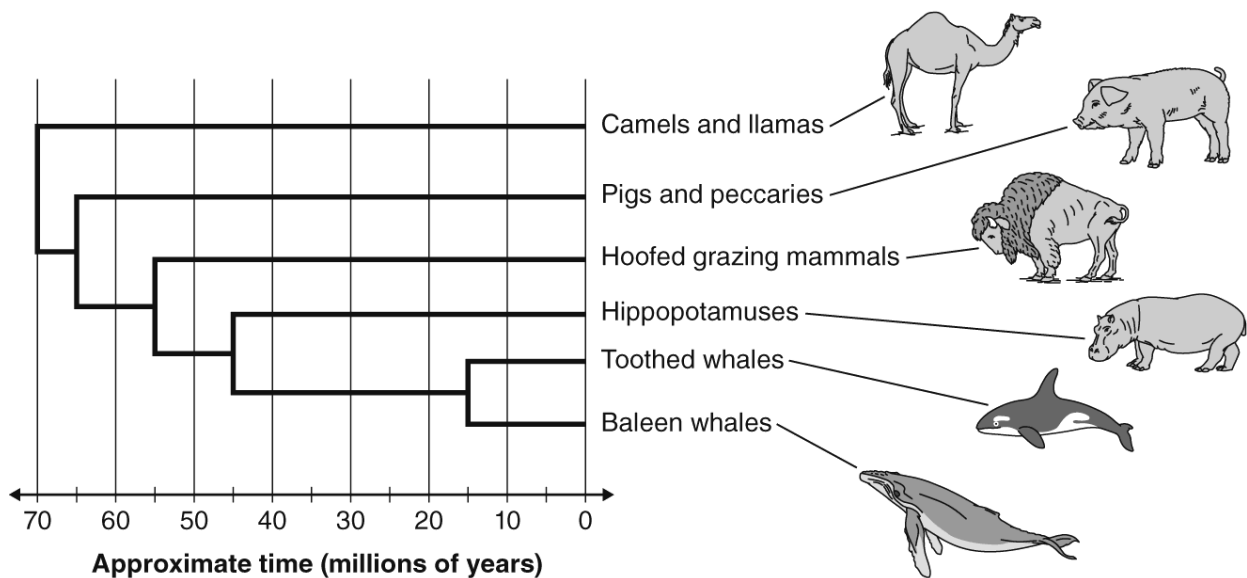


Life over Time

Key Concepts

Choose the letter of the best answer.

- Which of the following is an example of an external stimulus that could cause a plant to grow larger?
 - wilting
 - the presence of a predator
 - abundant sunlight and water
 - extremely dry and hot conditions
- The diagram below shows a model of the proposed relationships between some groups of ancient and modern mammals.



According to the diagram, how long ago did whales and pigs have a common ancestor?

- about 15 million years
 - about 45 million years
 - about 55 million years
 - about 65 million years
- How does relative dating help determine the age of a fossil?
 - It gives us the exact date an organism lived.
 - It allow us to study the radioactive elements to determine the age.
 - It determines whether an fossil formed before or after another fossil.
 - It compares a fossil with its current living relatives and studies the differences.

Name _____ Date _____

4. Two species might have similar skeletal structures that have different functions. What do these types of structures suggest about the relationship between the two species?
- A. Common structures with different functions suggest that the species live in the same habitat.
 - B. Common structures with different functions suggest that the species do not share a common ancestor.
 - C. Common structures with different functions suggest that one of the species never learned how to use the structure properly.
 - D. Common structures with different functions suggest that the species share a common ancestor that also had a similar structure.
5. The following organism grows near a wetland area.



The organism receives plenty of water and clean air. What else does it need to survive?

- A. food
 - B. a place to live
 - C. similar organisms
 - D. warm temperatures
6. How did photosynthesizing prokaryotes that lived during Precambrian time help life on Earth become more diverse?
- A. They reproduced quickly.
 - B. They became other organisms.
 - C. They made conditions more favorable by enriching the soil.
 - D. They made conditions more favorable by increasing the amount of oxygen.

Name _____ Date _____

7. Samantha plans an investigation in which she will study a population of animals. Which of these answers **best** describes the focus of Samantha's study?
- A. a single cat that lives in her house
 - B. all of the cats in her neighborhood
 - C. all of the pets owned by her classmates
 - D. the cats and dogs at a local animal shelter
8. The diagram below shows four major divisions of the geologic time scale.

Era	Period/Epoch	
Cenozoic Era	Pleistocene	present
	Pliocene	
	Miocene	
	Oligocene	
	Eocene	
	Paleocene	
Mesozoic Era	Cretaceous	65.5 Ma
	Jurassic	
	Triassic	
Paleozoic Era	Permian	251 Ma
	Carboniferous	
	Devonian	
	Silurian	
	Ordovician	
	Cambrian	
Precambrian time	Proterozoic	542 Ma
	Archean	2500 Ma
		4600 Ma

Which division(s) of time came before the Mesozoic era?

- A. only the Cenozoic
- B. Paleozoic and Precambrian
- C. none; the Mesozoic is the earliest
- D. Cenozoic, Paleozoic, and Precambrian

Name _____ Date _____

9. Felicia's teacher gives her the following list of types of organisms:

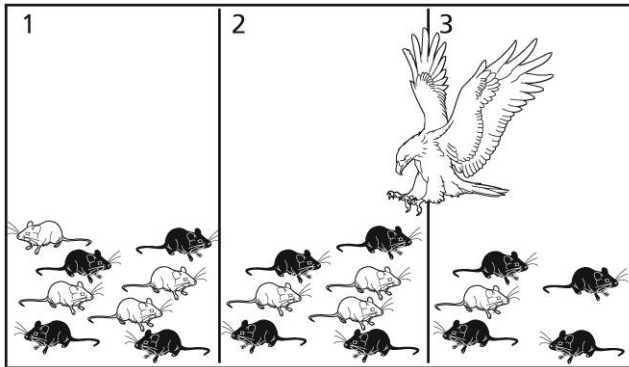
1. Ferns
2. Yeasts
3. Algae
4. Insects

Felicia needs to identify the kingdom for each type of organism. In what order could she list the kingdoms for organisms 1 through 4?

- A. Plantae, Fungi, Protista, Animalia
 - B. Animalia, Protista, Plantae, Fungi
 - C. Plantae, Protista, Fungi, Animalia
 - D. Fungi, Plantae, Protista, Animalia
10. During a research project, a scientist collects snails from a beach. He finds several snails that have shells of about the same size and shape. However, the shells have very different patterns and colors. How could the scientist **best** decide whether the snails belong to different species or to the same species?
- A. He could study how the snails develop.
 - B. He could examine the snails' RNA and DNA.
 - C. He could classify the snails according to shell color.
 - D. He could look for other physical similarities in the snails.
11. Some living things are able to tolerate life in hot springs. To which of the following domains would these organisms most likely belong?
- A. Archaea
 - B. Protista
 - C. Eukarya
 - D. Bacteria

Name _____ Date _____

12. The illustration below shows the changes over time in a population of mice in the wild after a population of hawks has moved into the grassy fields where they live. The white and dark mice differ only in color.



Which of the following terms would best be used to describe the 3 steps shown in this diagram?

- A. variation
- B. selection
- C. overproduction
- D. selective breeding

Critical Thinking

Answer the following questions in the space provided.

13. Identify and describe an example of an adaptation, and describe how the adaptation can help the organism survive in a changing environment.

Name _____ Date _____

Extended Response**Answer the following questions in the space provided.**

14. Describe three different types of evidence that scientists use to support the theory of evolution. Explain how each piece of evidence supports the theory of evolution.
