

# Light Years and Crawling Seconds

The speed of light is 300,000 km/second. How long is a light second?

Show how you would calculate the distance of one light year:

How many kilometers is one light year?

The distance from Earth to the Sun is 150,000,000 kilometers. Is the light year a convenient measuring unit for describing the distance from Earth to the Sun? Explain your answer.

The diameter of the Milky Way galaxy is approximately 100,000 light years. The observable universe is about 15 billion light years, but that might only be a small part of our physical universe or all that exists. People often have difficulty understanding that a light year is a measure of distance since the word year is a measure of time, not distance. You can practice using other units of distance that include a unit of time.

How far is the longest distance from one end of the room to the other in:

Crawling seconds:

Crawling minutes:

Walking seconds:

Running seconds:

Make up one or more units of measurement to describe the three distances in the Table below:

Name of your unit of measurement	Distance home to school	Distance home to friend's house	Distance bedroom to refrigerator