

Middle School Ecology Fundamentals

Ecology · Answer Key · 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