

Name _____ Date _____ Period _____

Chapter 10 Concept Review

B I O L O G Y

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