

Earth and Life History
History of Life on Earth Benchmark Review

Name:

Period:

Use your brain to answer the following questions, then check your work using Chapter 9.

_____ 1. In the sentence “Fossils provide evidence of how life has changed,” what does the word **evidence** mean?

- a. information presented in a legal proceeding
- b. information showing whether an idea is true or valid
- c. a separation or division
- d. a visual aid

Use a term from the chapter to correct the words that are underlined in each sentence below.

2. **Continental drift** is the method used to divide Earth’s history into manageable parts.

the correct term is _____

3. The death of every member of a species is called **an index fossil**.

the correct term is _____

_____ 4. Which of the following is a trace fossil?

- a. an insect preserved in amber
- b. a mammoth frozen in ice
- c. wood replaced by minerals
- d. a dinosaur footprint

_____ 5. The largest divisions of geologic time are called

- a. periods.
- b. eras.
- c. eons.
- d. epochs.

_____ 6. The first life on Earth appeared in

- a. Precambrian time.
- b. the Paleozoic Era.
- c. the Mesozoic Era.
- d. the Cenozoic Era.

_____ 7. In which time period are we currently living?

- a. Precambrian time.
- b. the Paleozoic Era.
- c. the Mesozoic Era.
- d. the Cenozoic Era.

_____ 8. Movements of continental and oceanic plates during Earth’s history have

- a. affected the distribution of organisms.
- b. caused changes in climate.
- c. caused changes in geographic connections.
- d. All of the above

_____ 9. At a divergent plate boundary, tectonic plates

- a. move toward each other.
- b. slide horizontally against each other.
- c. move apart from each other.
- d. crumple up to form mountain ranges.

10. Describe three processes by which fossils form.

#1—

#2—

#3—

11. Explain two ways in which scientists use fossils to determine environmental change.

#1—

#2—

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12. List two important groups of organisms that appeared during each time interval:

Precambrian time: _____ and _____

the Paleozoic Era: _____ and _____

the Mesozoic Era: _____ and _____

the Cenozoic Era: _____ and _____

13. Describe the event that some scientists think caused the mass extinction at the end of the Mesozoic Era.

14. How long has life existed on Earth? _____

15. Give one example of how continental drift has caused a change in geographic connections and one example of how continental drift has caused a change in climate.

16. Give an example of how continental drift has affected the distribution of organisms during Earth's history.

17. How does fossil evidence supports plate tectonics and continental drift?

18. How did the breakup of Pangaea affect climate and organisms?

19. How does the fossil record provide evidence for the Cretaceous-Tertiary extinction?

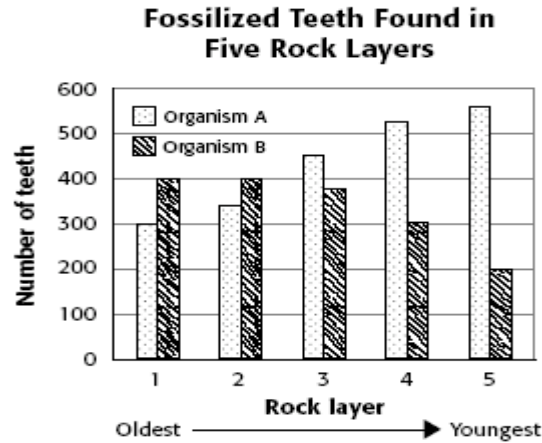
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The chart below shows data about fossilized teeth that were found within a series of rock layers. Use the chart below to answer the next two questions.



20. Describe the changes in the populations of organisms A and B that are suggested by the evidence in the chart.

21. What might explain these population changes?

22. Describe conditions that can cause the number of species to increase dramatically and conditions that can cause the number of species to decrease dramatically.

23. How does the Cretaceous-Tertiary extinction relate to the Age of Mammals?

24. Two undisturbed rock layers are being studied by paleontologists. One of the layers is directly on top of the other, and both layers contain fossils. Describe the relative ages of the layers, and tell which layer is likely to contain fossils of life-forms that are similar to living organisms.