

Biology

Chapter 10-11 Study Guide Name _____ Period _____ Date _____

Answer the following questions:

1. Explain what is meant by the term evolution and give an example.
2. What idea did Cuvier, Lyell and Hutton challenge with their studies?
3. Explain Lamarck's principle of use and disuse.
4. How did Malthus describe the conditions of the populations of Europe?
5. What is Darwin's principle of common descent?
6. How does Darwin's principle of common descent explain the characteristics of today's species?
7. Darwin discovered that different types of tortoises lived on the different Galapagos Islands. Use what you learned about Darwin's theory to explain how the different tortoises may have evolved.
8. Give four pieces of evidence for evolution. Explain what each piece of evidence is and explain how it supports the theory of evolution.
9. Define natural selection.
10. What are Darwin's four principles of natural selection?
11. What is artificial selection? How did this concept affect Darwin's thinking about change over time?
12. What is an adaptation?
13. Compare homologous and analogous structures.
14. How can adaptations help an organisms survive?
15. Define the term vestigial structure.
16. How might vestigial structures be important showing common ancestry among organisms?
17. Explain what the term relative frequency means.
18. What does a change in the relative frequency of the alleles in a population mean in terms of evolution?
19. What process leads to a change in the relative frequency of alleles in a population?
20. What are two sources of genetic variation in a population?
21. Name the three ways how natural selection can affect the distribution of phenotypes in a population.
22. Compare what happens to the range of phenotypes in a population with stabilizing, directional and disruptive selection.
23. How does genetic drift affect a small population? Give an example of genetic drift.
24. Define the term speciation.
25. What are the three mechanisms for reproductive isolation? Give an example of each one.
26. Compare and contrast **punctuated equilibrium** and **gradualism** model of evolution. Which theory supports the possible evolution of the horse?