

Questions and Answers: Basic Science - "The Chain of Life"

Class 5

Class 1: Introduction to Food Chains

Q1: What is a food chain? A1: A food chain is a series of organisms each dependent on the next as a source of food. It shows how energy is passed from one organism to another when one organism eats another.

Q2: What are the three types of consumers in a food chain? A2: The three types of consumers are:

- Herbivores: Animals that eat plants.
- Carnivores: Animals that eat other animals.
- Omnivores: Animals that eat both plants and animals.

Q3: Give an example of a simple food chain. A3: Example of a simple food chain:

1. Grass (Producer)
 2. Grasshopper (Primary Consumer/Herbivore)
 3. Frog (Secondary Consumer/Carnivore)
 4. Snake (Tertiary Consumer/Carnivore)
 5. Hawk (Quaternary Consumer/Carnivore)
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Class 2: Exploring Food Webs

Q1: What is a food web? A1: A food web is a system of interlocking and interdependent food chains. It shows how various food chains are connected and how energy flows in an ecosystem.

Q2: How is a food web different from a food chain? A2: A food web is more complex than a food chain because it consists of multiple interconnected food chains, showing various paths through which energy flows in an ecosystem.

Q3: Why is a food web important? A3: A food web is important because it illustrates the complexity of ecosystems and how different organisms are connected. It shows that the survival of one species can affect many others.

Class 3: The Role of Producers, Consumers, and Decomposers

Q1: What are producers? Give an example. A1: Producers are organisms that make their own food using sunlight through a process called photosynthesis. Example: Grass.

Q2: What are primary consumers? Give an example. A2: Primary consumers are herbivores that eat producers (plants). Example: Rabbit.

Q3: What role do decomposers play in an ecosystem? A3: Decomposers break down dead plants and animals, returning nutrients to the soil, which helps producers (plants) grow. They recycle nutrients within the ecosystem.

Q4: Give an example of a decomposer. A4: Example of a decomposer: Mushroom.

Class 4: Human Impact on Food Chains and Food Webs

Q1: Name two human activities that can disrupt food chains and food webs. A1: Two human activities that can disrupt food chains and food webs are:

- Pollution (e.g., contaminating water sources)
- Deforestation (e.g., cutting down forests and destroying habitats)

Q2: How can pollution affect aquatic food webs? A2: Pollution can decrease fish populations by contaminating the water, which affects the animals that eat fish and disrupts the entire aquatic food web.

Q3: What can humans do to reduce their negative impact on food chains and food webs? A3: Humans can reduce their negative impact by:

- Reducing pollution and properly disposing of waste.
 - Protecting natural habitats and preventing deforestation.
 - Practicing sustainable fishing and farming methods.
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Class 5: Assessment and Review

Q1: Define a food chain and give an example. A1: A food chain is a sequence of organisms each dependent on the next for food. Example: Grass (Producer) → Grasshopper (Primary Consumer) → Frog (Secondary Consumer) → Snake (Tertiary Consumer) → Hawk (Quaternary Consumer).

Q2: What is the role of producers in an ecosystem? A2: Producers, such as plants, make their own food using sunlight and provide the base energy source for all other organisms in the ecosystem.

Q3: Explain the importance of decomposers in a food web. A3: Decomposers break down dead plants and animals, returning essential nutrients to the soil, which supports plant growth and maintains the health of the ecosystem.

Q4: How does urbanization affect food chains and food webs? A4: Urbanization reduces natural habitats, leading to a loss of species and disrupting food chains and food webs. It can cause the extinction of some species and imbalance in the ecosystem.

Q5: Why is it important to understand food chains and food webs? A5: Understanding food chains and food webs helps us appreciate the interconnectedness of organisms and the impact of human activities on ecosystems. It highlights the importance of preserving biodiversity and maintaining ecological balance.