



Worksheet 1

Name:

Class:

Sixth grade

Subject:

Science

Date:

Ecosystem

- **What are ecosystems ?**

—> Ecosystems are made up of organisms, the physical environment surrounding them, and the interactions between them.



- **What components make up an ecosystem?**

—> Organisms
—> The physical environment
—> Their interactions

Notes:

- **Ecosystem Components:** Made up of biotic (living) and abiotic (non-living) factors.
- **Biotic Factors:** Include living things like animals, plants, fungi, and bacteria.
- **Energy Transfer:** Occurs when organisms get energy from other organisms, e.g., animals eating plants.
- **Biotic Interactions:** Involve mutualism, disease, decomposition, predation, parasitism, and reproduction.

- What are biotic factors?

—> They are living components of an ecosystem like animals, plants, fungi, and bacteria.

- **How do organisms transfer energy?**

—> 1. Through eating
2. absorbing nutrients
3. photosynthesis in plants.

- **What are examples of biotic interactions?**

—> 1. Mutualism (helping each other).
2. Disease.
3. Decomposition (breaking down dead things).
4. Predation (hunting).
5. Reproduction.

- **Are dead organisms considered biotic factors?**

—> Yes, because they were once alive and still affect the ecosystem through decomposition.

Notes:

- **Abiotic factors:** Non-living elements in an ecosystem.
- **Examples:** Temperature, precipitation, light intensity, water, soil, air, pollutants, and nutrients.
- **Swamp example:** Includes both abiotic (muddy soil, water, air, climate) and biotic factors (otters, alligators, trees).

- **What are abiotic factors?**

—> Non-living components of an ecosystem.

- **Give examples of abiotic factors.**

—> Temperature, light intensity, water, soil, air, pollutants, and nutrients.

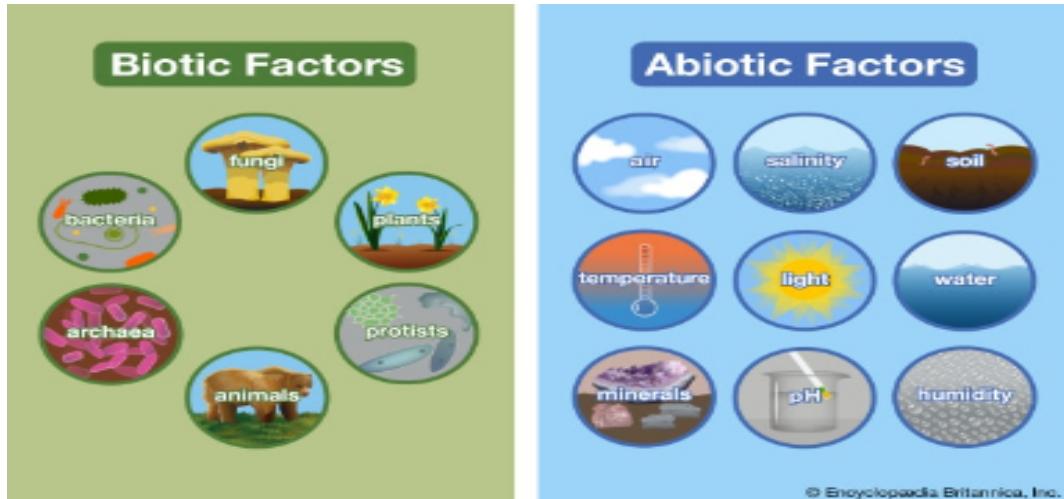
- **How do abiotic factors affect ecosystems?**

—> They influence the environment and determine which organisms can live there.

- **What factors make a swamp different from other environments?**

—> Abiotic factors like climate, air, water, muddy soil, and shady areas, combined with biotic factors like wildlife and plants.

-  **Ecosystem and Its Major Components**



Practice

Part A: Define the following terms:

1. Ecosystem:

2. Biotic Factors:

3. Abiotic Factors:

4. Energy Transfer:

5. Biotic Interactions:

Part B: Fill in the Blanks:

non-living, water, air / plants, animals, microorganisms / absorption / biotic, abiotic, environment

1. Ecosystems are made up of _____, the _____ environment, and their _____.
2. Biotic factors include living things like _____, _____, and _____.
3. Energy transfer occurs when organisms get energy through _____, absorbing _____, and consumption in plants.
4. Abiotic factors are _____ elements in an ecosystem like _____, _____, and _____.

Part C: Multiple Choice Questions

1. Which of the following is a biotic factor?

- A) Air
- B) Temperature
- C) Bacteria
- D) Water

2. What is an example of energy transfer?

- A) Rocks eroding
- C) Rainfall
- B) Animals eating plants
- D) Wind blowing

3. Which of the following is NOT an abiotic factor?

- A) Soil
- B) Light intensity
- C) Fungi
- D) Water

4. What type of interaction involves hunting?

- A) Mutualism
- B) Parasitism
- C) Predation
- D) Decomposition

5. Dead organisms are considered biotic because:

- A) They are non-living
- B) They were once alive and affect ecosystems through decomposition.
- C) They affect temperature
- D) They are part of the air

Part D: Short Answer

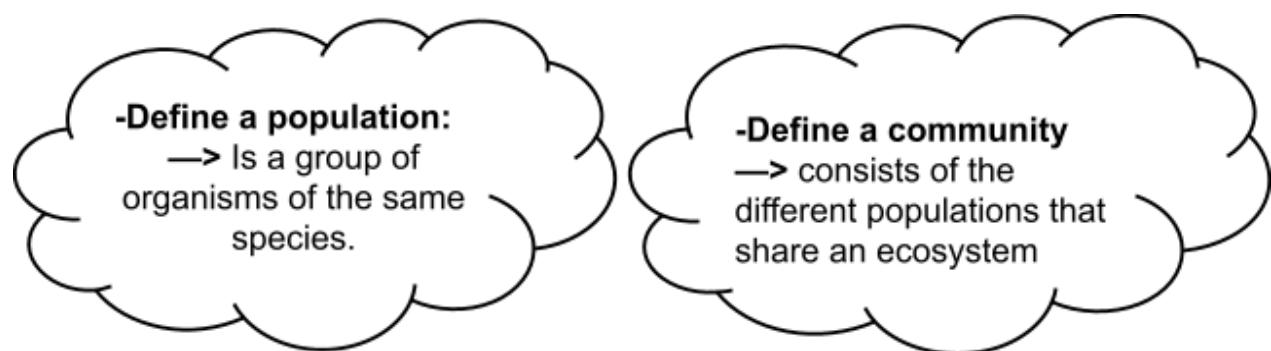
- **How do abiotic factors affect ecosystems?**

- **What makes a swamp different from other environments?**

- **Give two examples each of biotic and abiotic factors.**

Biotic Factors	Abiotic Factors

Population and Communities



Notes:

- **Competition:** Interaction between populations to meet needs (food, water, space, shelter, mates).
- **Limiting Factors:** Resources that control population size.

- **What is competition?**
- > Interaction between populations for necessary resources.
- **What are examples of resources populations compete for?**
- > Food, water, space, and shelter.
- **What are the limiting factors?**
- > Resources that control the size of populations.
- **How do limiting factors affect populations?**
- > They determine how many individuals can survive in an ecosystem.

Diversity

Notes:

- Biodiversity refers to the variety of species in an ecosystem.
- Ecosystems with diverse species are healthier and more stable.
- Climate and location affect biodiversity; it's richer near the equator.
- Human activities like deforestation and over-hunting reduce biodiversity.
- Coral reefs and rainforests are examples of highly diverse ecosystems.

- **What is biodiversity?**
- > The variety of species in an ecosystem.
- **Why is biodiversity important?**
- > It helps ecosystems stay healthy and stable.
- **How do climate and location affect biodiversity?**
- > Biodiversity is higher in warm, stable climates like near the equator.
- **Give examples of ecosystems with high biodiversity.**
- > Coral reefs and rainforests.

Practice

Part A: Define the following terms:

1. **Population:**

2. Community:

3. Competition:

4. Limiting Factors:

5. Biodiversity:

Part B: Fill in the Blanks:

Limiting / Community / Biodiversity / Competition / Population

1. A group of the same species living in an area is called a _____.

2. _____ refers to different populations living together.

3. When organisms compete for resources, this is called _____.

4. _____ factors limit the size of populations.

5. The variety of life in an ecosystem is known as _____.

Part C: Multiple Choice

1. Which of the following describes a community?

- A) A group of lions in the savannah
- B) All living and non-living things in a pond
- C) Different species living together in one area
- D) A single tree in a forest

2. What is a limiting factor?

- A) A factor that increases population size
- B) A factor that has no effect on populations
- C) A factor that restricts population growth
- D) A predator always present in an ecosystem

3. Which of the following is an example of competition?

- A) Birds migrating south for winter
- B) Two species of birds fighting over food
- C) Fish swimming in a lake
- D) A tree growing taller

4. Biodiversity refers to:

- A) The number of ecosystems in an area
- B) The variety of species in a particular habitat
- C) The size of a population
- D) The amount of trees in a forest

5. Which of the following is NOT a limiting factor?

- A) Water availability
- B) Space for shelter
- C) Unlimited food supply
- D) Disease