

# Geological time scale 2013, in millions of years

This scale is by the **International Commission on Stratigraphy (ICS)**. It is based on the ICS *International Chronostratigraphic Chart*, which is the standard time scale used by the Geological Survey of Canada, the Geological Society of America and most other geological organizations worldwide.

## PHANEROZOIC EON 541–Present

### *Cenozoic Era* 66.0–Present

#### **Quaternary Period** 2.59–Present

Holocene Epoch 13,500\*–Present

Pleistocene Epoch 2.59–13,500\*

#### **Neogene Period** 23.0–2.59

Pliocene Epoch 5.33–2.59

Miocene Epoch 23.0–5.33

#### **Paleogene Period** 66.0–23.0

Oligocene Epoch 33.9–23.0

Eocene Epoch 56.0–33.9

Paleocene Epoch 66.0–56.0

### *Mesozoic Era* 252–66.0

#### **Cretaceous Period** 145–66.0

Late 101–66.0

Early (no middle) 145–101

#### **Jurassic Period** 201–145

Late 164–145

Mid 174–164

Early 201–174

#### **Triassic Period** 252–201

Late 237–201

Mid 247–237

Early 252–247

### *Paleozoic Era* 541–252

#### **Permian Period** 299–252

Lopingian (Late) 260–252

Guadalupian (Mid) 272–260

Cisuralian (Early) 299–272

#### **Carboniferous Period** 359–299

Pennsylvanian Epoch 323–299

Mississippian Epoch 359–323

#### **Devonian Period** 419–359

Late 383–359

*Famennian Age* 372–359

*Frasnian Age* 383–372

Mid 393–383

Early 419–393

#### **Silurian Period** 443–419

Late (Pridoli) 423–419

Mid (Wenlock and Ludlow) 433–423

Early (Llandovery) 443–433

#### **Ordovician Period** 485–443

Late 458–443

Mid 470–458

Early 485–470

#### **Cambrian Period** 541–485

Furongian 497–485

Epoch 3 509–497

Epoch 2 521–509

Terreneuvian 541–521

## PROTEROZOIC EON 2500–541

### *Neoproterozoic Era* 1000–541

#### **Ediacaran Period** 635–541

#### **Cryogenian Period** 850–635

#### **Tonian Period** 1000–850

### *Mesoproterozoic Era* 1600–1000

#### **Stenian Period** 1200–1000

#### **Ectasian Period** 1400–1200

#### **Calymmian Period** 1600–1400

### *Paleoproterozoic Era* 2500–1600

#### **Statherian Period** 1800–1600

#### **Orosirian Period** 2050–1800

#### **Rhyacian Period** 2300–2050

#### **Siderian Period** 2500–2300

## ARCHEAN EON 4000–2500

### *Neoproterozoic Era* 2800–2500

### *Mesoarchean Era* 3200–2800

### *Paleoarchean* 3600–3200

### *Eoarchean Era* 4000–3600

## HADEAN EON 4567–4000

No eras or periods are defined in the Hadean. Scale begins when Earth and the other planets are fully formed from the pre-solar nebula, which took only about ten million years.

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\*In calendar years. Same as 11,800 BP, where “BP” stands for “Before the present,” meaning radiocarbon years.