

# What is the Geologic Column?

Name: \_\_\_\_\_

Date: \_\_\_\_\_

## Time Inferences

- The reason for the fossil sequence and the time span associated with it came to be associated with the newest scientific theory – \_\_\_\_\_.
- As individual layers were grouped into larger categories, they were given names with \_\_\_\_\_ connotations.
- Now the geologic column is referred to as the geological time scale and uses \_\_\_\_\_ called eons, eras, and periods.
- An \_\_\_\_\_ is the largest division of geologic time.
- There are \_\_\_\_\_ eons:
  - Phanerozoic
  - Proterozoic
  - Archean
  - Hadean
- Eons are divided into \_\_\_\_\_, which are still long periods of time, but shorter than eons.
- For example, the Phanerozoic eon is divided into \_\_\_\_\_ eras – Cenozoic, Mesozoic, Paleozoic.
- Each of these three eras contain at least three \_\_\_\_\_.
- A \_\_\_\_\_ is the basic unit on the geologic time scale.

	<b>Prefix</b>	<b>Suffix</b>	<b>Meaning</b>
Cenozoic	Ceno = recent	Zoic = animal life	
Mesozoic	Meso = middle	Zoic = animal life	
Paleozoic	Paleo = old	Zoic = animal life	

- Notice how the meaning of the words Cenozoic, Mesozoic, and Paleozoic include the idea of \_\_\_\_\_.
- Lower layers are considered \_\_\_\_\_ than higher layers because they were laid down earlier.
- Scientists often refer to the age of one \_\_\_\_\_ in relation to another.

- \_\_\_\_\_ **age** is the age of a rock or formation in relation relative to other rocks or formations, usually defined as a zone fossil name.
- **Relative** \_\_\_\_\_ is the science of determining the relative order of past events, without necessarily determining their absolute age.
- Scientists have attempted to assign actual dates to the rock layers using a process called \_\_\_\_\_ **dating**.
- Also, called \_\_\_\_\_ dating, it is a method of dating that compares the relative proportions of radioactive isotopes present in a sample.
- Certain elements that occur in nature decay predictably over time, changing from what we call a parent isotope to what we call a \_\_\_\_\_ isotope.
- The more time that passes, the \_\_\_\_\_ parent isotope is left and the more daughter isotope there is.
- Scientists know that \_\_\_\_\_ of various elements.
- They can compare the ratio of parent isotopes to daughter isotopes to figure out the \_\_\_\_\_ of the rock layers.
- While the ratios of parent isotopes to daughter isotopes are actual data, the interpretation of those ratios as millions of years \_\_\_\_\_ with both the biblical history of earth and scientific evidence that is difficult to explain if the layers were really laid down over millions of years.
- \_\_\_\_\_ age geology predicts that there are more discoveries to be made about radiometric dating and that these discoveries will shed light on why these ratios indicate time spans that conflict with the chronological information found in the Bible.
- The geologic column, which includes both the rock strata and the fossil record, is observable \_\_\_\_\_.
- The time inferences associated with the geologic column are interpretations of that data, which are influenced by the \_\_\_\_\_ of the scientists who make them.