

---

## LIST E - GEOLOGIC AGE (STRATIGRAPHIC) TERMS - HIERARCHICAL LIST

---

<p><b>Phanerozoic</b></p> <p><b>Cenozoic</b></p> <p style="padding-left: 20px;"><b>Quaternary</b></p> <p style="padding-left: 40px;"><b>Holocene</b></p> <p style="padding-left: 40px;"><b>Pleistocene</b></p> <p style="padding-left: 60px;">upper Pleistocene</p> <p style="padding-left: 60px;">middle Pleistocene</p> <p style="padding-left: 60px;">lower Pleistocene</p> <p style="padding-left: 80px;">Calabrian</p> <p style="padding-left: 80px;">Gelasian</p> <p style="padding-left: 20px;"><b>Tertiary</b></p> <p style="padding-left: 40px;"><b>Neogene</b></p> <p style="padding-left: 60px;"><b>Pliocene</b></p> <p style="padding-left: 80px;">upper Pliocene</p> <p style="padding-left: 100px;">Piacenzian</p> <p style="padding-left: 80px;">lower Pliocene</p> <p style="padding-left: 100px;">Zanclean</p> <p style="padding-left: 60px;"><b>Miocene</b></p> <p style="padding-left: 80px;">upper Miocene</p> <p style="padding-left: 100px;">Messinian</p> <p style="padding-left: 100px;">Tortonian</p> <p style="padding-left: 80px;">middle Miocene</p> <p style="padding-left: 100px;">Serravalian</p> <p style="padding-left: 100px;">Langhian</p> <p style="padding-left: 80px;">lower Miocene</p> <p style="padding-left: 100px;">Burdigalian</p> <p style="padding-left: 100px;">Aquitanian</p> <p style="padding-left: 40px;"><b>Paleogene</b></p> <p style="padding-left: 60px;"><b>Oligocene</b></p> <p style="padding-left: 80px;">upper Oligocene</p> <p style="padding-left: 100px;">Chattian</p> <p style="padding-left: 80px;">lower Oligocene</p> <p style="padding-left: 100px;">Rupelian</p> <p style="padding-left: 60px;"><b>Eocene</b></p> <p style="padding-left: 80px;">upper Eocene</p> <p style="padding-left: 100px;">Priabonian</p> <p style="padding-left: 80px;">middle Eocene</p> <p style="padding-left: 100px;">Bartonian</p> <p style="padding-left: 100px;">Lutetian</p> <p style="padding-left: 80px;">lower Eocene</p> <p style="padding-left: 100px;">Ypresian</p> <p style="padding-left: 60px;"><b>Paleocene</b></p> <p style="padding-left: 80px;">upper Paleocene</p> <p style="padding-left: 100px;">Thanetian</p> <p style="padding-left: 80px;">middle Paleocene</p> <p style="padding-left: 100px;">Selandian</p> <p style="padding-left: 80px;">lower Paleocene</p> <p style="padding-left: 100px;">Danian</p> <p><b>Mesozoic</b></p> <p><b>Cretaceous</b></p> <p style="padding-left: 20px;">Upper Cretaceous</p> <p style="padding-left: 40px;">Maestrichtian</p> <p style="padding-left: 40px;">Campanian</p> <p style="padding-left: 40px;">Santonian</p> <p style="padding-left: 40px;">Coniacian</p> <p style="padding-left: 40px;">Turonian</p> <p style="padding-left: 40px;">Cenomanian</p> <p style="padding-left: 20px;">Lower Cretaceous</p> <p style="padding-left: 40px;">Albian</p> <p style="padding-left: 40px;">Aptian</p> <p style="padding-left: 40px;">Barremian</p>	<p style="padding-left: 40px;">Hauterivian</p> <p style="padding-left: 40px;">Valanginian</p> <p style="padding-left: 40px;">Berriasian</p> <p><b>Jurassic</b></p> <p style="padding-left: 20px;">Upper Jurassic</p> <p style="padding-left: 40px;">Tithonian</p> <p style="padding-left: 40px;">Kimmeridgian</p> <p style="padding-left: 40px;">Oxfordian</p> <p style="padding-left: 20px;">Middle Jurassic</p> <p style="padding-left: 40px;">Callovian</p> <p style="padding-left: 40px;">Bathonian</p> <p style="padding-left: 40px;">Bajocian</p> <p style="padding-left: 40px;">Aalenian</p> <p style="padding-left: 20px;">Lower Jurassic (use for Liassic)</p> <p style="padding-left: 40px;">Toarcian</p> <p style="padding-left: 40px;">Pliensbachian</p> <p style="padding-left: 40px;">Sinemurian</p> <p style="padding-left: 40px;">Hettangian</p> <p><b>Triassic</b></p> <p style="padding-left: 20px;">Upper Triassic</p> <p style="padding-left: 40px;">Rhaetian</p> <p style="padding-left: 40px;">Norian</p> <p style="padding-left: 40px;">Carnian</p> <p style="padding-left: 20px;">Middle Triassic</p> <p style="padding-left: 40px;">Ladinian</p> <p style="padding-left: 40px;">Anisian</p> <p style="padding-left: 20px;">Lower Triassic</p> <p style="padding-left: 40px;">Olenekian</p> <p style="padding-left: 40px;">Induan</p> <p style="text-align: center;">-----</p> <p style="padding-left: 40px;">Keuper</p> <p style="padding-left: 40px;">Muschelkalk</p> <p style="padding-left: 40px;">Bunter</p> <p><b>Paleozoic</b></p> <p><b>Permian</b></p> <p style="padding-left: 20px;">Lopingian</p> <p style="padding-left: 40px;">Changhsingian</p> <p style="padding-left: 40px;">Wuchiapingian</p> <p style="padding-left: 20px;">Guadalupian</p> <p style="padding-left: 40px;">Capitanian</p> <p style="padding-left: 40px;">Wordian</p> <p style="padding-left: 40px;">Roadian</p> <p style="padding-left: 20px;">Cisuralian</p> <p style="padding-left: 40px;">Kungurian</p> <p style="padding-left: 40px;">Artinskian</p> <p style="padding-left: 40px;">Sakmarian</p> <p style="padding-left: 40px;">Asselian</p> <p style="text-align: center;">-----</p> <p style="padding-left: 40px;">Upper Permian</p> <p style="padding-left: 40px;">Lower Permian</p> <p><b>Carboniferous</b></p> <p style="padding-left: 20px;">Pennsylvanian</p> <p style="padding-left: 40px;">Upper Pennsylvanian</p> <p style="padding-left: 60px;">Gzhelian</p> <p style="padding-left: 60px;">Kasimovian</p> <p style="padding-left: 40px;">Middle Pennsylvanian</p> <p style="padding-left: 60px;">Moscovian</p> <p style="padding-left: 40px;">Lower Pennsylvanian</p> <p style="padding-left: 60px;">Bashkirian</p> <p style="padding-left: 20px;">Mississippian</p> <p style="padding-left: 40px;">Upper Mississippian</p> <p style="padding-left: 60px;">Serpukhovian</p>
--	--

Middle Mississippian  
 Visean  
 Lower Mississippian  
 Tournaisian  
 -----  
 Upper Carboniferous  
 Lower Carboniferous  
**Devonian**  
 Upper Devonian  
 Famennian  
 Frasnian  
 Middle Devonian  
 Givetian  
 Eifelian  
 Lower Devonian  
 Emsian  
 Pragian  
 Lochkovian  
**Silurian**  
 Pridoli  
 Ludlow  
 Ludfordian  
 Gorstian  
 Wenlock  
 Homerian  
 Sheinwoodian  
 Llandovery  
 Telychian  
 Aeronian  
 Rhuddanian  
 -----  
 Upper Silurian  
 Lower Silurian  
**Ordovician**  
 Upper Ordovician  
 Hirnantian  
 Katian  
 Sandbian  
 Middle Ordovician  
 Darriwilian  
 Dapingian  
 Lower Ordovician  
 Floian  
 Tremadocian  
**Cambrian**  
 Upper Cambrian  
 Middle Cambrian  
 Lower Cambrian

**Precambrian**  
**Proterozoic**  
 Neoproterozoic  
 Ediacaran  
 Cryogenian  
 Tonian  
 Mesoproterozoic  
 Stenian  
 Ectasian  
 Calymmian  
 Paleoproterozoic  
 Statherian  
 Orosirian  
 Rhyacian  
 Siderian  
**Archean**  
 Neoarchean  
 Mesoarchean  
 Paleoarchean  
 Eoarchean  
**Hadean**