

Geologic Timeline Exercise

Anything with a measurable length of either time or distance can be used to illustrate geologic time. A year or the twenty-four hours in a day are classic examples.

Find something, Watterson Towers or the distance between ISU and Daytona Beach, that has a definite measurable length and divide it into chunks relative to important points in geologic history.

Be creative. You could choose a CD or movie; the running time is usually listed on these.

Ratios are the easiest way to find your correlations:

$$\frac{\text{Geologic point in time (in years)}}{4.6\text{Ga}} = \frac{\text{Point in object you are measuring}^*}{\text{Total length of object being measured}^*}$$

*in minutes, inches, miles, etc.

Remember Ga is the abbreviation for billion years ago

Plug in the point in time you are looking for, multiply it by the total length of the object being measured, and divide that result by 4.6 billion years to get the point in your object that corresponds. *The result you get for the “point in object you are measuring” will give you time/distance remaining not elapsed.*

Events to include on your timeline:

- the start of the Hadean eon (4.6 billion years ago)
- oldest known crystal (4.4 billion years ago)
- oldest rocks and the start of the Archean eon (4 billion years ago)
- oldest undisputed fossils (3.4 billion years ago)
- the start of the Proterozoic eon (2.5 billion years ago)
- the start of the Phanerozoic eon (545 million years ago)
- first vertebrate animal (500 million years ago)
- extinction of the dinosaurs (65 million years ago)
- the oldest hominid skull 7 million years old
- Columbus sails to the Americas (year 1492)