

Name \_\_\_\_\_ Date \_\_\_\_\_ Period \_\_\_\_\_

## Chapter 10 Concept Review

### BIOLOGY

**Directions:** Answer the following questions using your notes and textbook

1. Evolution- process of biological change by which \_\_\_\_\_ come to differ from their \_\_\_\_\_.
2. Carolus Linnaeus (1700's)- developed \_\_\_\_\_ system to name living things (grouped by similarities)
3. Erasmus Darwin- Darwin's grandfather. Proposed that all living things were descended from a common \_\_\_\_\_
4. Jean-Baptiste Lamarck -proposed theory that all organisms evolved toward \_\_\_\_\_ and \_\_\_\_\_.
  - a. Proposed changes in environment caused an organism behavior to change, leading to greater use or disuse of a \_\_\_\_\_ or \_\_\_\_\_.
  - b. Organism then passed changes on to \_\_\_\_\_.
5. Charles Lyell (1830)- published "Principles of Geology". Also said Earth must be very \_\_\_\_\_. Said changes in Earth occurred at constant \_\_\_\_\_ over time
6. Noticed variations well suited to animals environment (variation- differences in \_\_\_\_\_ traits)
7. Studied birds, tortoises and said somehow adapt to their surroundings (adaptation- a feature that allows an organism to better \_\_\_\_\_ in environment)
8. Artificial Selection- process by which humans change a species by \_\_\_\_\_ it for certain traits
9. Darwin compared what he learned about \_\_\_\_\_ to his idea of adaptation
10. Said that in nature, \_\_\_\_\_ creates selective pressure instead of humans in artificial selection
11. Natural Selection- mechanism by which \_\_\_\_\_ is selective agent

12. Said adaptations arose over many \_\_\_\_\_ (called process “descent with modification)
13. 4 main principles to theory of natural selection
- \_\_\_\_\_ - variations in populations are basis for natural selection.
  - \_\_\_\_\_ - organisms produce more offspring than will survive (creates competition)
  - \_\_\_\_\_ - Some adaptations allow organism to survive at higher rate and individuals are “naturally selected” to survive and produce \_\_\_\_\_ offspring
  - \_\_\_\_\_ with \_\_\_\_\_ - Over time, natural selection will result in species with adaptations that are well suited for survival
14. Fitness- measure of ability to \_\_\_\_\_ and produce more \_\_\_\_\_ relative to other members of a population
15. Natural selection acts on \_\_\_\_\_ (not genetic material itself)
16. As environment changes, different traits will become \_\_\_\_\_.
17. The different environments on each island led to specific \_\_\_\_\_ in diets, habits, and beak shapes
18. Embryology- Similarities in embryos showed relationships between organisms and possible \_\_\_\_\_ ancestor
19. \_\_\_\_\_ structures- features that are similar in structure but have different functions (suggested common ancestor) (i.e. forelimbs of vertebrates)
20. \_\_\_\_\_ structures-structures that perform similar function but are not similar in origin (i.e. wings of bats and insects)
21. \_\_\_\_\_ structures- structures or organs that seem to lack any useful function that had a function in early ancestor
22. Fossils provide a \_\_\_\_\_ of evolution
23. \_\_\_\_\_ - study of fossils or extinct organisms
24. \_\_\_\_\_ and \_\_\_\_\_ evidence support fossil and anatomical evidence
25. DNA sequence analysis- more closely \_\_\_\_\_ have more \_\_\_\_\_ DNA