

Middle School Ecology Essentials

Ecology · Answer Key · 25 Questions

1. Which term describes an organism that can produce its own food using sunlight?

- A) Consumer
- B) Decomposer
- C) Producer**
- D) Scavenger

2. In an energy pyramid, which level contains the greatest amount of available energy?

- A) Tertiary consumers
- B) Secondary consumers
- C) Primary consumers
- D) Producers**

3. What is the primary role of fungi and bacteria in an ecosystem?

- A) Photosynthesis
- B) Decomposition**
- C) Predation
- D) Pollination

4. Which of the following is a biotic factor in a forest ecosystem?

- A) Soil pH
- B) Temperature
- C) Tree species**
- D) Annual rainfall

5. What do we call the specific physical area where an organism lives and interacts with its environment?

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

6. Which process involves the movement of water from the surface of Earth into the atmosphere as gas?

- A) Precipitation
- B) Condensation
- C) Evaporation**
- D) Infiltration

7. What is the term for a group of individuals of the same species living in the same area?

A) Population

B) Ecosystem

C) Biome

D) Biosphere

8. An organism that eats only plants is classified as a:

A) Carnivore

B) Omnivore

C) Herbivore

D) Detritivore

9. Which gas is absorbed by plants from the atmosphere during the process of photosynthesis?

A) Oxygen

B) Nitrogen

C) Carbon dioxide

D) Hydrogen

10. What is the main source of energy for almost all life on Earth?

A) Chemical bonds

B) The Sun

C) Geothermal heat

D) Fossil fuels

11. Which relationship describes one organism benefiting while the other is harmed?

A) Mutualism

B) Commensalism

C) Parasitism

D) Competition

12. What is a biological community of interacting organisms and their physical environment called?

A) Ecosystem

B) Population

C) Species

D) Biome

13. Which of the following is an example of an abiotic factor?

- A) Grass
- B) Predator
- C) Sunlight**
- D) Bacteria

14. What is the role of a secondary consumer in a food chain?

- A) Eating producers
- B) Eating primary consumers**
- C) Making its own food
- D) Breaking down dead matter

15. Which biome is characterized by low temperatures and a layer of permanently frozen subsoil called permafrost?

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

16. The total variety of all living organisms in a specific area is known as:

- A) Sustainability
- B) Biodiversity**
- C) Adaptation
- D) Succession

17. What process converts atmospheric nitrogen into a form that plants can use?

- A) Nitrogen fixation**
- B) Respiration
- C) Combustion
- D) Evaporation

18. Which of these is considered a scavenger?

- A) Vulture**
- B) Green plant
- C) Mouse
- D) Earthworm

19. What is the definition of a niche in ecology?

- A) The geographic location of a species
- B) The role and position a species has in its environment**
- C) The total number of species in a region
- D) The physical boundary of an ecosystem

20. Which organism occupies the highest trophic level in a food chain?

- A) Apex predator**
- B) Primary producer
- C) Herbivore
- D) Decomposer

21. What is the process by which a forest gradually recovers after a wildfire?

- A) Erosion
- B) Succession**
- C) Evaporation
- D) Pollination

22. Which ecosystem has the highest rate of primary productivity?

- A) Desert
- B) Tropical rainforest**
- C) Open ocean
- D) Tundra

23. What is an organism that eats both plants and animals called?

- A) Herbivore
- B) Carnivore
- C) Omnivore**
- D) Producer

24. Which of the following best describes the carbon cycle?

- A) The movement of carbon through the biosphere, atmosphere, and geosphere**
- B) The creation of carbon in the soil
- C) The destruction of carbon by sunlight
- D) The storage of carbon in water only

25. What refers to the maximum population size of a species that an environment can sustain indefinitely?

- A) Birth rate
- B) Carrying capacity**
- C) Niche limit
- D) Biomass