
Earth Scientist: Heyn

Date: _____ - _____ - _____ HR: _____

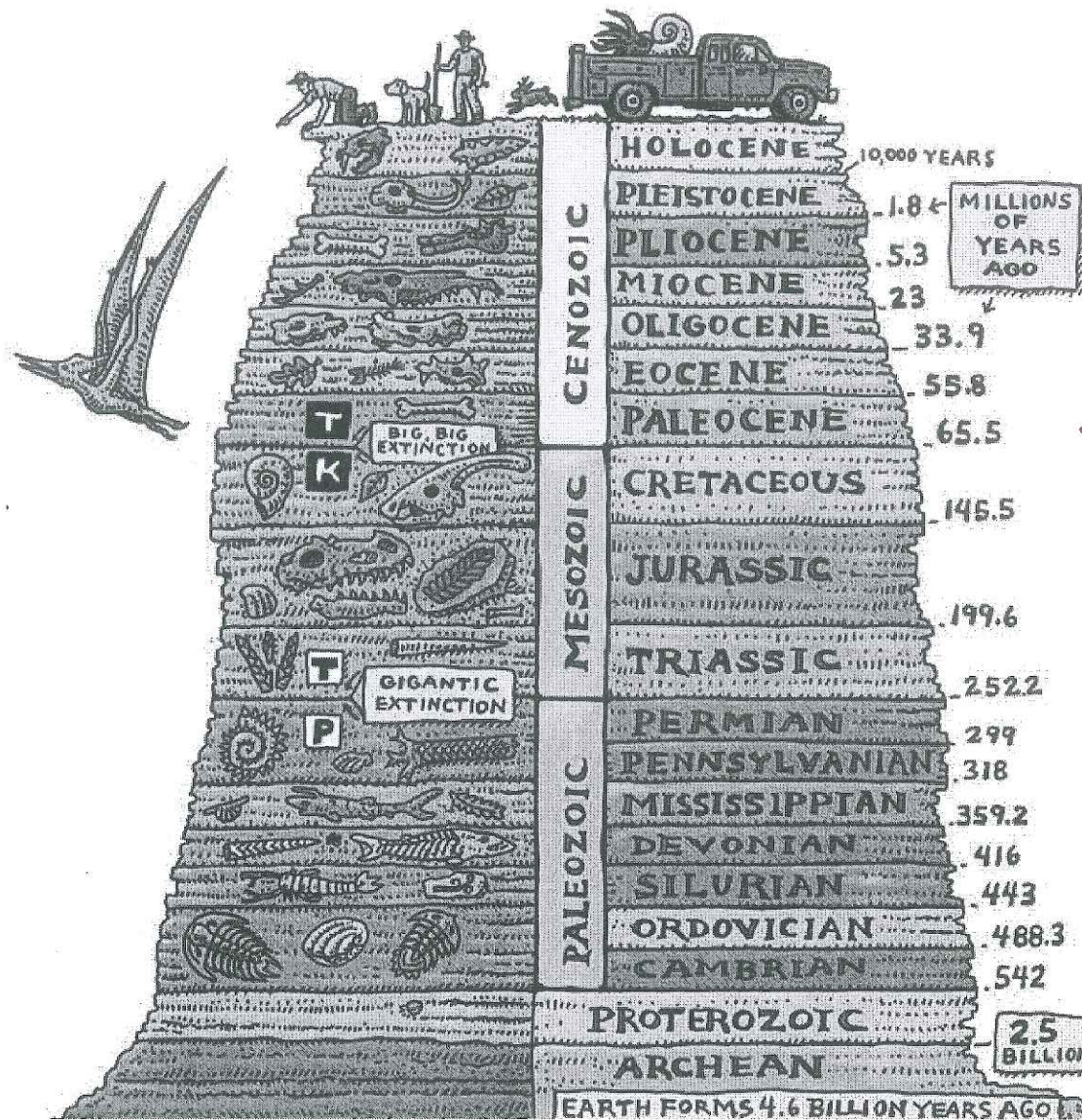
Geologic Time – Two Column Notes

Directions: Use pages 229 – 232 in the Earth Science textbook to fill in the two-column notes, below.

Big Idea	Details from the text
The geologic column	The <u>geologic column</u> is an <u>ordered arrangement</u> of <u>rock layers</u> that is based on the <u>relative</u> ages of the <u>rocks</u> and in which the <u>oldest</u> rocks are at the <u>bottom</u> .
How do Scientists use a geologic column	To <u>estimate</u> the <u>ages</u> of <u>rock layers</u> that cannot be <u>dated radiometrically</u> . To determine the <u>age</u> of a rock layer, scientists <u>compare</u> that <u>layer</u> with <u>similar layers</u> that contain the <u>same fossils</u> or that has the <u>same relative position</u> .
Divisions of Geologic Time	are marked by <u>major changes</u> in Earth's <u>surface</u> , <u>climate</u> , and types of <u>organisms</u> . Divisions are usually characterized by a <u>dominant life - form</u> .
Eons	Eons are the <u>largest</u> unit of <u>geologic time</u> . There are <u>4</u> eons: Hadean Eon (4,600 Ma - 3,800 Ma) Archean Eon (3,800 Ma - 2,500 Ma) Proterozoic Eon (2,500 Ma - 542 Ma) Phanerozoic Eon (542 Ma - now)
Eras	Eons are <u>divided</u> into <u>smaller</u> units of <u>time</u> . The Phanerozoic Eon is divided into <u>3</u> eras: ① Paleozoic Era ② Mesozoic Era ③ Cenozoic Era
Periods	<u>Eras</u> are divided into <u>periods</u> . Periods are usually named for the <u>location</u> in which the <u>fossils</u> were first <u>discovered</u> .
Epochs	Where the rock record is most complete and least deformed, a detailed fossil record may allow scientists to <u>divide</u> a period into shorter time units called <u>epochs</u> .

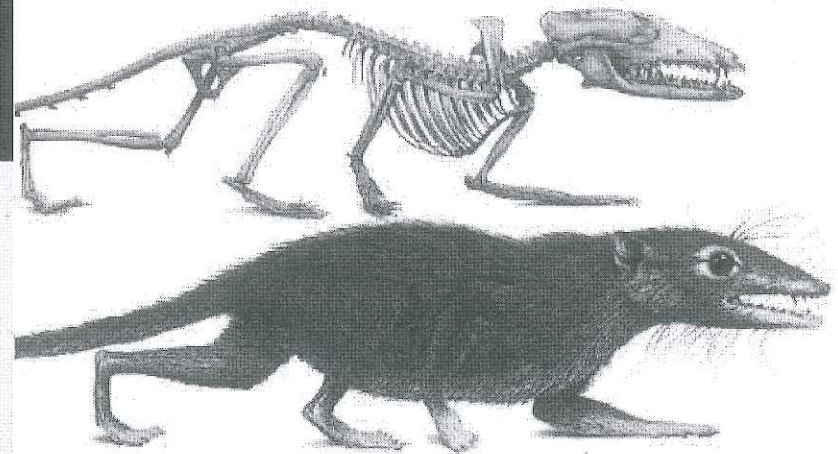
Questions:

1. “Geologic time” is the timeline that describes the major events from the formation of the Earth until now. The “geologic column” is a vertical cross-section that shows the layers of sedimentary rock.



Questions:

2. If a scientist discovered a mammal fossil from the Paleozoic Era, we would have to reevaluate our current timeline. Other scientists would confirm the initial results. New questions would be investigated. Whenever new evidence is discovered, scientists adjust their explanations to include all of the confirmed evidence. We are always learning more about the world and refining our understandings.



Mark A. Klingler / Carnegie Museum of Natural History

Questions: Use what you learned to answer the following questions using complete thoughts and complete sentences

for questions 1-2.
Question #3 is fill-in-the-blank.

1. Compare the terms geologic time and geologic column.

2. How would our understanding of Earth's past change if a scientist discovered a mammal fossil from the Paleozoic Era?

3. Use the following terms to create a concept map: *geologic time, Precambrian time, Paleozoic Era, Mesozoic Era, Cenozoic Era, periods & epochs.* Fill in a-H!

