

# What Is A LIGHT YEAR?

Light Year:  $9.4607 \times 10^{15}$  m

*A unit of astronomical distance equivalent to the distance that light travels in one year.  
The closest star to Earth after the sun, Alpha Centauri A, is 4.376 light years away.*

**REMEMBER LIGHT YEAR IS A DISTANCE NOT A TIME**

Calculation:

$$v = 3 \times 10^8 \text{ m/s}$$

$$d = ? \text{ m}$$

$$t = 31536000 \text{ s}$$

$$t = 365 \times 24 \times 60 \times 60$$

$$= 31536000 \text{ s}$$

$$v = d/t$$

$$3 \times 10^8 = d/31536000$$

$$3 \times 10^8 \times 31536000 = d$$

$$d = \underline{\underline{9.4608 \times 10^{15} \text{ m}}}$$

For Example:

*The closest star to Earth after the sun, Alpha Centauri A, is 4.376 light years away.*