

Read and complete each question in full sentences. Use examples whenever possible!

1. Core Case Study of the chapter 4 talks about sharks and their position in the ecosystem. Based on the Core Case Study (CCS) state your opinion and explain why or why not the sharks are important part of the biodiversity.

2. How many species are identified by biologist? _____

3. List the major components of the earth's biodiversity:

- A) _____
B) _____
C) _____
D) _____

4. Going back to our CCS – What are three ways the sharks support one or more of the four components of the diversity within the environment?

- A) _____
B) _____
C) _____

5. In your own words explain why is biodiversity dependent on the species variety?

6. Define the theory of evolution and the two scientists who contributed to its origin.

7. Which theory explains how life had changed in the past 3.5 billion years?

8. Which process has to happen first in order for the *biological evolution by natural selection* to take place? _____

9. Explain the difference between the mutation and the adaptation.

Mutation _____

Adaptation _____

10. Based on your prior knowledge explain *genetic resistance*, give an example.

11. *Homo sapiens sapiens* became one of the most powerful species that had evolved by natural selection. List all the advantages we had acquired by adaptation:

- a) _____
- b) _____
- c) _____

12. Explain how is the giraffe's long neck a misconception or a myth in the evolution through the natural selection.

13. How did tectonic plates drift effect the evolution and distribution of life on the earth?

14. In the period of 3.5 billion years many catastrophic collision had happened. What are the main changes that resulted from these collisions?

- a) _____
- b) _____

15. Explain the difference between the geographical and reproductive isolation.

16. All species eventually become extinct, differentiate between the biological extinction and local extinction.

- A) _____
- B) _____

17. Why do you think that Edward O. Wilson and other scientists study species on small isolated islands rather than in vast areas? Explain the theory of island biogeography.

Based on the Case Studies in Section 4-6 define these terms. Support each term with the example:

18. A) generalist species:

B) specialist species:

19. A) native species:

B) nonnative species:

20. A) indicator species:

B) keystone species:
