Name:

Changes in Geology Over Time

**What is relative age?**

1. Two ideas that help scientists determine the age of rock layers are original horizontality and

2. Scientists compare the age of one rock layer to the age of another to find its .

3. Layers of rock can be tilted, folded or by forces within Earth, making it difficult to determine their relative ages.

**What are fossils?**

4. Fossils can form when organisms die and are buried by , which replaces the hard parts of the body and hardens to form rock.

5. Some fossils are formed when organisms are trapped in flowing tree sap, which hardens to form

.

6. Other fossils are formed when footprints or other quickly dry and become covered with sediment and preserved.

**What is absolute age?**

7. The discovery of allowed scientists to determine how old a rock layer or fossil really is.

8. Rocks contain radioactive elements that decay into other elements at a constant rate called

.

9. By comparing the amount of original element to the amount of decay product in a rock layer, scientists can determine a rock’s age in years, or its

**Is Earth still changing?**

10. The formation of a new by plate movement is proof that Earth is constantly changing.

11. Changes in Earth’s surface bring about changes in Earth’s ; some become extinct if they cannot adapt.

12. Today some living organisms are in danger of becoming extinct due to activity.

Match the correct letter with the description.

a. absolute age d. geologic column g. relative age

b. era e. half-life h. superposition

c. fossil f. period

1. a list of Earth’s rock layers in order from oldest to youngest

2. a shorter time measurement that divides eras into smaller parts

3. inferred by using the ideas of original horizontality and superposition

4. the remains of a living thing preserved in Earth’s crust

5. a measurement of a long stretch of time in Earth’s geologic history

6. the idea that the bottom layer in a series of rock layers is the oldest and the top layer is the youngest

7. described as the time it takes for half the mass of an original element to change to a new product

8. a rock layer’s age in years