

# Chapter 14

## The History of Life

### Reinforcement and Study Guide

#### Section 14.1 The Record of Life

*In your textbook, read about the early history of Earth.*

For each statement below, write **true** or **false**.

- \_\_\_\_\_ 1. Earth is thought to have formed about 4.6 billion years ago.
- \_\_\_\_\_ 2. The conditions on primitive Earth were very suitable for life.
- \_\_\_\_\_ 3. Geological events on Earth set up conditions that would play a major role in the evolution of life on Earth.
- \_\_\_\_\_ 4. Violent rainstorms beginning 3.9 million years ago formed Earth's oceans.
- \_\_\_\_\_ 5. The first organisms appeared on land between 3.9 and 3.5 billion years ago.

*In your textbook, read about a history in the rocks.*

For each statement in Column A, write the letter of the matching item in Column B.

Column A	Column B
_____ 6. A footprint, trail, or burrow, providing evidence of animal activity	<b>a.</b> petrified fossil
_____ 7. A fossil embedded in tree sap, valuable because the organism is preserved intact	<b>b.</b> imprint
_____ 8. An exact stone copy of an original organism, the hard parts of which have been penetrated and replaced by minerals	<b>c.</b> trace fossil
_____ 9. Any evidence of an organism that lived long ago	<b>d.</b> cast
_____ 10. The fossil of a thin object, such as a leaf or feather, that falls into sediments and leaves an outline when the sediments hardened	<b>e.</b> amber-preserved
_____ 11. An empty space left in rock, showing the exact shape of the organism that was buried and decayed there	<b>f.</b> fossil
_____ 12. An object formed when a mold is filled in by minerals from the surrounding rock	<b>g.</b> mold

**Chapter**  
**14**
**The History of Life, *continued***
**Reinforcement and Study Guide**
**Section 14.1 The Record of Life,  
*continued***

*In your textbook, read about the age of a fossil.*

**Answer the following questions.**

- 13.** Explain how relative dating works.

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- 14.** What is the limitation of relative dating?

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- 15.** What dating technique is often used by paleontologists to determine the specific age of a fossil?

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- 16.** How do scientists use this dating technique to determine the ages of rocks or fossils?

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*In your textbook, read about a trip through geologic time.*

**Complete the table by checking the correct column for each statement.**

Statement	Era			
	Pre-Cambrian	Paleozoic	Mesozoic	Genozoic
<b>17.</b> The first photosynthetic bacteria form dome-shaped structures called stromatolites.				
<b>18.</b> Primates evolve and diversify.				
<b>19.</b> Divided into three periods: Triassic, Jurassic, and Cretaceous				
<b>20.</b> An explosion of life, characterized by the appearance of many types of invertebrates and plant phyla				
<b>21.</b> Mammals appear.				
<b>22.</b> Dinosaurs roam Earth, and the ancestors of modern birds evolve.				
<b>23.</b> Flowering plants appear.				
<b>24.</b> Amphibians and reptiles appear.				