

Chapter 14: The History of Life

1. Scientists theorize that the first forms of life may have been _____.

- a. complex eukaryotic cells
- b. maggots
- c. heterotrophs
- d. formed through spontaneous generation

2. Look at the geologic time scale shown below. In which era did the first land plants appear?

Geologic Time Scale	
Event	Estimated Years Ago
Earliest evidence of life	3.5 billion
Paleozoic Era begins	543 million
First land plants	443 million
Mesozoic Era begins	248 million
Triassic Period begins	248 million
Jurassic Period begins	206 million
First dinosaurs	225 million
First birds	150 million
Cretaceous Period begins	144 million
Dinosaurs become extinct	65 million
Cenozoic Era begins	65 million
Primates appear	75 million
Humans appear	200 000

- a. The Cenozoic Era
 - b. The Mesozoic Era
 - c. The Paleozoic Era
 - d. The Precambrian Era
3. Which of these is a period in the Mesozoic Era?
- a. Cretaceous
 - b. Devonian
 - c. Tertiary
 - d. Ordovician
4. What is the name scientists have given to the continents' joined landmass that started to drift apart about 245 million years ago?

- a. Pangaea
- b. Laurasia
- c. Gondwana
- d. Devonia

5. Which of these statements is NOT true?

- a. Paleontologists use fossils to study organisms that lived long ago.
- b. There is a no direct evidence of the earliest part of Earth's history.
- c. The oldest rocks that have been found and analyzed were formed 9.3 billion years ago.
- d. Geologists use deductive reasoning to understand more about the geological history of Earth.

6. What is a trace fossil?

- a. an organism that has been sealed in amber
- b. a dead organism that has had all of its hard parts replaced by minerals
- c. any indirect evidence left by an animal
- d. minerals left behind in a space once filled by a decayed organism

7. What type of rock are most fossils found in?

- a. sedimentary
- b. igneous
- c. volcanic
- d. metamorphic

8. Some scientists hypothesize that the first forms of life on Earth evolved from _____.

- a. archaebacteria
- b. biogenesis
- c. a protocell
- d. primordial soup

9. Which hypothesis on the origin of life states that proteins, lipids, and other complex organic molecules formed when energy from the Sun and other sources caused chemical reactions among gases in Earth's prehistoric atmosphere?

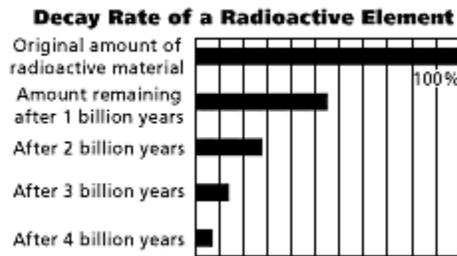
- a. self-replicating molecules
- b. primordial soup
- c. spontaneous generation
- d. biogenesis

10. Which of these statements about the four rock layers is true?



- a. The leaf in the third layer from the top is older than the skull in the top layer.
 - b. There is no way to compare the ages of the fossils in these four layers.
 - c. The skull in the top layer is older than the leaf in the third layer from the top.
 - d. All the fossils in these four rock layers are the same age.
11. Which period of geologic time was marked by an enormous increase in the diversity of life forms?
- a. The Permian Period
 - b. The Jurassic Period
 - c. The Quaternary Period
 - d. The Cambrian Period
12. Which of these shows the order of the eras of geologic time, from oldest to youngest?
- a. Precambrian–Paleozoic–Mesozoic–Cenozoic
 - b. Paleozoic–Precambrian–Mesozoic–Cenozoic
 - c. Cenozoic–Precambrian–Paleozoic–Mesozoic
 - d. Cenozoic–Paleozoic–Precambrian–Mesozoic

13. What is the difference between spontaneous generation and biogenesis?
- a. Spontaneous generation applies only to plants and how they produce life, while biogenesis applies to animals and how they produce life.
 - b. Spontaneous generation and biogenesis both support the theory that nonliving materials are the source of living organisms.
 - c. Spontaneous generation proposes that nonliving materials can produce life, while biogenesis follows the idea that living things come only from other living things.
 - d. Biogenesis supposes that nonliving materials can produce life, while spontaneous generation follows the idea that living things come only from other living things.
14. Which scientist's work disproved the theory of spontaneous generation of microorganisms?
- a. Alexander Oparin
 - b. Harold Urey
 - c. Stanley Miller
 - d. Louis Pasteur
15. About how much original material from the radioactive element is left after 2 billion years?



- a. exactly 50%
- b. 100%
- c. less than 33%
- d. over 75%