

Evolution

Name:

Evolution Benchmark Review

Period:

Use your brain to answer the following questions, then check your work using Chapter 10.

Complete each of the following sentences by choosing the correct term from the word bank.

adaptation species natural selection

1. A group of organisms that can mate with each other to produce fertile offspring is known as a _____.

2. An _____ makes an organism better able to survive in its environment.

_____ 3. Charles Darwin observed variations between individuals within a population, but he did not know how variations occur. Which of the following causes variation in a population?

- a. interbreeding b. differences in food c. genetic variation d. selective breeding

_____ 4. The fossil record is a history of life indicated by fossils found in Earth's crust. What information about organisms in an environment can the fossil record provide?

- a. how natural selection occurs c. how selective breeding occurs
b. how organisms in an environment changed over time d. how genetic variation occurs

_____ 5. Darwin puzzled over the various species of Galápagos finches. He eventually concluded that over time, the finches adapted to various environments on the islands. On which of the following traits did Darwin base his conclusions?

- a. eye color b. flight patterns c. beak size and shape d. bone structure of the wings

6. What are two ways that organisms can be compared to provide evidence of evolution from a common ancestor?

#1—

#2—

7. What evidence that supports the hypothesis that whales evolved from land-dwelling mammals?

8. Why are some animals more likely to survive to adulthood than other animals are?

9. How environmental changes can cause species to become extinct?

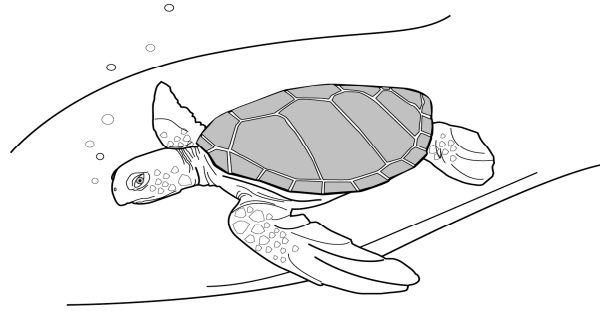
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Use the image below to answer the next question.



10. What are some of the adaptations that sea turtles have for living in the ocean?

11. How does natural selection occur? Be sure to include the four parts of natural selection.

12. Geologists have evidence that the continents were once a single giant landmass. This giant landmass eventually split apart, and the individual continents moved to their current positions. What role might this movement of continents have played in evolution?

13. Tarantulas defend themselves by flicking hairs into the eyes of their predators. In a population of tarantulas, a few tarantulas do not have these hairs. Why are the tarantulas that have these hairs more likely to produce offspring than the hairless tarantulas are?

14. Similar species of lizards can be found on several Caribbean islands. But the species have some different traits that match the different environments in which they live. Explain how speciation could have produced the different species of lizards.

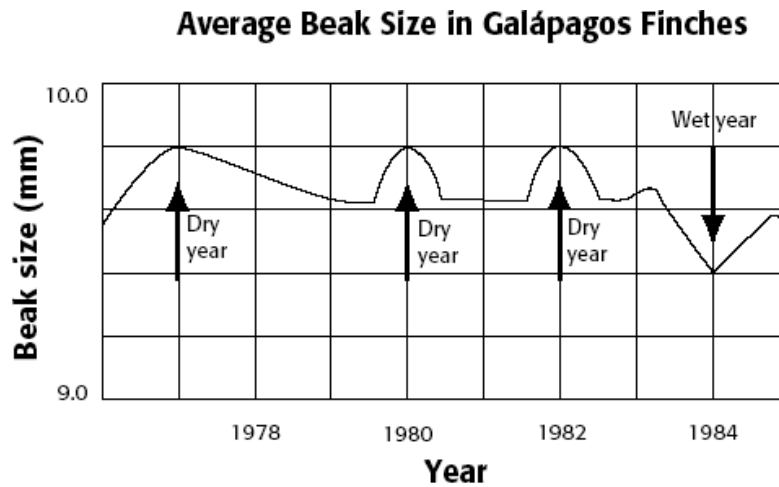
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Use the graph below to answer the next two questions.



15. During dry years, fewer seeds are produced. Birds have to be able to eat the large, tough seeds. How does the change of this environmental factor affect the average beak size of Galápagos finches?

16. Imagine that a storm blew some of the birds on the Galápagos Islands to a new island. The new island receives a large amount of rain. After several generations on the new island, what would you expect to happen to the average beak size of the finches?

17. Whales share a more recent common ancestor with land mammals than they do with fishes. Whales breathe air, give birth to live young, and produce milk like mammals. The DNA of whales is more similar to the DNA of land mammals than it is to the DNA of fishes. Still, whales do share some characteristics with fishes. For example, both fishes and whales use flat fins to swim. How does natural selection explain how whales and fishes can have similar adaptations despite not having a recent common ancestor?