

Middle School Ecology Fundamentals

Ecology · Practice Test · 23 Questions

1. Which of the following is an example of an abiotic factor in an ecosystem?

- A) A type of bird
- B) The amount of rainfall
- C) A species of grass
- D) A population of fish

2. What is the primary role of decomposers in an ecosystem?

- A) To produce oxygen through photosynthesis
- B) To break down dead organic matter
- C) To consume producers directly
- D) To compete for limited resources

3. A food chain shows the flow of energy from one organism to another. Which organism is typically at the bottom of a food chain?

- A) A carnivore
- B) An omnivore
- C) A herbivore
- D) A producer

4. What term describes all the different populations of organisms living and interacting in a particular area?

- A) Biome
- B) Habitat
- C) Community
- D) Ecosystem

5. Which of these biomes is characterized by very cold temperatures, low precipitation, and permafrost?

- A) Tropical Rainforest
- B) Desert
- C) Tundra
- D) Grassland

6. What is the term for a place where an organism lives and finds food, water, and shelter?

- A) Niche
- B) Population
- C) Habitat
- D) Community

7. In a food web, what happens to the energy as it moves up to higher trophic levels?

- A) It increases by 10%
- B) It is completely lost
- C) It decreases significantly
- D) It remains the same

8. Photosynthesis, the process plants use to create their own food, requires which key component from the environment?

- A) Oxygen
- B) Carbon Dioxide
- C) Nitrogen
- D) Methane

9. Which of the following is an example of a biotic factor?

- A) Temperature
- B) Soil pH
- C) A predator
- D) Wind speed

10. What is the largest level of ecological organization that includes all the Earth's ecosystems?

- A) Biome
- B) Biosphere
- C) Ecosystem
- D) Community

11. Which biome is known for its hot, dry climate and sparse vegetation, often with animals that are nocturnal?

- A) Savanna
- B) Taiga
- C) Desert
- D) Temperate Forest

12. What is the term for the role an organism plays in its environment, including its diet and interactions?

- A) Habitat
- B) Niche
- C) Community
- D) Population

13. A population of rabbits is eaten by foxes. In this relationship, the rabbits are the:

- A) Predators
- B) Producers
- C) Prey
- D) Decomposers

14. Which biome is characterized by a large amount of rainfall and a wide variety of plant and animal life?

- A) Tundra
- B) Temperate Deciduous Forest
- C) Tropical Rainforest
- D) Chaparral

15. What is the name for all the living organisms in a particular area, plus the non-living physical components of that environment?

- A) Community
- B) Population
- C) Ecosystem
- D) Biome

16. Which of the following represents a producer in an aquatic ecosystem?

- A) A shark
- B) A seaweed
- C) A crab
- D) A fish

17. What process involves the movement of water from the Earth's surface into the atmosphere?

- A) Condensation
- B) Precipitation
- C) Evaporation
- D) Transpiration

18. An organism that eats other organisms is called a:

- A) Producer
- B) Decomposer
- C) Consumer
- D) Autotroph

19. Which biome is dominated by grasses and has moderate rainfall, supporting large grazing animals?

- A) Taiga
- B) Savanna
- C) Desert
- D) Tundra

20. What is the primary source of energy for most ecosystems on Earth?

- A) Geothermal vents
- B) The Moon
- C) The Sun
- D) Fossil fuels

21. The interaction where one organism benefits and the other is harmed is called:

- A) Mutualism
- B) Commensalism
- C) Predation
- D) Competition

22. Which factor is crucial for the survival of all known life forms on Earth?

- A) High levels of UV radiation
- B) Complete absence of water
- C) Presence of oxygen
- D) Extreme cold temperatures

23. What is a group of individuals of the same species living in the same area called?

- A) Community
- B) Ecosystem
- C) Population
- D) Biome