

Science Grade 5

Lesson 3: Relationships in Ecosystems

- **Competition:** the fight for limited resources
- **Limiting factor:** is any resource that restricts the growth of populations
 - **Abiotic limiting factors:** water, temperature, weather, soil type, space to grow, shelter and sunlight.
 - **Biotic limiting factors:** the amount of available food
- **Carrying capacity:** is the greatest number of individuals within a population that an ecosystem can support
- **Habitat:** is the physical place where an organism lives and hunts for food.
- **Niche:** is the special role that an organism plays in a community.
- **Symbiosis:** is a relationship between two or more kinds organisms that last over times
- **Mutualism:** a symbiotic relationship that benefits both organisms. Examples:
 - Pollinator (insect or bird) and a flowering plant
 - Ants and acacia trees
 - Lichens (the fungus and alga)
- **Commensalism:** a symbiotic relationship that benefits one organism without harming the other. Example:
 - Remoras are fish attach themselves to the bodies of rays and shark to get food, transportation and protection.
 - Orchids growing on trees in a rain forest.
- **Parasitism:** symbiotic relationship where one organism benefit and the other harmed. Example:
 - Ticks and parasites on animals
 - Tapeworm in human
 - Amoeba cause a disease called dysentery.

	Mutualism	Commensalism	Parasitism
Definition	benefits both organisms	benefits one organism without harming the other.	one organism benefit and the other harmed
Example	<ul style="list-style-type: none"> ○ Pollinator (insect or bird) and a flowering plant ○ Ants and acacia trees ○ Lichens (the fungus and alga) 	<ul style="list-style-type: none"> ○ Remoras are fish attach themselves to the bodies of rays and shark to get food, transportation and protection. ○ Orchids growing on trees in a rain forest. 	<ul style="list-style-type: none"> ○ Ticks and parasites on animals ○ Tapeworm in human ○ Amoeba cause a disease called dysentery.

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- **A lichen is a combination of fungus and algae that lives on the sides of trees, rocks, and other materials. The fungus provides the algae with water and minerals and the algae uses the water and minerals to make food for both organisms. What type of relationship does the lichen represent?**
 - Parasitism
 - Commensalism
 - Mutualism
- **When a symbiotic relationship benefits both organisms, it is an example of:**
 - Commensalism
 - Mutualism
 - Parasitism
 - Carnivores
- **When a symbiotic relationship helps one organism and hurts the other it is an example of:**
 - Commensalism
 - Mutualism
 - Parasitism
- **the following picture is an example of what kind of symbiotic relationship?**
 - Commensalism
 - Mutualism
 - Parasitism
- **Which of the following symbiotic relationships is considered parasitic?**
 - ticks feeding on a dog
 - bees transporting pollen from flowers
 - pilot fish swimming under sharks
 - birds eating the insects from the back of a hippopotamus
- **Ants and acacia trees have a mutualistic relationship because**
 - they benefit each other.
 - they are part of the same ecosystem.
 - they are both adapted to a humid climate.
 - the ants eat part of the acacia tree.
- **Which of the following is a symbiotic relationship where one partner benefits and the other does not benefit or lose from the relationship?**
 - commensalism
 - mutualism
 - parasitism
 - decomposition



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- **Which of the following is a symbiotic relationship where both partners benefit?**
 - commensalism
 - mutualism
 - parasitism
 - decomposition

- **Which of the following is a symbiotic relationship where one partner benefits and the other is harmed?**
 - commensalism
 - mutualism
 - symbolism
 - Parasitism

- **Which of the following symbiotic relationships is considered parasitic?**
 - Tapeworm in an intestinal tract
 - Bees transporting pollen from flowers
 - Pilot fish swimming under sharks
 - Birds eating the insects from the back of a hippopotamus

- **Ants and acacia trees have a mutualistic relationship because.**
 - They both benefit from living with each other.
 - They are part of the same ecosystem.
 - They are both adapted to a humid climate.
 - The ants eat part of the acacia tree

- **This occurs when organisms try to get the same resources.**
 - Symbiosis
 - Competition
 - Predation
 - Parasitism

- **A relationship in which one animal hunts, kills and eats another.**
 - Parasitism
 - Symbiosis
 - Predation
 - Mutualism

- **The animal that is hunted and killed for food.**
 - Predator
 - Scavenger
 - Decomposer
 - Prey

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Lesson 3: Relationships in Ecosystems

- **A close relationship between two different species of organisms living together.**
 - Food Web
 - Food Chain
 - Symbiosis
 - Competition

- **A symbiotic relationship in which both species benefit.**
 - Competition
 - Commensalism
 - Parasitism
 - Mutualism

- **A symbiotic relationship in which one species benefits without benefiting or harming the other organism.**
 - Competition
 - Parasitism
 - Commensalism
 - Mutualism

- **A symbiotic relationship in which one species benefits by harming another.**
 - Mutualism
 - Competition
 - Commensalism
 - Parasitism

A dog and a tick are examples of which symbiotic relationship?

- Predator/Prey
 - Parasitism
 - Commensalism
 - Mutualism
-
- **An owl and a mouse are examples of which symbiotic relationship?**
 - Mutualism
 - Parasitism
 - Commensalism
 - Predator/Prey
-
- **A clownfish lives in a sea anemone. The anemone is not hurt, but the clownfish can live in its safety. This is an example of what symbiotic relationship?**
 - Mutualism
 - Parasitism
 - Predator/Prey
 - Commensalism