Evolution: Scientists, Evidence & Rates Study Guide

Directions: Match the term to the definition.

A. Adaptation  
B. Analogous Structures  
C. Evolution  
D. Fossil  
E. Homologous Structures  
F. Vestigial Structures

_____ 1. Unused features; remnants of organs or structures that had a function in early ancestors
_____ 2. Remains or evidence of an organism that no longer exists
_____ 3. Body parts that have a similar function, but not a similar structure; do not indicate shared ancestry.
_____ 4. Process by which species of organisms change over time
_____ 5. Feature that allows an organism to better survive in its environment
_____ 6. Body parts of different organisms that have a similar structure, but may have different functions; indicate shared ancestry

Directions: Answer the following questions about Evolutionary Scientist and their theories.

7. Jean-Baptiste Lamarck’s ideas of evolution are known as the inheritance of acquired characteristics. What was incorrect about his theory of how organisms evolve?

8. What did Carolus Linnaeus contribute to evolution?

9. What did Georges Buffon contribute to evolution?

10. What did Charles Darwin contribute to evolution?

11. What did “catastrophism” state? Who supported the hypothesis of “catastrophism”?

12. What did “gradualism” state? Who supported the hypothesis of “gradualism”?

13. What did “punctuated equilibrium” state? Who supported the hypothesis of “punctuated equilibrium”? 
14. What did “uniformitarianism” state? Who supported the hypothesis of “uniformitarianism”?

15. What are the four types of evidence used to support the theory of evolution?
   1. 
   2. 
   3. 
   4. 

16. What are the differences between relative dating and absolute dating scientists use to determine the age of a fossil?

17. Give an example of homologous structures, analogous structures, and vestigial structures.
   
   Homologous Structures:

   Analogous Structures:

   Vestigial Structures:

18. How do scientists determine common ancestry by studying embryos?

19. What is biochemical evidence?

20. How is biochemical evidence used to support the theory of evolution?