

## Chapter 5 Biodiversity, Species Interactions, and Population Control Review Questions

1. Southern sea otters act as a key-stone species in their environment. Why should we care about protecting this species from premature extinction.
2. Define interspecific competition, predation, parasitism, mutualism, and commensalism and give an example of each.
3. Describe and give an example of resource partitioning and explain how it can increase species diversity.
4. Distinguish between a predator and a prey species and give an example of each. What is a predator– prey relationship?
5. Describe three ways in which prey species can avoid their predators and three ways in which predators can increase their chances of feeding on their prey.
6. Define and give an example of coevolution.
7. Describe four variables that govern changes in population size and write an equation showing how they interact.
8. What is a population's age structure and what are three major age groups called?
9. Distinguish between the environmental resistance and the carrying capacity of an environment, and use these concepts to explain why there are always limits to population growth in nature.
10. Why are southern sea otters making a slow comeback and what factors can threaten this recovery?
11. Define and give an example of a population crash.
12. Explain why humans are not exempt from nature's population controls.
13. Describe the exploding white-tailed deer population problem in the United States.
14. Describe two different reproductive strategies that can enhance the long-term survival of a species.
15. Define population density and explain how it can affect the size of some but not all populations.
16. What is ecological succession?
17. Distinguish between primary ecological succession and secondary ecological succession and give an example of each.
18. Explain why succession does not follow a predictable path.
19. Explain how living systems achieve some degree of sustainability by undergoing constant change in response to changing environmental conditions.
20. In terms of stability, distinguish between inertia (persistence) and resilience and give an example of each.