

## Chapter 21, Section 3

### Interactions Among Living Things

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natural selection - a characteristic that makes an individual better suited to its environment may eventually become common in that species through the process of natural selection.

➤ adaptations - the behaviors and physical characteristics that allow organisms to live successfully in their environments.

➤ niche - every organism has a variety of adaptations that are suited to its specific living conditions  
- the role of an organism in its habitat, or how it makes its living, is called its niche.  
(includes its type of food, other organisms that use it for food, when and how the organism reproduces, etc).

There are three major types of interactions among organisms: competition, predation, and symbiosis.

➤ competition - the struggle between organisms to survive as they attempt to use the same limited resource

➤ predation - an interaction in which one organism kills another for food.

predator - the organism that does the killing.

prey - the organism that is killed.

➤ symbiosis - a close relationship between two species that benefits at least one of the species.

- Three types of symbiotic relationships

mutualism

commensalism

parasitism

➤ - mutualism - a relationship in which both species benefit.

➤ - Commensalism - a relationship in which one species benefits and the other species is neither helped nor harmed.

➤ - parasitism - involves one organism living on or inside another organism and harming it.

- parasite - the organism that benefits.

- host - the organism that a parasite lives on.  
the parasite is usually smaller than the host.

## Questions p. 729.

1a. Adaptations are the behaviors and physical characteristic that allow organisms to live successfully in their environments.

1b. The sharp fangs enable the snake to bite into its prey.

1c. Snakes with sharper fangs could capture more prey and thus be able to survive and reproduce. They pass this trait, sharp fangs, on to their offspring.

2a Competition, predation, and symbiosis

2b. Competition - Two species of birds that eat the same type of insects;

Predation - a snake eating a mouse

Symbiosis - stinging ants nesting in an acacia tree.

3a Mutualism, commensalism, and parasitism

3b. Mutualism - both species benefit

Commensalism - one species benefits and the other is neither harmed nor helped.

Parasitism - one species is helped and the other is harmed

3c Parasitism is most likely. One species is being harmed (plus)