

0 1.01 Food Chains and Webs Guided Notes

Objectives:

In the lesson, you will::

- identify producers, consumers, and decomposers in a food chain and/or food web
- differentiate between a food chain and a food web and trace the flow of energy between trophic levels
- explain the roles and relationships among producers, consumers, and decomposers in the process of energy transfer throughout a food web
- analyze food webs to determine if they correctly illustrate the roles, relationships, and transfer of energy among organisms

Big Ideas:

Key Questions and Terms	Notes
What are the differences between producers, consumers, and decomposers?	Producers can make their own food using energy Consumers eat other organisms for survival Decomposers break down dead organisms and waste into non living elements.
What is an ecosystem?	An ecosystem is a group of living organisms that live in and interact with each other in a specific environment.
How are producers, consumers, and decomposers categorized?	Producers, consumers, and decomposers are organisms in ecosystems that are classified based on how they gain their nutrition.
What is the role of producers in the ecosystem?	A producer's role in an ecosystem is to create food from inorganic matter.

What is another name for a producer?	autotrophs
What is a consumer?	an organism, usually an animal, that feeds on plants or other animals.
What is another name for a consumer?	heterotrophs
What are three types of consumers and how are they different?	Consumers are broken into three groups. Primary, secondary, and tertiary. Primary consumers are the herbivores that eat the producers. Secondary consumers are the carnivores or omnivores that eat the primary consumers. Tertiary consumers are carnivores or omnivores that eat the secondary consumers. Deer are herbivores and wolves are carnivores; they are both consumers.
What is the role of decomposers in the ecosystem?	Decomposers break down dead organisms and waste into non living elements. Mushrooms are common decomposers.
Give two examples of decomposers.	mushrooms, bacteria
What is a food chain? Where do you fit in on the food chain?	Food chains describe feeding relationships from one organism to the next. Food chains follow just one path of energy as animals find food.

<p>What is a food web? Compare and contrast food webs with food chains.</p>	
<p>How is energy transferred as it flows through the trophic levels in a food chain or a food web?</p>	
<p>What happens to the energy that is not transferred from one trophic to the next?</p>	
<p>How does the amount of energy available change as you move from one trophic level to the next?</p>	
<p>Approximately what percent of the energy is transferred from one trophic level to the next?</p>	
<p>The following examples show how energy is transferred from one trophic level to the next.</p> <p>10% of 5000 kcals is 500 kcals</p> <p>10% of 300 kcals is 30 kcals</p> <p>10% of 20 kcals is 2 kcals</p> <p>Describe the pattern you see.</p>	

How can changes in one part of a food web affect another part?

Energy of Life Video:

Key Questions and Terms	Notes
List three examples of producers.	
How are consumers classified into different groups?	
What is an herbivore, carnivore, and omnivore?	
What impact do decomposers have on the food web?	
What organisms are found in the first trophic level?	
Explain how energy moves through a food chain and a food web.	