

Name _____ Date _____ Period _____

Darwin's Theory of Evolution

MULTIPLE CHOICE

Circle the answer that best completes the statement.

Evolution

MULTIPLE CHOICE: Circle the letter of the ONE BEST answer that completes the statement.

Structures that have different mature forms, but develop from the same embryonic structure are called _____ structures.

- A. Darwinian
- B. Lamarckian
- C. homologous
- D. fossils

Because of its similarities to artificial selection, Darwin referred to the "survival of the fittest" as _____.

- A. use it or lose it
- B. natural selection
- C. homologous structures
- D. struggle for existence

The idea that each living species has descended with changes from other species over time is called _____.

- A. descent with modification
- B. struggle for existence
- C. artificial selection
- D. acquired traits

The natural differences between individuals of a species are referred to as _____.

- A. fitness
- B. natural selection
- C. adaptations
- D. natural variation

When farmers select the largest hogs, the fastest horses, or the cows that produce the most milk for breeding it is called _____.

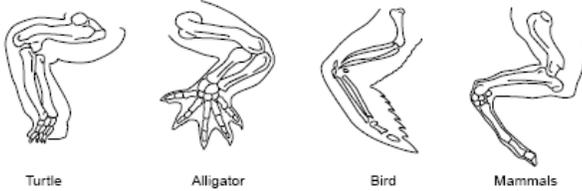
- A. natural selection
- B. artificial selection
- C. survival of the fittest
- D. homologous variation

An inherited characteristic that increases an organism's ability to survive and reproduce in its specific environment is called a(n) _____.

- A. homologous structure
- B. vestigial organ
- C. adaptation
- D. speciation

A human appendix, whale hipbones, and a skink's legs are examples of _____

- A. homologous structures
- B. embryonic mates
- C. vestigial organs
- D. adaptation



The bones in the diagram at the left are examples of _____

- A. homologous structures
- B. embryonic mates
- C. vestigial organs
- D. common descent

Competition for food, space, and other resources among members of a species is called _____

- A. common descent
- B. artificial selection
- C. survival of the fittest
- D. struggle for existence

The ability of an individual to survive and reproduce in a specific environment is called _____

- A. fitness
- B. common descent
- C. survival of the sneakiest
- D. struggle for existence

All of the following play a role in Darwin's Theory of Evolution EXCEPT _____

- A. natural variation
- B. survival of the fittest
- C. struggle for existence
- D. inheritance of acquired traits

1. Differences among individuals of a species are referred to as _____.

2. Is the following sentence true or false? Genetic variation is found only in wild organisms in nature. _____

Match each term with its definition.

- Terms**
- _____ 3. fitness
 - _____ 4. adaptation
 - _____ 5. natural selection

- Definitions**
- a. Any inherited characteristic that increases an organism's chance of survival
 - b. Survival of the fittest
 - c. The ability of an individual to survive and reproduce in its specific environment

6. What does the phrase struggle for existence mean? _____

7. Is the following sentence true or false? Adaptations can be physical characteristics but not more complex features such as behavior. _____

8. Circle the letter of each sentence that is true about natural selection.

- a. It selects traits that increase fitness.
- b. It takes place without human control.
- c. It can be observed directly in nature.
- d. It leads to an increase in a species' fitness.

9. The principle that living species descend, with changes, from other species over time is referred to as _____.

10. How do fossils that formed in different rock layers provide evidence of evolution?

11.

Circle the letter of the way Darwin explained the distribution of finch species on the Galápagos Islands.

- a. They had descended with modification from a common mainland ancestor.
- b. They had descended with modification from several different mainland ancestors.
- c. They had remained unchanged since arriving on the Galápagos from the mainland.
- d. They had become more similar to one another after arriving on the Galápagos.

12. Structures that have different mature forms but develop from the same embryonic tissues are called _____.

13. Is the following sentence true or false? Homologous structures provide strong evidence that all four-limbed vertebrates have descended, with modifications, from common ancestors. _____

14. Organs that are so reduced in size that they are just vestiges, or traces, of homologous organs in other species are called _____.

15. Circle the letter of each idea that is part of Darwin's theory of evolution.

- a. There is variation in nature.
- b. Fewer organisms are produced than can survive.
- c. There is a struggle for existence.
- d. Species change over time.

16. According to Darwin's theory, what happens to individuals whose characteristics are not well suited to their environment? _____
- _____ 17. In humans, the pelvis and femur, or thigh bone, are involved in walking. In whales, the pelvis and femur shown in Figure 15-1 are
- examples of fossils.
 - vestigial structures.
 - acquired traits.
 - examples of natural variation.
- _____ 18. The same kinds of skeletal bones in different but related organisms is explained as
- homologous structures.
 - the same kind of embryos.
 - natural variations in a population.
 - descent with modification.
- _____ 19. The combined genetic information of all members of a particular population is the population's
- relative frequency.
 - phenotype.
 - genotype.
 - gene pool.
- _____ 20. An adaptation is an inherited characteristic that can be
- physical or behavioral.
 - physical or geographical.
 - acquired during the organism's lifetime.
 - the result of artificial selection.
- _____ 21. The hypothesis that species change over time by natural selection was proposed by
- James Hutton.
 - Jean-Baptiste Lamarck.
 - Thomas Malthus.
 - Charles Darwin.
- _____ 22. Which statement about evolution in the Galápagos finches is true?
- Natural selection on beak size and shape occurred due to the available food.
 - Stabilizing selection has favored an intermediate beak type for all of the finches.
 - Mate choice likely plays no role in the finches' evolution.
 - None of the finch species is reproductively isolated.

MATCH THE SCIENTIST with his contribution

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|---|-------------------|
| 23. _____ proposed that Earth was shaped by geological forces that took place over millions of years | A. DARWIN |
| 24. _____ proposed that organisms acquired or lost traits during their lifetime by selective use or disuse of organs | B. MALTHUS |
| 25. _____ predicted that the human population will grow faster than the space and food the space and food needed to sustain it | C. LAMARCK |
| 26. _____ stressed that scientists can explain past events in terms of earth processes occurring they can observe happening now | D. LYELL & HUTTON |
| 27. _____ proposed a hypothesis to explain how living things change over time | |