

Chapter 8, 9, 10 Study Questions

Name _____

What does the principle of uniformitarianism state?

- a.** The geologic processes once at work are now changing.
- b.** Earth changes only at certain times and only after certain events.
- c.** Earth has always been as it is now.
- d.** The same geologic processes have been at work throughout Earth's history.

What can the study of fossils provide evidence of?

- a.** the age of the earth
- b.** how the environment has changed and how life has changed
- c.** the age of the universe
- d.** how mountains and rivers form

What do scientists know about an undisturbed sequence of rock layers?

- a.** Older rocks lie above younger rocks.
- b.** Younger rocks lie under older rocks.
- c.** Younger rocks lie above older rocks.
- d.** Older rocks have eroded away.

When atoms of the same element have the same number of protons but a different number of neutrons, what are they called?

- a.** isotopes
- b.** radiometric
- c.** stable
- d.** absolute

Which of the following might be used to find the age of our solar system?

- a.** igneous rocks
- b.** meteorites
- c.** metamorphic rocks
- d.** sedimentary rocks

What is amber?

- a.** hardened tree sap
- b.** soft, sticky tree sap
- c.** ice in glaciers
- d.** wood replaced by minerals

Why are many fossil remains left from the last ice age?

- a.** Freezing slowed down their decay.
- b.** Tar slowed down their decay.
- c.** Tree sap slowed down their decay.
- d.** Hard minerals slowed down their decay.

How long have organisms been trapped and preserved in the La Brea Tar Pits in Los Angeles, California?

- a.** no more than 500 years
- b.** no more than 1,000 years
- c.** for at least 38,000 years
- d.** for at least one million years

What trapped and preserved many kinds of organisms at La Brea?

- a.** petrified wood
- b.** sticky tree sap
- c.** sticky tar
- d.** quicksand

In what process do minerals replace an organism's tissues?

- a.** freezing
- b.** burning
- c.** sedimentation
- d.** petrification

What kind of ancient organisms do scientists know the most about?

- a.** organisms with soft bodies
- b.** organisms with hard bodies
- c.** organisms that were eaten
- d.** organisms that burned up

What kind of fossil appears all around the world in certain rock layers?

- a.** content fossils
- b.** index fossils
- c.** dinosaur fossils
- d.** unidentified fossils

What happened to show that tectonic plates split apart and moved?

- a.** Rocks and fossils moved.
- b.** All living things died.
- c.** All of Earth's ice melted.
- d.** Living things stopped evolving.

Climate

What happened to the climates of continents as they moved toward the equator?

- a.** They became warmer.
- b.** They became colder.
- c.** They became drier.
- d.** They did not change.

What happened to Antarctica as the other continents moved away?

- a.** The icecap melted.
- b.** An icecap formed.
- c.** Volcanoes erupted.
- d.** Mountain belts formed.

What happened to living things when the environments on continents changed?

- a.** They all disappeared.
- b.** They all moved to the sea.
- c.** They stayed the same.
- d.** They changed.

After the Panama Land Bridge formed, what did the Gulf Stream do to the climate of Western Europe?

- a.** made it very hot
- b.** made it very cold
- c.** made it mild
- d.** made it extreme

What is used to divide Earth's history into smaller pieces of time?

- a.** the geologic time scale
- b.** the geographic time scale
- c.** the prehistoric time scale
- d.** the archaeological time scale

What is one gradual change that can cause a mass extinction?

- a.** an asteroid strike
- b.** a climate change
- c.** a volcano eruption
- d.** a tsunami

What is one catastrophic event that can cause a mass extinction?

- a.** an asteroid strike
- b.** a tornado
- c.** a hurricane
- d.** a forest fire

What did cyanobacteria add to the atmosphere?

- a.** oxygen gas
- b.** radiation
- c.** magnetic fields
- d.** ultraviolet rays

What did ozone do that helped life survive on land?

- a.** increased radiation
- b.** reduced radiation
- c.** increased oxygen
- d.** reduced oxygen

What do fossils show were the first land animals?

- a.** dinosaurs
- b.** arthropods
- c.** fish
- d.** humans

What percentage of marine species became extinct during the Permian Extinction?

- a.** 90%
- b.** 78%
- c.** 50%
- d.** 30%

What are the best-known reptiles from the Mesozoic Era?

- a.** salamanders
- b.** worms
- c.** birds
- d.** dinosaurs

What plants formed large forests in the Mesozoic Era?

- a.** conifers
- b.** ferns
- c.** grass
- d.** flowers

What is the fossil evidence that there was a Cretaceous-Tertiary extinction?

- a.** Fossils disappeared from the record.
- b.** Fossils appeared in the record.
- c.** Cretaceous and Tertiary fossils are the same.
- d.** One fossil was left in the record.

Why do scientists know more about the Cenozoic Era than about earlier eras?

- a.** Cenozoic fossils are easy to find.
- b.** Cenozoic fossils are hard to find.
- c.** Cenozoic fossils have not formed.
- d.** Early humans left pictures.

Evidence that organisms have changed over time is buried where?

- a.** in the atmosphere of Earth
- b.** in the sands carried by desert winds
- c.** in sedimentary rock within Earth's crust
- d.** in the falling rain

What do scientists think that all living species descended from?

- a.** flowering trees
- b.** shared traits
- c.** common ancestors
- d.** recent fossils

What do all living things get from ancestors?

- a.** traits
- b.** evolution
- c.** fossils
- d.** offspring

How is your arm like a bat's wing?

- a.** Your arm has similar bones.
- b.** Your arm is used in the same way.
- c.** Your arm has similar muscles.
- d.** Your arm looks the same.

Why does your arm have almost the same bones as a dolphin's flipper?

- a.** Dolphins evolved from people.
- b.** Dolphins and people have a common ancestor.
- c.** People evolved from dolphins.
- d.** Flippers are the same as hands.