

International Indian School, Buraidah

Class: 8th

Subject: Environmental Education

Worksheet 1: Ecosystems and Food Chains

1. What is an ecosystem? Give one example from your surroundings.

Ans. An ecosystem is a system in which living organisms interact with one another and with the non-living environment of a particular area, for example, a school garden or a pond.

2. Define habitat and niche. How are they different in meaning?

Ans. A habitat is the place where an organism lives, such as a forest or a pond. A niche is the specific role or job of an organism in its habitat, like what it eats and how it interacts with others.

3. Who are producers in an ecosystem? Give any two examples.

Ans. Producers are green plants or algae that make their own food using sunlight by photosynthesis, for example, grass and phytoplankton.

4. What are decomposers? State one important role they play in nature.

Ans. Decomposers are organisms like bacteria and fungi that break down dead plants and animals. They return nutrients to the soil and keep the environment clean.

5. What is a food chain? Write any one simple food chain found in a grassland.

Ans. A food chain is a sequence that shows who eats whom in an ecosystem. A grassland food chain is: grass → grasshopper → frog → snake → eagle.

6. Explain the terms biotic and abiotic components. Give two examples of each from a pond ecosystem.

Ans. Biotic components are the living parts of an ecosystem, such as fish and aquatic plants in a pond. Abiotic components are the nonliving parts, such as water and dissolved oxygen in the pond.

7. Describe any one terrestrial ecosystem and any one aquatic ecosystem. Mention two features of each.

Ans. A forest is a terrestrial ecosystem with many trees and animals; it has thick vegetation and rich soil. A lake is an aquatic ecosystem in which water is the main medium; it contains aquatic plants and animals, such as fish and insects.

8. What will happen in an ecosystem if the number of herbivores suddenly decreases a lot? Explain any three possible effects.

Ans. If herbivores decrease, plants may overgrow due to less grazing, carnivores may face food shortages, and the balance of the ecosystem can be disturbed, leading to migration or death of some animals.

9. Differentiate between a food chain and a food web. Why is a food web considered more realistic in nature?

Ans. A food chain shows a single, straight feeding relationship, while a food web shows many interconnected food chains. A food web is more realistic because in nature, organisms usually eat and are eaten by more than one kind of organism.

Fill in the blanks:

1. The place where an organism lives and finds food and shelter is called its habitat.
2. Producers are green plants or algae that make their own food using sunlight by photosynthesis.
3. Animals that eat only plants are called herbivores.
4. Decomposers are organisms like bacteria and fungi that break down dead plants and animals.
5. A food web shows many interconnected food chains.

True or False:

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| 1. In an ecosystem, only living components interact with each other. | False |
| 2. Carnivores are animals that eat both plants and animals. | False |
| 3. Energy available to organisms usually decreases at each higher trophic level. | True |
| 4. A forest is an example of an artificial ecosystem. | False |
| 5. All ecosystems on Earth have identical climate and rainfall conditions. | False |

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