

GEOLOGIC TIME AND EVENTS

Millions of Years Ago	Event
4600	Origin of the Earth/Precambrian Era
~3900	Oldest Dated Crustal Rocks (Canada and Western Greenland)
3800	Oldest Evidence for Life
2000	First Oxygen in Atmosphere
1000	<u>Compression and Volcanism formed the Blue Ridge Mountains*</u>
*540	Beginning of the Paleozoic Era / Cambrian Period
530	Extensive Shallow Seas/Appalachians began to form
500	<u>Age of sedimentary rocks found in the Valley and Ridge Province of Virginia*</u>
*490	Oldest Fish Fossils / Beginning of the Ordovician Period
465	First Vertebrates
*442	First land plants / Beginning of the Silurian Period
*435	<u>Taconic Orogeny dates from 400 – 500 mybp (this occurred when Africa was approaching North America and was a time of intrusions of magma and volcanic activity that formed many of the rocks of the Piedmont) *</u>
*415	Beginning of the Devonian Period
375	Oldest Amphibian Fossil
*355	First Crinoids/Beginning of the Mississippian Period
*330	<u>Age of Petersburg Granite— This is when the magma that created this rock began to cool off and crystallized deep below the Earth’s surface, according to dates given for the Petersburg Granite this event continued for about 15 million years.... (This is the age of the bedrock under the James River at the Fall Zone) *</u>
*320	First cockroaches & horsetails / Beginning of the Pennsylvanian Period
*300	<u>Alleghanian Orogeny begins—building of Appalachian Mountains starts (250 – 300 mybp). *</u>
*290	Beginning of the Permian Period
280	First Reptiles
246	<u>Appalachian Mountains are at their highest -- Pangaea is one continent</u>
*245	Beginning of the Mesozoic Era / Triassic Period
225	<u>Approximate age of Virginia’s Triassic Sedimentary deposits such as the Midlothian coal. This was a time of tension as Pangaea began to split apart, Grabens formed and filled with sedimentary material and some fossils formed.*</u>
*206	Beginning of the Jurassic Period
200	First Mammals and Dinosaurs
160	First Birds
145	Atlantic Ocean opens up
144	Beginning of the Cretaceous Period
130	Oldest fossils of Flowering Plants
70	<u>Erosion of much of Virginia and deposits of the Coastal Plain begin*</u>
*66	Rocky Mountains begin to rise/Dinosaurs go extinct / Beginning of the Cenozoic Era / Tertiary Period
5	<u>Chesapeake jeffersonius (state fossil) lived in the shallow seas that stretched from Hanover to the current Virginia Beach area*</u>
3.4	Oldest <i>Australopithecus afarensis</i> fossils
*1.6 - 2.0	Pleistocene Ice Age begins / Beginning of the Quaternary Period

TEACHERS: when students get to this point, it is beneficial to have them expand the last mm to an extra meter of adding machine tape. This is also a good refresher in metric conversions.

0.6	Oldest <i>Homo erectus</i>
0.1	<i>Homo sapiens</i>
0.005	Start of Modern Civilization
0.000055	Start of the Space Age (October 4, 1957)
0.0000__	Your birth (put your age as the last two digits)