

Chapter 4 Biodiversity and Evolution Review Questions

1. Describe the threats to many of the world's shark species and explain why we should protect sharks from extinction as a result of our activities.
2. What are the four major components of biodiversity (biological diversity)?
3. What are species?
4. Define and give three examples of biomes.
5. Why are fossils important in understanding the history of life?
6. Summarize the theory of evolution.
7. What is natural selection?
8. What is a mutation and what role do mutations play in evolution by natural selection?
9. What is an adaptation (adaptive trait)?
10. What is differential reproduction and why is it important?
11. What are two limits to evolution by natural selection?
12. What are three myths about evolution through natural selection?
13. Describe how geologic processes can affect natural selection.
14. Describe conditions on the earth that favor the development of life as we know it
15. What is speciation?
16. Distinguish between geographic isolation and reproductive isolation and explain how they can lead to the formation of a new species.
17. Distinguish between artificial selection and genetic engineering and give an example of each.
18. What is extinction
19. What is an endemic species and why can such a species be vulnerable to extinction?
20. Distinguish between background extinction and mass extinction.
21. What is species diversity?
22. Distinguish between species richness and species evenness and give an example of each.
23. Explain why species-rich ecosystems tend to be productive and sustainable.
24. What is an ecological niche?
25. Distinguish between specialist species and generalist species and give an example of each.
26. Distinguish among native, nonnative and indicator species and give an example of each type.
27. Distinguish between keystone and foundation species.
28. Describe the role of some sharks as keystone species.
29. Describe the role of the American alligator as a keystone species and how it was brought back from near extinction.
30. Describe the role of beavers as a foundation species

