

Chapter 8 Section 2 Notes

An Organism's niche

- habitat – location where an organism lives
- niche – the functional role of a species within an ecosystem
 - kangaroo's role as a large herbivore on Australian grasslands
 - American bison's niche includes grasslands, water, and the gray wolf

niches can overlap if 2 species in an area eat the same food but at different times of the day

How Species Interact with Each Other

One organism may be classified in different ways depending on the role and interaction being observed. a grizzly bear could be considered a competitor (territorial with regard to other grizzlies), a mutualist (berry producing plants rely on bears to disperse their seeds), or a predator (hunting salmon)

- competition – two species negatively affect each other and both are harmed
 - woodpeckers eating at a bird feeder
 - members of a species may compete with one another for social dominance or for resources
 - indirect competitors for food if they use the same food source at different times of the day
 - bird that feeds at night and a bird that feeds during the day from the same flower
- predation – one species benefits the other species is usually killed
 - owl snatching a mouse from a field to eat
 - if exponential growth occurs in the population of a species of predator, the population of the prey will most likely decrease
- parasitism – one species benefits the other species is harmed but not killed
 - worm in your intestine
 - three lampreys attached to a fish and sucking its body fluids for food
- mutualism – both species benefit
 - bacteria in your intestines that help you break down food
 - butterfly pollinating a flower as it drinks nectar from the flower
- commensalism – one species benefits and the other is unaffected
 - robin that doesn't affect the tree it nests in
 - orchid using a high tree branch as a place of attachment to receive more sunlight but not affecting the tree

symbiosis – a relationship in which two different organisms live in close association with each other.

- wren builds nest in a cactus
- yucca moth pollinates and lays eggs on yucca flowers
- bacteria in a fox's digestive system helps it digest food

coevolution – development of adaptations as a result of symbiotic relationships

- The "co" in coevolution means together
- If two species coevolve they may develop adaptations that reduce the harm and/or increase the benefit of the relationship
 - flowering plants and their pollinators have coevolved