

**MAJOR GEOGRAPHIC AND CHRONOSTRATIGRAPHIC UNITS\***

Eon	Era	Period	Epoch or Series	Age estimates of boundaries in million years <sup>1</sup>		
Phanerozoic	Cenozoic	Quaternary		Holocene	0.0117	
				Pleistocene	2.58	
		Tertiary	Neogene		Pliocene	5.33
					Miocene	23.03
			Paleocene		Oligocene	34.09
					Eocene	55.9
					Paleocene	66.0
	Mesozoic	Cretaceous		Upper	~ 145	
				Lower		
		Jurassic		Upper	201.3± 0.2	
				Middle		
				Lower		
		Triassic		Upper	251.9	
			Middle			
			Lower			
	Paleozoic	Permian		Lopingian	298.9± 0.2	
				Guadalupian		
				Cisuralian		
		Carboniferous	Pennsylvanian		Upper	323.2± 0.4
					Middle	
				Lower		
		Mississippian	Upper	358.9± 0.4		
		Lower				
Devonian		Upper	419± 3.2			
		Middle				
		Lower				
Silurian		Upper	443.8± 1.5			
		Middle				
		Lower				
Ordovician		Upper	485.4± 1.9			
		Middle				
		Lower				
Cambrian		Upper	541.0± 1.0			
		Middle				
		Lower				
Proterozoic <sup>3</sup>	Neo-proterozoic			1000		
	Meso-proterozoic			1600		
	Paleo-proterozoic			2500		
Archean <sup>2,3</sup>	Neoarchean			2800		
	Meso-archean			3200		
	Paleo-archean			3600		
	Eoarchean			4000		
Hadean <sup>3</sup>				~ 4600		

\*Adapted from Divisions of geologic time approved by the U. S. Geological Survey Geologic Names Committee, 2018. Published as U. S. Geological Survey Fact Sheet 2018-3054, August 2018.

<sup>1</sup> Boundary age estimates are from U. S. Geological Survey Fact Sheet 2018-3054 and reflect age estimates from the International Commission on Stratigraphy, 2018.

<sup>2</sup> Hadean is the geochronologic unit used for the Eon preceding the Archean.

<sup>3</sup> Precambrian is an informal term not shown that may be used with Hadean, Archean, and Proterozoic. More specific terms are encouraged.