

# The Geological Time Scale : Notes/W.S.-20

When rocks are arranged in order from oldest to youngest, we have the geological time scale. This gives the relative ages of rocks. The periods contain certain index fossils that are found all over the world. This scale was created using the "Law of Superposition", and the fact that certain index fossils are known to be found in some strata, but not in strata above or below. For example; certain trilobites (an index fossil) are found only in Cambrian rock. The age of the rocks shown below is in millions of years. The age of the beginning of the period or epoch is shown. The absolute age was found using radioactive dating.

<u>Era</u>	<u>Period/Epoch</u>	<u>Age</u>	<u>Comments</u>
Cenozoic	Pleistocene	2	man appears
	Pliocene		
	Miocene	25	grasses appear
	Oligocene		
	Eocene	55	horses appear
	Paleocene	65	
Mesozoic	Cretaceous	135	dinosaurs die
	Jurassic		flowers appear
	Triassic	230	
Paleozoic	Permian	290	coal forms
	Pennsylvanian	320	
	Mississippian		amphibians appear
	Devonian	400	
	Silurian		
	Ordovician		fish appear
	Cambrian	560	
Precambrian		before 560	very few fossils

In the Precambrian era, there were very few life forms.

In the early Paleozoic era, fish appeared. Later, in this era, amphibians appeared.

In the Mesozoic era (age of the reptiles), reptiles and conifer plants appeared.

In the Cenozoic era (age of the mammals), mammals and flowering plants appeared.

Questions:

- 1) In which period did the dinosaurs become extinct?
- 2) How long ago did horses appear?
- 3) In which era are fossils rare?
- 4) What is the age of Triassic rocks in years?
- 5) Which rocks are older, Silurian or Jurassic?
- 6) Give the order (oldest first) in which they first appear in the geological time scale; mammals, amphibians, fish, and reptiles.
- 7) Which era is the age of the mammals?

Answers: 1) Cretaceous, 2) Eocene, 3) Precambrian, 4) 230 million years, 5) Silurian, 6) fish, amphibians, reptiles, mammals., 7) Cenozoic.