Name _____ Date _____ Period _____

Chapter 12 Concept Review
B I O L O G Y

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

1. _____- minerals carried by water are deposited around or replace the hard structure

2. Amber-preserved fossils- organisms trapped in _____ _____ that hardens into amber

3. Most fossils form in _____ rock

4. Best _____ for fossilization include wetlands, bogs, rivers, lakebeds, and floodplains

5. _____ Dating- estimate of date by comparing placement of fossils in rock layers.

6. _____ dating- technique using natural decay rate of unstable isotopes

7. _____ fossils are another tool to determine the age of rock layers.

8. Index fossils- organisms that existed only during specific spans of time over large geographic

area. Estimate _____ of rock layers by _____ they contain

9. _____ time scale- representation of the history of Earth

    a. Organizes by major _____ or events

    b. Uses evidence from _____ and geologic records

10. Miller-Urey experiment (1953)- demonstrated that organic compounds could be made by simulating conditions on early Earth

11. Meteorite hypothesis- _____ molecules may have arrived on Earth through meteorite or asteroid impacts

12. Iron-sulfide bubbles hypothesis- biological molecules formed in chimneys of

_____ vents

13. Single-celled organisms changed Earth's surface by depositing _____. Changed atmosphere by giving off oxygen

14. 3.5 billion years ago, _____ life evolved (cyanobacteria)

15. Higher _____ levels in atmosphere and oceans allowed evolution of aerobic prokaryotes

16. Eukaryotic cells may have evolved through _____

17. Endosymbiosis theory- one organisms lives within body of another, and both

_____ from relationship

a. Early mitochondria and chloroplasts were once simple _____ cells taken up by larger prokaryotes 1.5 billion years ago

b. Based theory on fact that mitochondria and chloroplasts have their own _____

and _____

18. The evolution of _____ reproduction led to increased diversity

19. One of most important _____ in history of life

a. First appeared during _____ era (544 million years ago)

b. Huge _____ of animal species evolved

20. Paleozoic Era ended with mass _____

21. Reptiles radiated during the Mesozoic era. Era ended with mass extinction caused by meteorite impact

22. Mammals radiated during the _____ era

23. _____- category of mammals with flexible hands and feet, forward looking eyes, and enlarged brains relative to body size.

24. Modern humans arose about _____ years ago

25. Increased skull and brain size gave humans a _____ advantage