Science in a Bag – Student Page

What’s for Dinner?

Grade Level 6th

Standards

**GLE 0607.2.1** Examine the roles of consumers, producers, and decomposers in a biological community.

**SPI 0607.2.1** Classify organisms as producers, consumers, scavengers, or decomposers according to their role in a food chain or food web.

Task Objective

Students will understand the different roles of producers, consumers, scavengers and decomposers in a food chain and be able to identify examples of each.

Materials Needed

Teacher-made Learning Pyramid

Organism cards for making food chains

Food Chain template

Learning Logs

Procedures

1. Look at the learning pyramid. Become familiar with the definitions of Producer, Consumer, Scavenger and Decomposer and their role in a food chain.

2. Using the Food Chain template and the cards provided make two simple food chains. Sketch them in your learning log. (You will not need to use ALL of the cards)

3. In your learning log, label each organism in your food chains as “Producer”, “Primary Consumer”, “2nd Level Consumer”, and/or “3rd Level Consumer”.

4. In your learning log list one example of a scavenger and one example of a decomposer. You may use the learning pyramid for ideas.

Assessment

1. Where do producers get their energy from to make food?

1. What is the difference between producers and consumers and how they obtain energy?

2. What do scavengers and decomposers have in common?

Clean-up

Place the learning pyramid and the organism cards carefully back in the bag.

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Explanation

In a food chain or web the first level is always the producers. Producers are organisms that make their own food via photosynthesis using energy from the sun. All plants are producers. The next levels are consumers. Consumers cannot make their own food but must consume other organisms for energy. The first level above producers is the primary consumer. Primary consumers are herbivores that eat only plants. Above primary consumers are secondary and tertiary consumers. These can be carnivores (meat eating) or omnivores (meat and plant eating). Scavengers are a special type of consumer that eats dead organisms. Decomposers are organisms that break down dead and decaying organisms and return their nutrients to the soil.

Common Misconceptions

It’s common for students to think that food chains are simple one to one relationships. A food web is a better representation of the complexities of energy relationships is an ecosystem. I would definitely address this misconception in another activity.

Some students that plants depend on people for water, nutrients, and soil. But plants do not need people to survive, people need plants.

Real World Connection

A real world example of how food chains work is a cow grazes in a pasture, then it is sent to the butcher and becomes hamburgers and steaks for humans. The grass got its energy from the sun, the cow got its energy from the grass, and the human gets its energy from the steak.

Connections Across the Curriculum

[**CCSS.ELA-Literacy.RI.6.7**](http://www.corestandards.org/ELA-Literacy/RI/6/7/) **Integrate information presented in different media or formats (e.g., visually, quantitatively) as well as in words to develop a coherent understanding of a topic or issue.**

The information for this lesson is presented visually via the learning pyramid that is the “different media or format” that the students must use to develop a coherent understanding of the topic of food chains in an ecosystem.

**GLE 0607.Inq.5 Communicate scientific understanding using descriptions, explanations, and models.**

This activity could easily be extended to building a larger model of a more complex food web.

**Health Education Standards for grades 6-8**

**Standard 5: The student will understand the relationship of nutrition to healthy living.**

The study of food chains and webs extends easily to a study on nutrition and healthy living. You could examine the nutritional value and energy contained in the different levels of the food chain plant foods vs. animal foods for example.

References

<http://www.tes.co.uk/teaching-resource/Food-web-card-sort-or-cut-and-stick-6082739/>

<http://teachers.henrico.k12.va.us/godwin/strauss_s/sscwebpage/reviews/ecology_review_answers.pdf>

<http://www.learner.org/courses/essential/life/session7/closer5.html>