

Evolution Review

Define the following words:

- Population:
- Species:
- Homologous Structures:
- Vestigial Structures:
- Analogous Structures:
- Natural Selection:
- Artificial Selection:
- Fitness:
- Mutation:
- Genetic Drift:
- Gene Flow:
- Speciation:
- Extinction:
- Divergent Evolution:
- Convergent Evolution:
- Endosymbiosis:
- Uniformitarianism:
- Catastrophism:
- Adaptation:
- Geographic Isolation:
- Founder Effect:
- Coevolution:

1. George Cuvier is known for his theory of catastrophism. This theory along with evidence from fossils helps to support what theory?
2. What is the name of Charles Lyell's theory?
3. The long necks and long legs of certain tortoise populations are adaptations. What process is known for selecting the best characteristics and allowing them to survive?
4. Darwin found fossils that lead him to believe the earth is how old?
5. What is suggested when organisms have similar embryonic stages?
6. Why would an organism have a vestigial structure?
7. Explain how each of the following can show evolutionary relationships.
 - a. Anatomical structures
 - b. Embryonic development
 - c. Fossil record
 - d. DNA
8. The DNA of whales and cows are very similar. What type of evidence of evolution is this?
9. Is the process of extinction natural?
10. Explain the three types of selections based on populations' distribution.
11. A new species cannot form without what?
12. What are the three types of reproductive isolation? Explain each one.
13. Explain the three mechanisms of evolution and describe how they can cause a population to evolve.
14. What is the name of the scale used to organize Earth's history?
15. What periods make up the Mesozoic Era?
16. In what era did primates evolve?
17. How old is the Earth?
18. Name two organelles that may have been created through the process of endosymbiosis.
19. Know how to read a graph, what radiometric dating is, and how the daughter and parent isotope are related.
20. Evolution occurs through many mechanisms. The most well-known mechanism is *natural selection* and the idea of survival of the fittest; however *genetic drift*, *gene flow*, and *sexual selection* are also responsible. Describe how each of these mechanisms contributes to the overall process of evolution.