, or a dung beetle “makes compost” from the dung of an elephant. A single animal could be connected to multiple members of their food web.
7. Have everyone discuss their food webs and identify what role each of the members of their food web play.
8. Next, ask everyone to write down a list of things the animal you selected does during its day. How do they spend their time? What do they do? An example for elephants would be grazing (even pooping would be an acceptable answer!).
9. Allow everyone to discuss their answers and make a list of the different activities.
10. One by one, go through this master list and ask how this particular activity might affect the animals’ environment. Would this specific activity affect any plants in that environment? Would this affect help or hurt those plants? What about animals? Would the affect be helpful or hurtful? Are there any plants or animals that depend on your chosen animal during their day?
11. Discuss this situation further with the students. Must your chosen animal be connected to only one other member of their food web? Could it be harmful or helpful for other animals if your animal has more than one relationship in that food web?
12. Were you able to come up with more than one link between your animal and other members of a food web? Does it have an effect on many different animals and plants within their habitat?
13. Feel free to repeat the activity in any number of ways with any number of situations and animals that your students can come up with.
14. Was the outcome the same as what they had predicted?

Standards

Ohio Academic Content Standards
Grade 5 Life Science Topic: Interactions within Ecosystems Organisms perform a variety of roles in an ecosystem All of the processes that take place within organisms require energy

Next Generation Science Standards
Matter and Energy in Organisms and Ecosystems 5-LS2-1 Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment MS-LS2-3 Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem