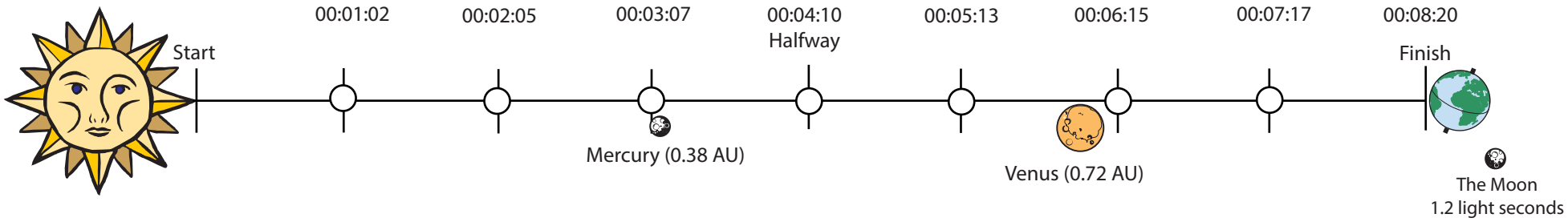
SUN/EARTH LIGHT TRAVEL TIMELINE



93,000,000 miles or 149,600,000 kilometers
8.33 light minutes (8 minutes and 20 seconds or 500 seconds)
1 AU

Activity

Go outside and feel the warmth of sunight on your skin. Do you realize the light you see and feel left the surface of the sun just about 8 minutes and 20 seconds ago? It traveled 93 million miles in that time. Astronomers call that distance an Astronomical Unit (au).

You will need at least 2 people for this activity, one person will be a timekeeper and the other will do an activity for 8 minutes and 20 seconds. The activity could be any concentrated activity, shaking a can full of beans, counting by ones, stirring a bowl of water, etc. Be creative and try to think of an activity you can do for 8 minutes. The timekeeper will start the clock by announcing 'READY, SET, START' and then draw Xs in the timeline circles at the appropriate time, as the sunlight travels to Earth, in order to measure the progress of its journey.

The goal of this activity is to begin understanding the speed of light and how astronomers measure distance, not by miles, but by how far light travels in space in a unit of time. If light can travel 93,000,000 miles in 8 minutes and 20 seconds, imagine how far light can travel in one year, a light year.

Interesting Facts

1 light year =5.88 trillion miles

Light can travel around Earth 7 times in one second

The nearest neighbor star to the Sun, Proxima Centauri, is 4.3 light years away

The center of the Milky Way galaxy is about 30,000 light years from the Sun

Find out more at www.themightysky.com