

(Biological Sciences 10 Study Notes.)

Chapter 19

1. What is the possible explanation for why humans have young that are helpless and immature for a relatively long time? What is the possible explanation of why you swing your left arm forward as the right leg does the same?
2. Earth came into being - how long ago? What criterion was used to separate one geological time period from another? What kind of event is the basis for many of the transitions from one time period to another? When is life on the planet thought to have begun? Is evolution a march toward the development of humans?
3. What 4 chemicals and what 5th item did Stanley Miller use to recreate conditions on the young Earth? What is a "replicator-first" model of how life might have originated? What are ribozymes?
4. What do the "metabolism-first" researchers believe about the origin of life?
5. What 2 characteristics would any origin of life proposal have to have?
6. What are the 3 domains (of today) of life? Where do prokaryotes belong?
7. What is the earliest evidence of possible life on Earth? 400 million years later, what is the evidence of life on earth? The oldest eukaryotic fossils date from when? What notable event began in bacteria about 3.4 billion years ago? What chemical element did that notable event produce?
8. What are the 2 "invaders" of eukaryotic cells and what did they do for the "invaded" cells?
9. What is the "Cambrian Explosion?" What might be responsible for it?
10. What general kind of organisms first moved to land from water?
11. In order for plants to "exploit" a land environment, 2 characteristics had to appear and they are: 1..... 2.....
12. How can a "seed" be defined? Flowering plants were more successful than cone-bearers because of one major change in pollination: _____
13. What kind of animal probably was the first to move to land. What is there about their anatomy that gave them protection?
14. What was the precursor to limbs in fish?
15. What is the sequence of development of 4-footed animals (tetrapods)? Birds are derived from what kind of animal?
16. In the transition from amphibians to reptiles, there was a significant innovation: _____
17. Insect eating, feeding milk to their young, a coat of fur, describes: _____
18. What are the 3 characteristics that primates have that separate them from other mammals?
19. What is the significance of "Tiktaalik?"