

SECTION 15-2 REVIEW

THEORIES OF EVOLUTION

VOCABULARY REVIEW Define the following terms.

1. biological evolution _____

2. natural selection _____

MULTIPLE CHOICE Write the correct letter in the blank.

- _____ 1. If Lamarck's hypothesis of species modification were true, the children of a person who developed large muscles by lifting weights would be born with
 - a. smaller-than-average muscles.
 - b. normal-sized muscles.
 - c. normal-sized muscles that would become larger only if the children also lifted weights.
 - d. larger-than-average muscles.

- _____ 2. When Darwin saw fossil shells of marine organisms in the mountains, he reasoned that
 - a. powerful storms scooped the animals out of the ocean and left them in the mountains.
 - b. ancient rock beds that were beneath the sea were elevated to form mountain ranges.
 - c. the ancient oceans were so deep that they covered the mountains.
 - d. the organisms that left the fossils migrated from the ocean to the mountains.

- _____ 3. Darwin's theory of descent with modification states that
 - a. newer forms appearing in the fossil record are the modified descendants of older species.
 - b. organisms that descend from high elevations are modified as they acquire new traits.
 - c. all living things descended from a recent common ancestor on the Galápagos Islands.
 - d. individuals modify their behavior to survive and then pass those modifications on to their descendants.

- _____ 4. According to Darwin's theory of modification by natural selection,
 - a. individuals are modified by adverse environmental conditions.
 - b. the environment affects all organisms in a population in the same way.
 - c. populations of all organisms grow unchecked under natural conditions.
 - d. organisms that have more favorable traits tend to leave more offspring.

- _____ 5. In an evolutionary sense, an individual organism has high fitness if it
 - a. has a large number of acquired traits.
 - b. can run long distances without becoming exhausted.
 - c. reproduces more successfully than other individuals.
 - d. evolves into another organism rather than becoming extinct.

SHORT ANSWER Answer the questions in the space provided.

1. Why are acquired traits unimportant in the process of evolution? _____

2. How did the ideas of Thomas Malthus influence Darwin's thinking about evolution? _____

3. What is the relationship between evolution and natural selection? _____

4. **Critical Thinking** If Lamarck and Darwin had debated why giraffes have such long necks, how would their explanations have differed? _____

STRUCTURES AND FUNCTIONS Use the figure to answer the following question.

1. Which of the parent birds shown below (*a* or *b*) appears to have greater fitness? Explain your answer.


