

OSP Interactive Educational Programming

Lesson Title: What's in the water?	Grade Level: 4th
Teacher: Kathi Murray	Duration: 50 minutes
<p>Essential Question(s)/Objective(s): What is a producer? How do producer use to make their food? What is a consumer? Do all consumers eat the same thing? What is a decomposer? What would happen if there weren't any decomposers?</p>	
<p>GPS: S4CS1. Students will be aware of the importance of curiosity, honesty, openness, and skepticism in science and will exhibit these traits in their own efforts to understand how the world works a. Keep records of investigations and observations and do not alter the records later. b. Carefully distinguish observations from ideas and speculation about those observations. c. Offer reasons for findings and consider reasons suggested by others. d. Take responsibility for understanding the importance of being safety conscious. S4CS7. Students will be familiar with the character of scientific knowledge and how it is achieved. Students will recognize that: b. Some scientific knowledge is very old and yet is still applicable today. S4CS8. Students will understand important features of the process of scientific inquiry. Students will apply the following to inquiry learning practices: a. Scientific investigations may take many different forms, including observing what things are like or what is happening somewhere, collecting specimens for analysis, and doing experiments. d. Science involves many different kinds of work and engages men and women of all ages and backgrounds. S4L1. Students will describe the roles of organisms and the flow of energy within an ecosystem. a. Identify the roles of producers, consumers, and decomposers in a community. b. Demonstrate the flow of energy through a food web/food chain beginning with sunlight and including producers, consumers, and decomposers. c. Predict how changes in the environment would affect a community (ecosystem) of organisms. d. Predict effects on a population if some of the plants or animals in the community are scarce or if there are too many.</p>	
Key Vocabulary	photosynthesis, producer, consumer, herbivore, carnivore, omnivore, decomposer, food chain, food web
Teacher Materials	Aquarium(s) or gold fish bowls with various organisms like topminnows, lung snails, duck weed, white water lilies, lettuce plants, etc. Lab sheet
Student Materials	Pencils/pen

Teaching Strategy/Procedures	Inquiry – have students move from station to station and observe each sample and list which organisms they think are the producers, consumers, and decomposers. Then have them list where each group of organisms get their energy.
Differentiation	Use terrestrial organisms instead of aquatic organisms Use pictures instead of live animals
Summarizing Strategy	Teacher explains how producers are the basis of every food chain/food web..i.e. sunlight is the ultimate energy source. Consumers eat producers, other consumers, or dead organisms. Food chains are simple feeding models and food webs are models that contain as many feeding relationships as possible.
Assignment(s)	Have the students draw 2 food chains or a food web using the information from the activity
Assessment For and/or Of Learning	Have students cut out and complete an energy pyramid