

# **GEOLOGICAL PERIODS OF WORLD**

**Dr Poonam Kumari**  
**Dept of Zoology**  
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A **geological period** is one of the several subdivisions of geologic time enabling cross-referencing of rocks and geologic events from place to place.

These periods form elements of a hierarchy of divisions into which geologists have split the Earth's history.

Eons and eras are larger subdivisions than periods while periods themselves may be divided into epochs and ages.

The rocks formed during a period belong to a stratigraphic unit called a system.

## **Dividing Earth History into Time Intervals**

Geologists have divided Earth's history into a series of time intervals. These time intervals are not equal in length like the hours in a day. Instead the time intervals are variable in length. This is because geologic time is divided using significant events in the history of the Earth.

## **Eons**

Eons are the largest intervals of geologic time and are hundreds of millions of years in duration. The Phanerozoic Eon is the most recent eon and began more than 500 million years ago. The eon is the broadest category of geological time. Earth's history is characterized by four eons; in order from oldest to youngest, these are the

Hadean, Archean, Proterozoic, and Phanerozoic. Collectively, the Hadean, Archean, and Proterozoic are sometimes informally referred to as the "Precambrian."

## **Eras**

Eons are divided into smaller time intervals known as **eras**. Phanerozoic is divided into three eras: Cenozoic, Mesozoic and Paleozoic. Very significant events in Earth's history are used to determine the boundaries of the eras. Most of our knowledge of the fossil record comes from the three eras of the Phanerozoic eon. The Paleozoic ("old life") era is characterized by trilobites, the first four-limbed vertebrates, and the origin of land plants. The Mesozoic ("middle life") era represents the "age of dinosaurs," though also is noteworthy for the first appearances of mammals and flowering plants. Finally, the Cenozoic ("new life") era is sometimes called the "age of mammals" and is the era during which we live today.

## **Periods**

Eras are subdivided into **periods**. The events that bound the periods are widespread in their extent but are not as significant as those which bound the eras. Paleozoic is subdivided into the Permian, Pennsylvanian, Mississippian, Devonian, Silurian, Ordovician and Cambrian periods. The most well known of all geological periods is the Jurassic period of the Mesozoic era

## **Epochs**

Finer subdivisions of time are possible, and the periods of the Cenozoic are frequently subdivided into **epochs**. Subdivision of periods into epochs can be done

only for the most recent portion of the geologic time scale. This is because older rocks have been buried deeply, intensely deformed and severely modified by long-term earth processes. As a result, the history contained within these rocks cannot be as clearly interpreted. The Paleogene period is divided into--from oldest to youngest--the Paleocene, Eocene, and Oligocene epochs. The Neogene is divided into the Miocene and Pliocene epochs. Finally, the Quaternary is divided into the Pleistocene and Holocene epochs.

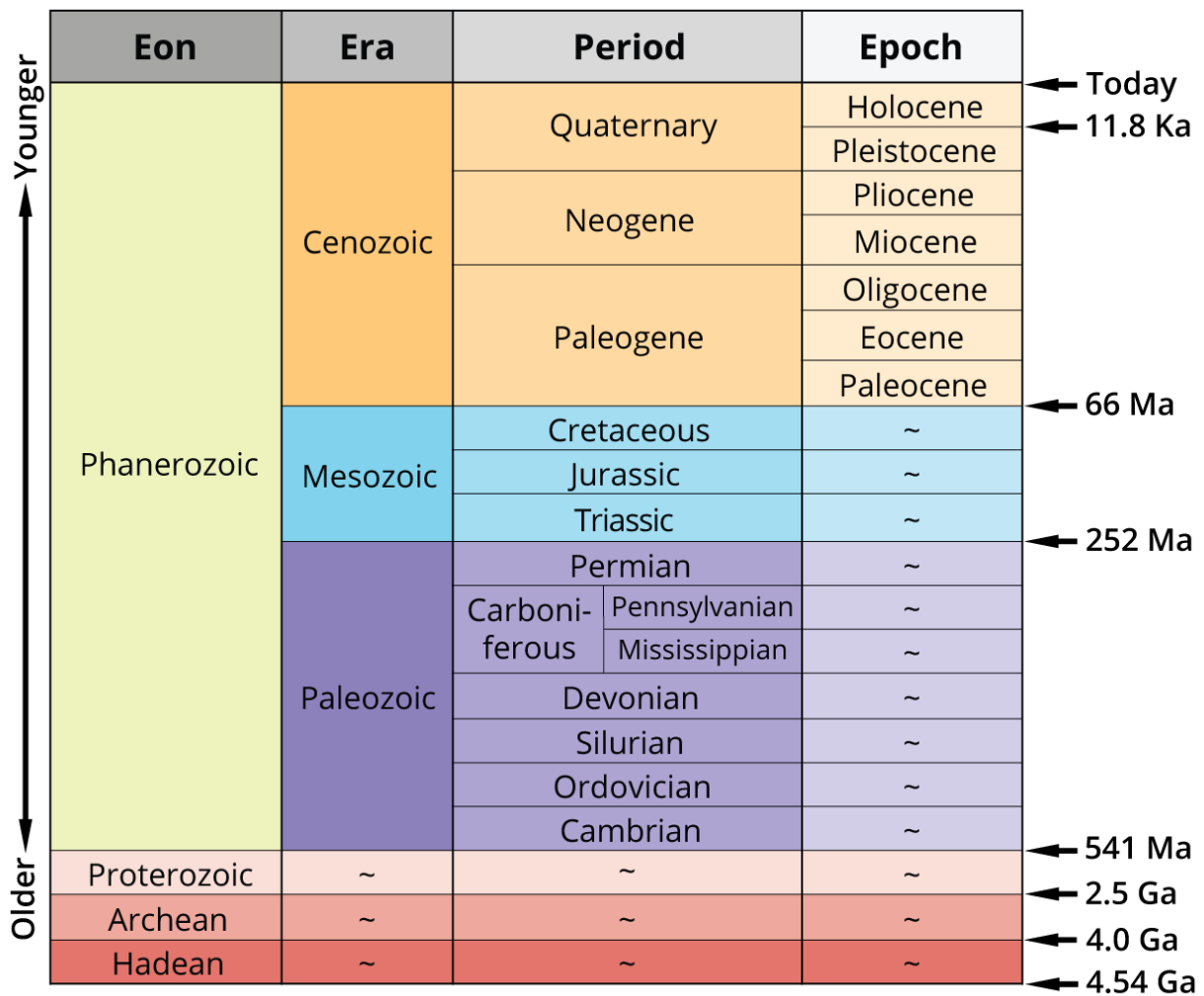


FIG: Geologic time scale