

Name: _____ Grade: _____ Date: _____



Interactions within Ecosystems

Multiple Choice

- What is the term for the interactions between organisms in an ecosystem?
 - Abiotic factors
 - Biotic factors
 - Symbiosis
 - Ecology
- Which of the following is NOT a type of symbiotic relationship?
 - Mutualism
 - Commensalism
 - Predation
 - Parasitism
- What is the term for an organism that eats only plants?
 - Producer
 - Primary consumer
 - Secondary consumer
 - Herbivore
- What is the term for an organism that eats other organisms?
 - Producer
 - Primary consumer
 - Secondary consumer
 - Consumer
- Which of the following is an example of mutualism?
 - A tick parasitizing a dog
 - A clownfish living among the tentacles of an anemone
 - A lion hunting a zebra
 - A cow eating grass

True/False

1. All ecosystems have the same types of interactions between organisms.
2. Competition is a type of symbiotic relationship.
3. Predators help to control the populations of their prey.
4. Parasites always harm their hosts.
5. Commensalism is a type of relationship where one organism benefits and the other organism is unaffected.

Short Answer

1. Explain the difference between mutualism and commensalism.
2. Describe how competition can affect the populations of two different species.
3. Explain why predators are important for maintaining a healthy ecosystem.
4. Give an example of a parasitic relationship.
5. What are some of the abiotic factors that can affect the interactions between organisms in an ecosystem?

Essay

Discuss the different types of interactions that can occur between organisms in an ecosystem and explain how these interactions contribute to the overall health and stability of the ecosystem.

Answers

Multiple Choice

1. C
2. C
3. D
4. D
5. B

True/False

1. False
2. False
3. True
4. True
5. True

Short Answer

1. Mutualism is a symbiotic relationship where both organisms benefit.
Commensalism is a symbiotic relationship where one organism benefits and the other organism is unaffected.
2. Competition can affect the populations of two different species in a number of ways. For example, if two species compete for the same resources, one species may outcompete the other and drive it to extinction. Competition can also lead to niche differentiation, where two species evolve to occupy different niches in the ecosystem.

3. Predators are important for maintaining a healthy ecosystem because they help to control the populations of their prey.
If there were no predators, prey populations would grow unchecked and eventually overgraze their food sources. This could lead to the collapse of the ecosystem.
4. An example of a parasitic relationship is the relationship between a tick and a dog. The tick feeds on the dog's blood, which harms the dog.
5. Some of the abiotic factors that can affect the interactions between organisms in an ecosystem include temperature, water availability, and salinity. For example, if the temperature of an ecosystem changes, it can affect the distribution of species and the interactions between them.

Essay

- ✓ The different types of interactions that can occur between organisms in an ecosystem include competition, predation, parasitism, mutualism, and commensalism. These interactions contribute to the overall health and stability of the ecosystem in a number of ways.
- ✓ Competition helps to ensure that resources are used efficiently and that no one species becomes too dominant. Predation helps to control the populations of prey species and prevents them from overgrazing their food sources. Parasitism can help to regulate the populations of host species and keep them in check. Mutualism benefits both organisms involved, and commensalism benefits one organism without harming the other.
- ✓ All of these interactions play an important role in maintaining the balance of nature and ensuring the survival of all species in an ecosystem. If any of these interactions were disrupted, it could have a negative impact on the entire ecosystem.
- ✓ For example, if there were too many predators in an ecosystem, they could overhunt their prey and drive them to extinction. This could lead to a cascade effect, where the loss of one species.