

Unit 1: Life Over Time

Vocabulary

Fill in each blank with the term that best completes the following sentences.

1. A _____ is a membrane-covered structure that contains all of the materials necessary for life.
2. In _____ reproduction, a single parent produces offspring that are genetically identical to the parent.
3. _____ is the difference in inherited traits an organism has from others of the same species.
4. The _____ is made up of fossils that have been discovered around the world.
5. In the most recent classification system, Bacteria, Archaea, and Eukarya are the three major _____ of life.

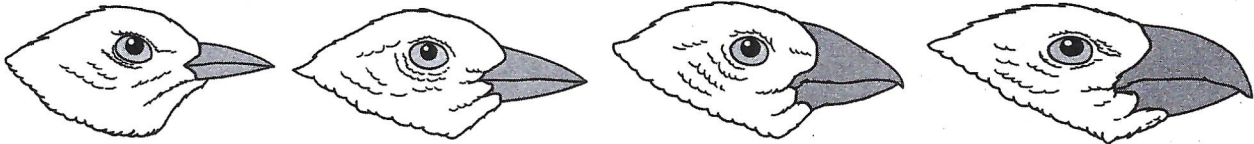
Key Concepts

Read each question below, and circle the best answer.

6. The teacher makes an argument to the class for why fire could be considered a living thing and then asks what is wrong with that argument. Tiana raises her hand and replies with one characteristic of life that fire does not have. Which of these could have been Tiana's response?
 - A. Fire does not grow and develop.
 - B. Fire cannot reproduce.
 - C. Fire does not have genetic material.
 - D. Fire does not use energy.
7. A mushroom grows on a dead, rotting oak tree lying in the forest. Which of the following best describes the tree and the mushroom?
 - A. The oak tree was a producer, and the mushroom is a producer.
 - B. The oak tree was a consumer, and the mushroom is a consumer.
 - C. The oak tree was a decomposer, and the mushroom is a producer.
 - D. The oak tree was a producer, and the mushroom is a decomposer.

Name _____ Date _____

8. Darwin's theory of natural selection consists of four important parts. Which of these correctly lists the four essential parts of natural selection?
- A. living space, adaptation, selection, and hunting
 - B. overproduction, genetic variation, selection, and adaptation
 - C. selection, extinction, underproduction, and competition
 - D. asexual reproduction, genetic variation, selection, and adaptation
9. Charles Darwin studied the finches of the Galapagos Islands and found that their beaks vary in shape and size.

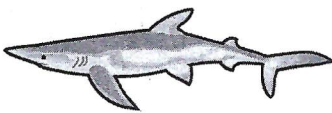


Darwin found that the finches that ate mostly insects had long, narrow beaks. Finches that ate mostly seeds had shorter, broad beaks to crush seeds. Which statement below best describes how natural selection resulted in the four types of finches shown above?

- A. The residents of the Galapagos Islands selectively bred together finches having the traits that they wanted them to have.
 - B. The narrow-beaked finches came first, and evolved into the broad-beaked finches through a series of natural mutations.
 - C. The broad-beaked finches wore down their beaks digging for insects and passed these narrower beaks on to their offspring.
 - D. Over time, the finches that were born with beaks better suited to the available food supply in their habitats survived and reproduced.
10. Which of these describes a likely reason why a species would become extinct after a major environmental change?
- A. There are not enough members of the species born with a trait necessary to survive in the new environment.
 - B. The environmental changes mean fewer predators are around.
 - C. The change in the environment opens new resources with less competition.
 - D. There are more homes for the species in the changed environment.

Name _____ Date _____

11. Which of the following provides structural evidence for evolution?
- A. A fossil from the Mesozoic era shows an extinct animal similar to a modern animal.
 - B. A comparison of similar bones in the legs of a human, a dog, and a bat.
 - C. A genetic analysis of two animals shows similar sequences of DNA.
 - D. The embryos of two animals look similar at similar stages.
12. The pictures below show four types of sea organisms.



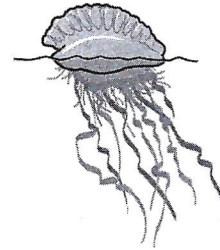
1



2



3



4

Which of these would you most expect to be true if these organisms were classified by their physical characteristics only?

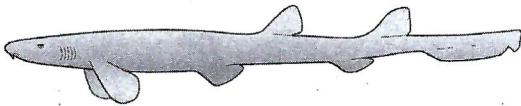
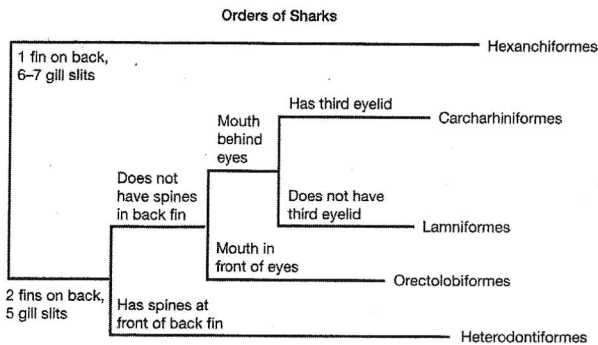
- A. Organisms 1 and 3 would be in the same species
 - B. Organisms 2 and 4 would be in the same genus
 - C. Organisms 1 and 3 would be more closely related than organisms 2 and 4
 - D. Organisms 2 and 4 would be more closely related than organisms 1 and 3
13. Which of the following happened in Precambrian time?
- A. Life began to evolve on Earth.
 - B. The first mammals appeared.
 - C. A mass extinction wiped out most dinosaurs.
 - D. Life on Earth began to move from water to land.

Name _____ Date _____

Critical Thinking

Answer the following questions in the space provided.

14. The dichotomous key below helps identify the order of some sharks.



Use the diagram to determine the order to which this shark belongs. Then name its domain and kingdom.

Order: _____

Domain: _____

Kingdom: _____

15. Describe how the changes that happened during the first division of the geologic time scale affected the evolution of organisms on Earth.

Connect ESSENTIAL QUESTIONS

Lessons 2, 3, 4 and 5

Answer the following question in the space provided.

16. Explain why mass extinctions occur and why it makes sense to measure geologic time between mass extinctions.
