# **Lab: Comparing the History of Life to a Clock**

Use a straight edge to created lines showing each of the following events.

4.6 billion years in 12 hours (“Ga” is billions of years):

Origin of the Solar System and Earth: 12.01 am

First Bacteria: 7:30 am

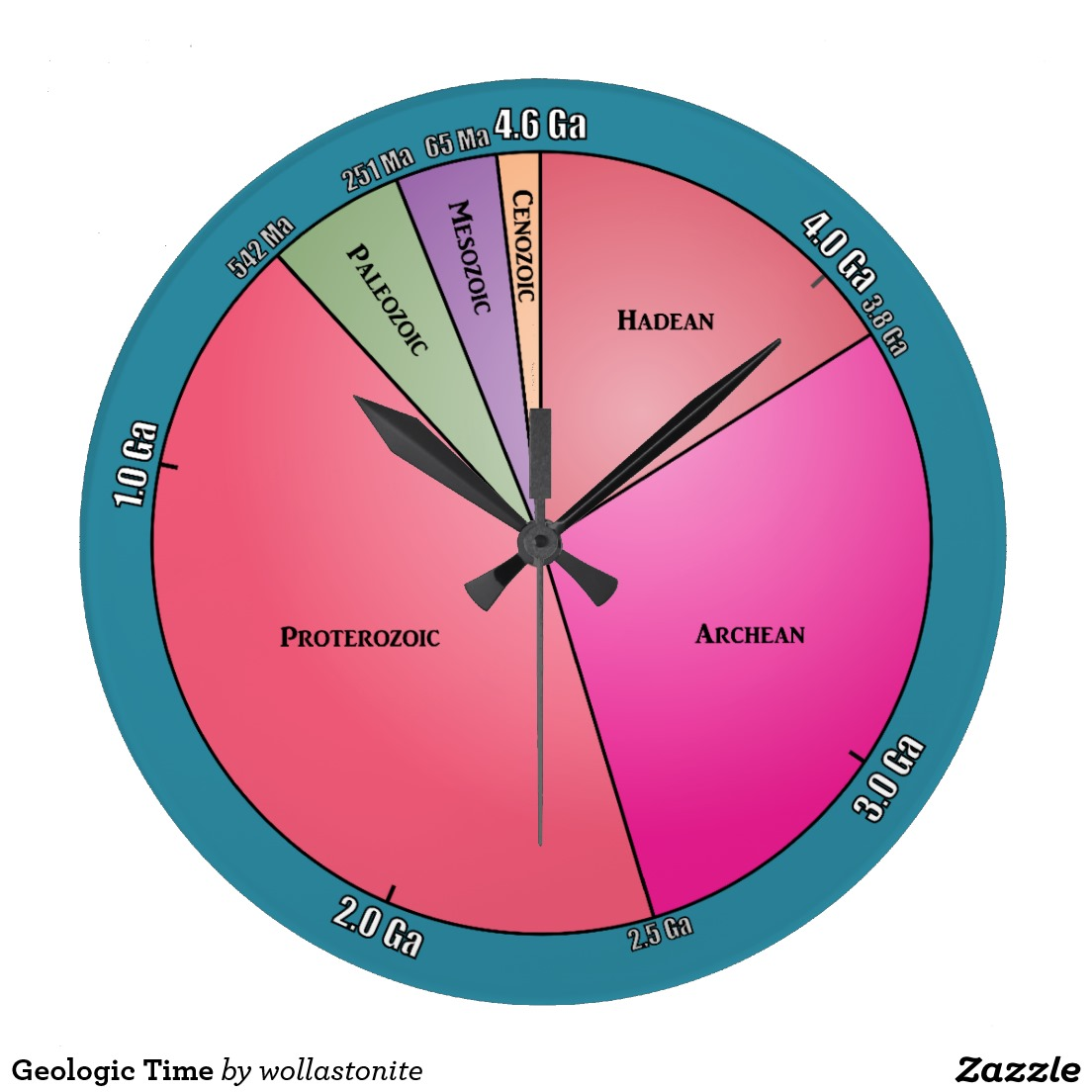
First Cell with Nucleus (eukaryotes): 8:05 am

Animals: 9:57 pm

Land Plants: 10:13 pm

Dinosaur extinction: 11:40 pm

Human appearance: 11:59 pm Midnight



Noon

## **These same events can be illustrated on a yearly calendar:**

\*\*Circle or highlight and **label** these important dates with arrows\*\*

First living cells - April 1st, 6pm

Algae & Marine Invertebrates - November 26th, 4:24am

Arthropods, Mollusks, first fish - December 1st, 6:36am

Many fish, trilobites, vascular plants - December 5th, 7:42am

Age of fishes, first amphibians, first insects - December 7th, 4:24am

Mosses, many amphibians, first reptiles - December 13th, 6pm

Marine Extinction, amphibian decline, Pangaea - December 14th, 2:21pm

First mammals and dinosaurs - December 16th, 10:14pm

Age of Dinosaurs, first birds - December 19th, 1:03am

Flowering plants, mass extinction - December 23rd, 5:54am

Birds and mammals flourish - December 28th, 1:09am

Hominids, ice ages, giant mammals - December 31st, 9:09pm

**Answer**: Are the events above evenly spaced through Earth’s history? Explain why the spacing seen above makes sense: