

**Chapter 4 – The Organization of Life Questions** – Answer in complete sentences in your own words.

**4.1 – Ecosystems: Everything is Connected**

1. List three abiotic and three biotic factors that are in your ecosystem.
2. Describe what a population is and give an example.
3. Describe which factors of an ecosystem are not part of a community.
4. Explain the difference between a population and a species.
5. Explain why a scientist might say a species is becoming rare due to habitat destruction.

**4.2 – Evolution**

6. Explain what an adaptation is and provide three examples.
7. Explain the process of evolution by natural selection.
8. Describe one way in which artificial selection can benefit humans.
9. Explain how a population of insects could become resistant to a pesticide.
10. A population of rabbits evolves thicker fur in response to a colder climate. Is this an example of coevolution? Explain your answer.

**4.3 – The Diversity of Living Things**

11. Describe how animals and angiosperms depend on each other.
12. Describe the importance of protists in the ocean.

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13. Name the 6 kingdoms of life and give two characteristics specific to each.

14. Explain the importance of bacteria and fungi in the environment.

15. Explain how the large number and wide distribution of angiosperm species is related to the success of insects.

### **Chapter Review**

16. List the five components that an ecosystem must contain to survive indefinitely.

17. What is the difference between biotic and abiotic factors in an ecosystem?

18. What is the difference between an adaptation and evolution?

19. In what building in your community do you think bacteria are evolving resistance to antibiotics most rapidly? Explain your answer.

20. A scientist applies a strong fungicide, a chemical that kills fungi, to an area of forest soil every week during October and November. How might this area look different from the surrounding ground at the end of the experiment?