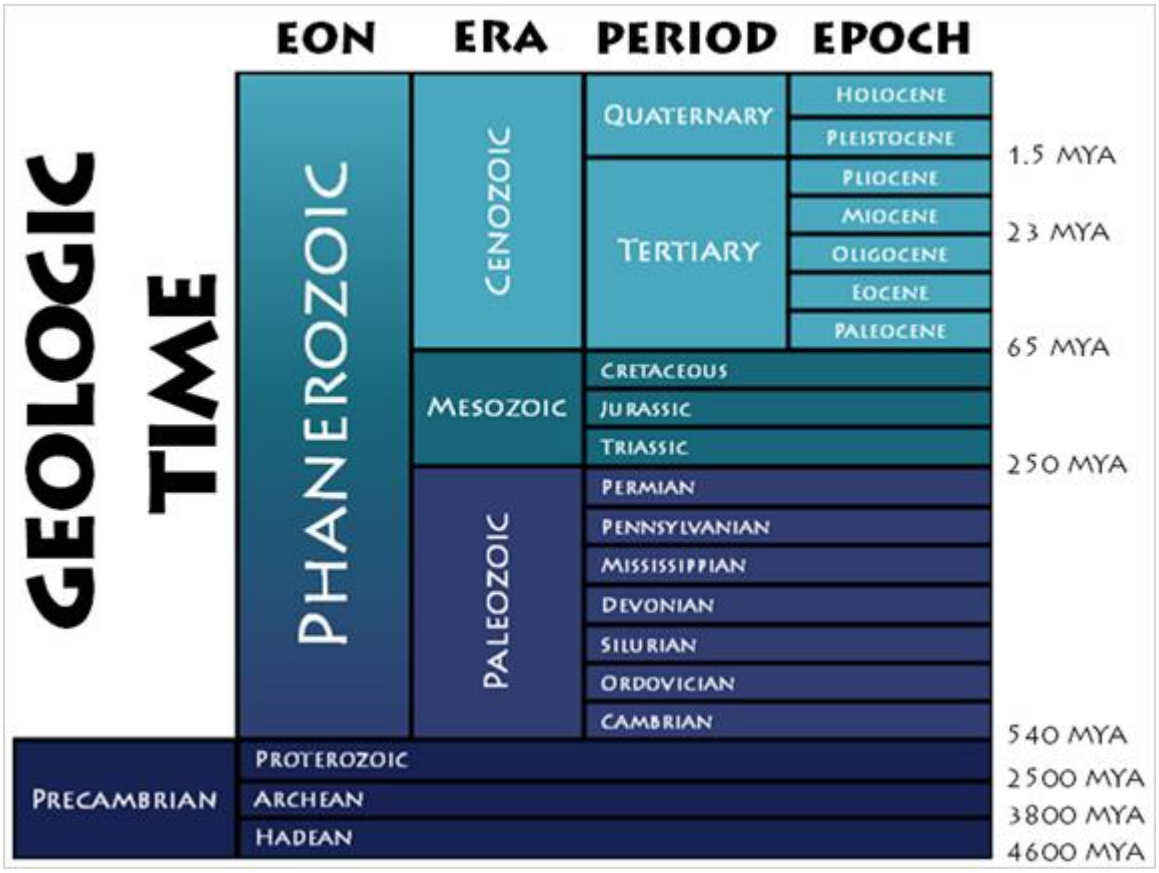
Module 9: Earth's History
Topic 3 Content: Geologic Time Divisions Notes



Paleontologists have created four separate divisions of geologic time. These divisions are eons, eras, periods, and epochs, and they are created based on events that are observed with fossils or other pieces of crucial evidence. Take a few moments to see how the history of Earth is structured as a whole. Then click ***NEXT*** to see how these divisions of geologic time are structured.

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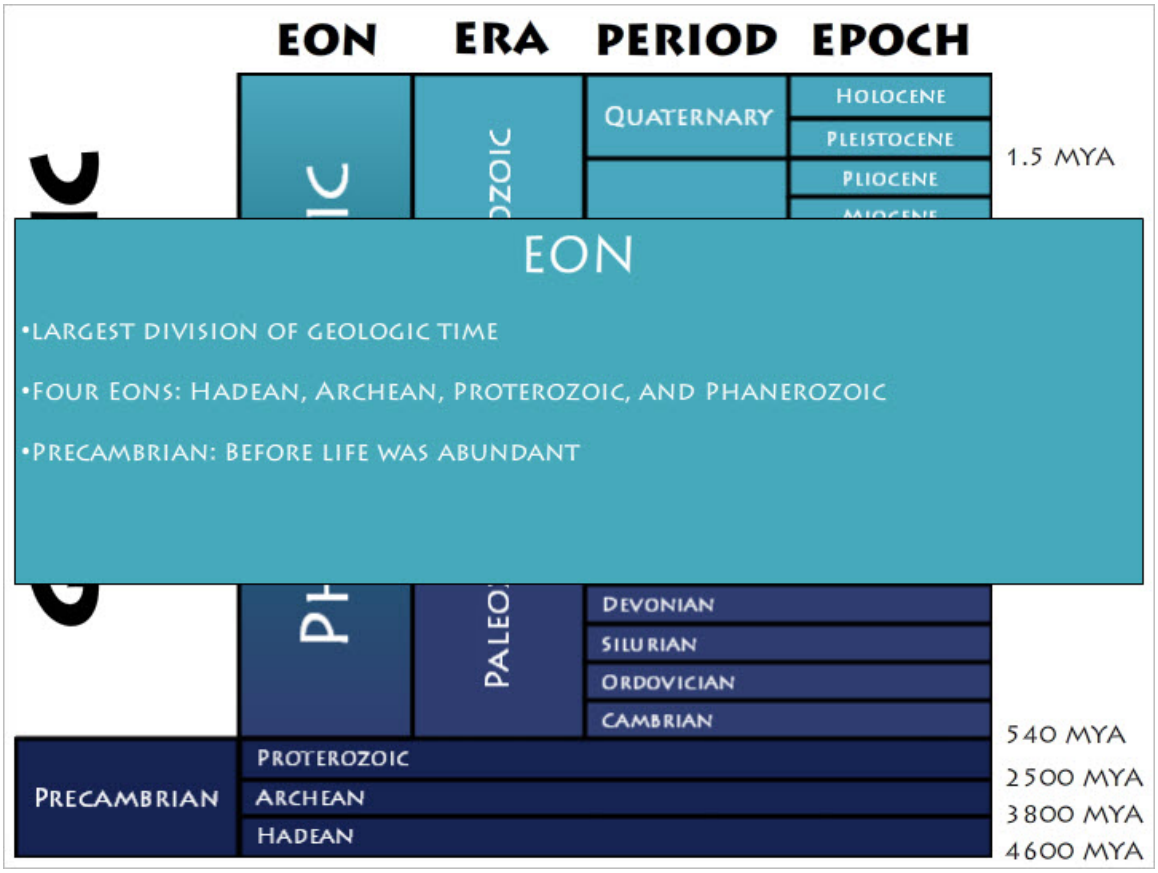

The largest division of geologic time devised by paleontologists is the eon. Eons can account for billions of years. There are four eons in all of Earth's history. The eons are named the Hadean, Archean, Proterozoic, and Phanerozoic. The Hadean, Archean, and Proterozoic eons are all grouped together and referred to as Precambrian Time. The Phanerozoic Eon accounts for the most recent 540 million years. The term Phanerozoic is derived from the Greek words *phaneros*, meaning "visible" or "evident," and *zoion*, meaning "animal." The Phanerozoic Eon is the span of time where life has flourished and diversified. The Precambrian is the span of time before life was abundant. Later, paleontologists discovered fossilized organisms that date back to the late Precambrian. As a result of this discovery, scientists further divided the Precambrian into three eons.

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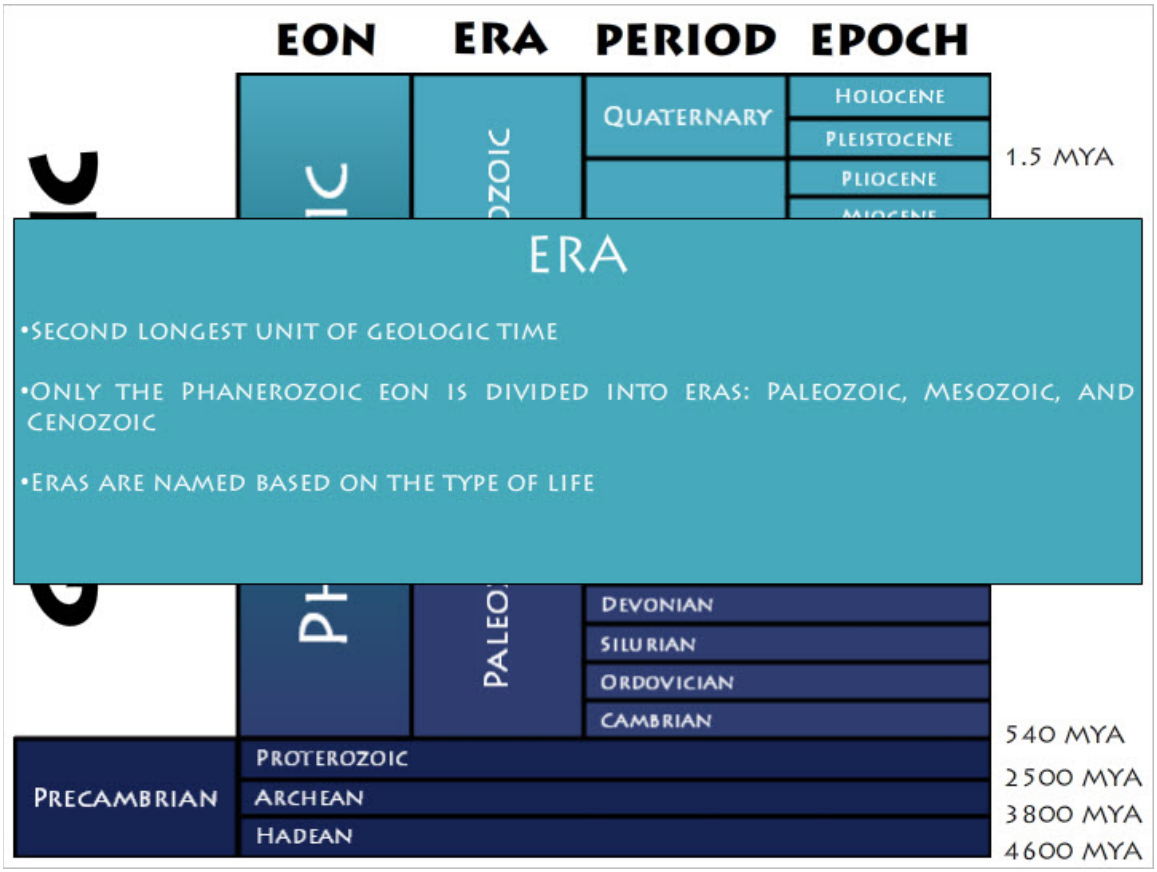

An era is the second longest unit of geologic time. Only the Phanerozoic Eon is subdivided into eras, of which there are only three: the Paleozoic, Mesozoic, and Cenozoic. The three eras of geologic time are named and grouped together based on the type of life that dominated the Earth's surface. Paleozoic comes from the Greek words for "ancient life." Mesozoic means "middle life." Cenozoic stands for "recent life."

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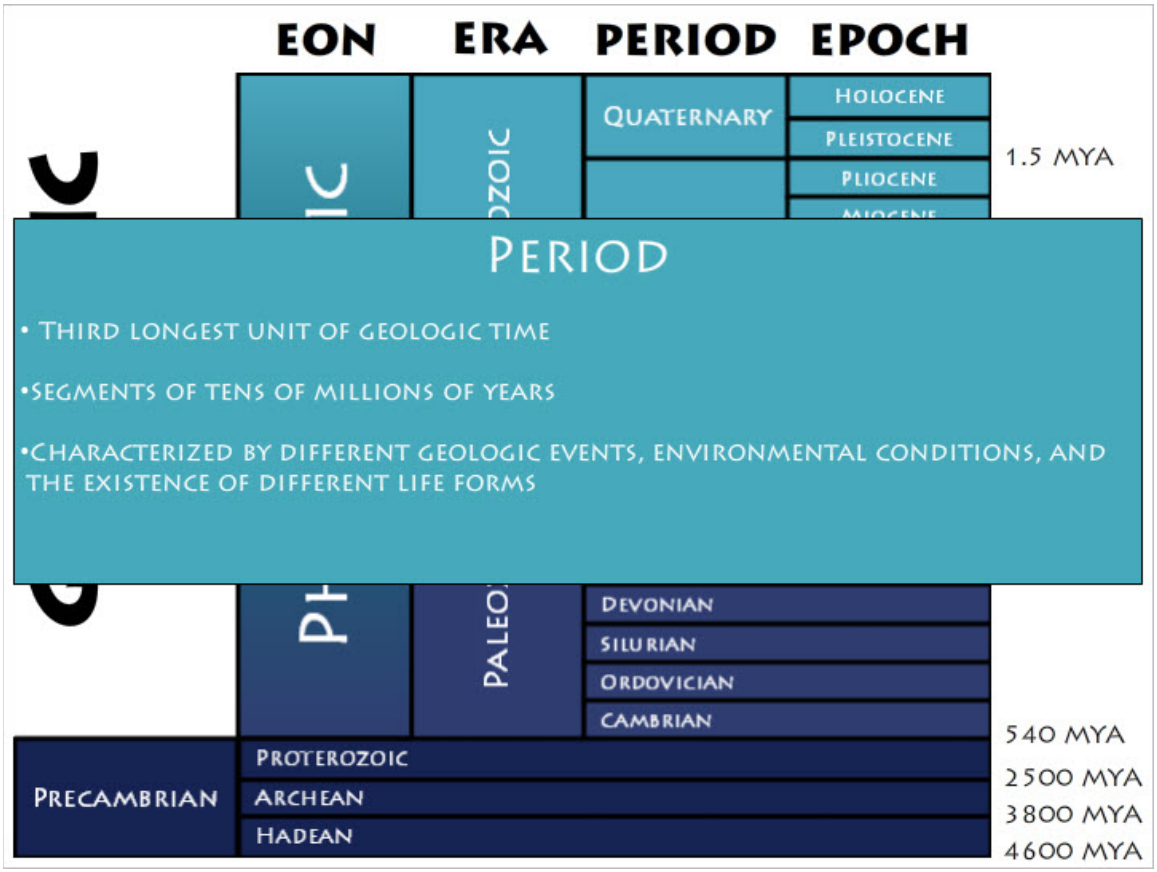

Periods are the third longest division of Earth time. Periods represent segments of Earth's history that lasted tens of millions of years. Different geologic events, environmental conditions, and the existence of different life forms characterize the different periods.

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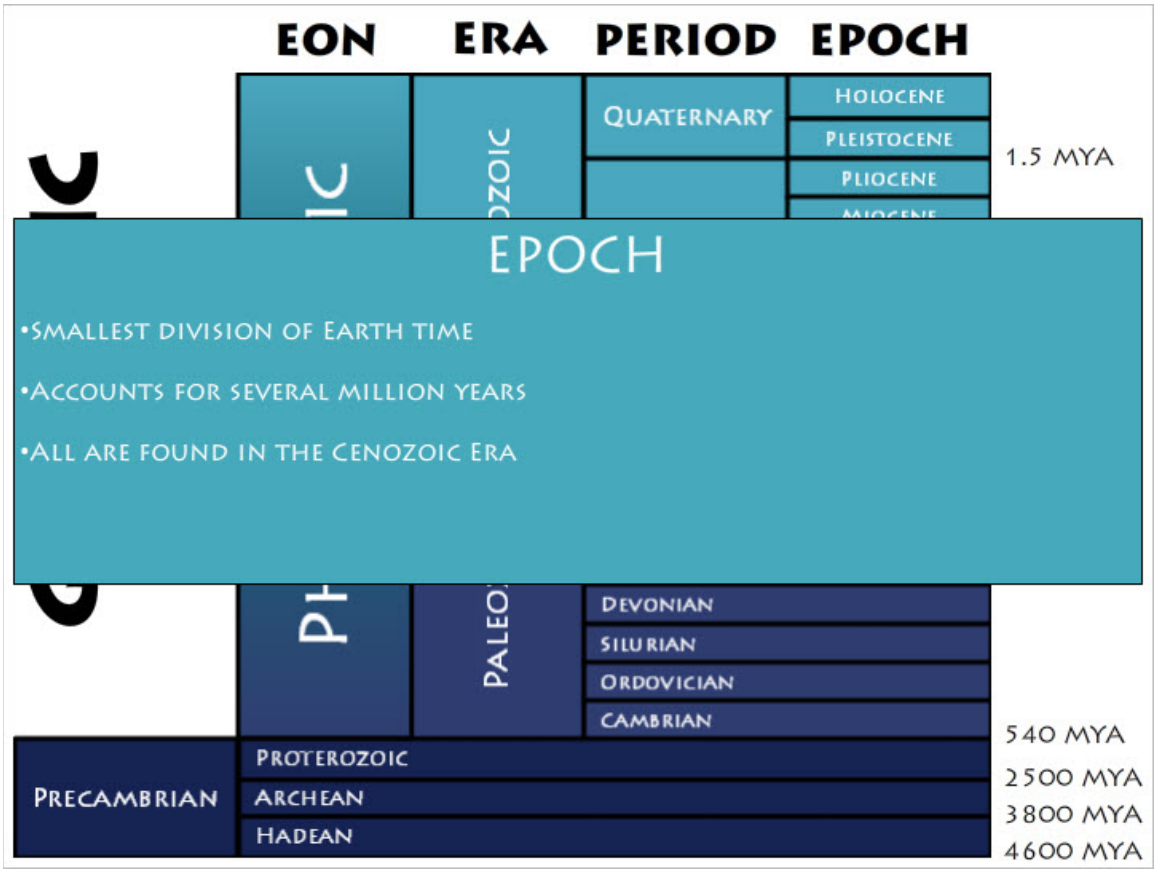

An epoch is the smallest division of Earth time and accounts for several million years. All of the epochs on the geologic time scale are found in the Cenozoic Era. These small divisions can only be made in recent times due to the amount of available data.