

# Fundamental Concepts of Ecology

Ecology · Answer Key · 10 Questions

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**1. What is the primary source of energy for almost all ecosystems on Earth?**

- A) Geothermal heat
- B) Solar radiation**
- C) Chemical bonds in rocks
- D) Tidal energy

**2. Which term describes an organism that can produce its own food using sunlight or chemical energy?**

- A) Consumer
- B) Decomposer
- C) Autotroph**
- D) Heterotroph

**3. In a food web, which organisms are responsible for breaking down dead organic matter and recycling nutrients?**

- A) Decomposers**
- B) Apex predators
- C) Primary consumers
- D) Secondary producers

**4. What is the 'carrying capacity' of an environment?**

- A) The total amount of oxygen produced
- B) The maximum population size an environment can support**
- C) The speed at which a species reproduces
- D) The total number of predators in an area

**5. Which gas is removed from the atmosphere by plants during the process of photosynthesis?**

- A) Nitrogen
- B) Oxygen
- C) Carbon dioxide**
- D) Methane

**6. What is a biome?**

- A) A specific type of soil composition
- B) A large geographical area characterized by specific climate, flora, and fauna**
- C) The population density of a single species
- D) The study of human impact on cities

**7. Which level of biological organization consists of all living organisms in a specific area interacting with their physical environment?**

- A) Population
- B) Community
- C) Biosphere
- D) Ecosystem**

**8. What is the relationship called when two species live in close physical contact, and both benefit?**

- A) Parasitism
- B) Mutualism**
- C) Commensalism
- D) Competition

**9. Approximately what percentage of energy is typically transferred from one trophic level to the next in a food chain?**

- A) 10%**
- B) 25%
- C) 50%
- D) 90%

**10. What defines a 'keystone species' in an ecosystem?**

- A) A species that has a disproportionately large effect on its environment**
- B) The species with the highest population count
- C) A species that only eats plants
- D) A species that is newly introduced to an area