

Student name: _____

Student number: _____

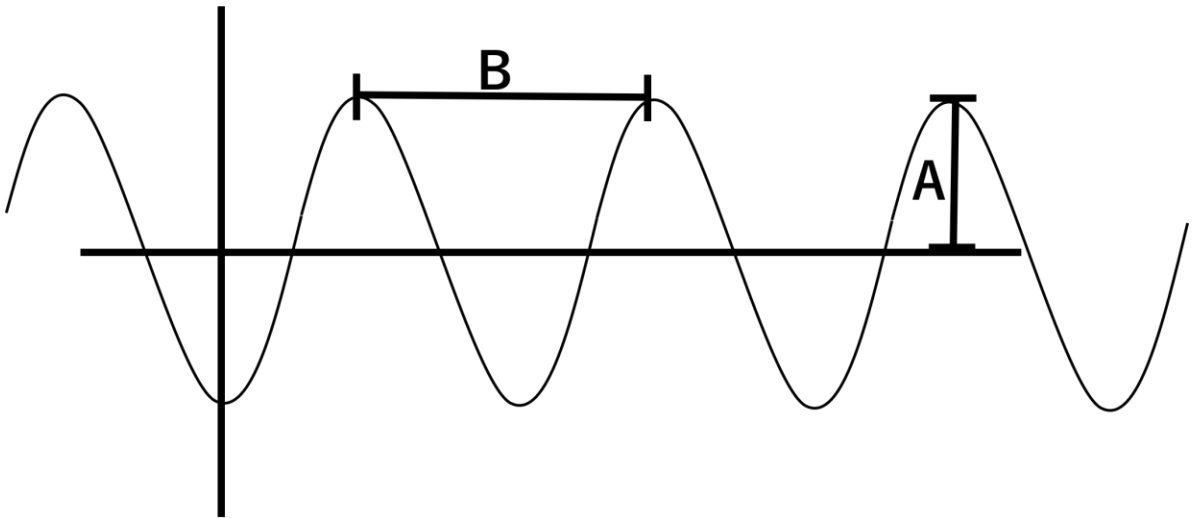
Light Waves

Definition of Light: _____

Light is a **wave**. Waves transfer _____ from one location to another. Energy from the sun is transferred to the Earth with light waves.

There are 4 basic properties of waves: **Amplitude**, **Wavelength**, **Frequency**, and **Wave Speed (velocity)**.

- **Amplitude** - The *amplitude* (A) of a wave is the height of the wave above its normal level.
- **Wavelength** - The *wavelength* (λ) of a wave is the length of a complete wave.
- **Frequency** - the *frequency* (f) of a wave is the number of waves that pass any point each second.
- **Wave speed (velocity)** - the *wave speed* (v) is how fast the wave moves through space



What are A and B in the picture above?

A: _____ B: _____

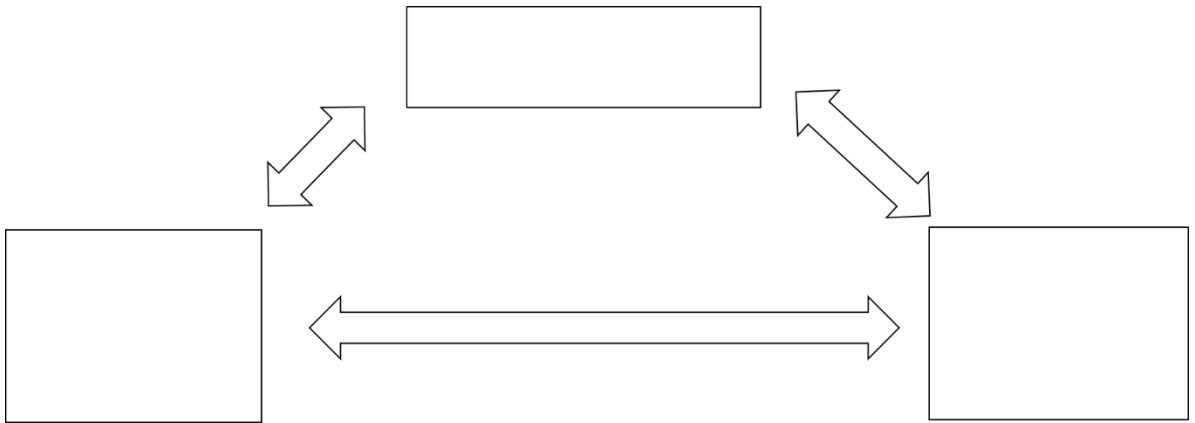
What are the units of frequency and wave speed?

Frequency (f): _____ Wave speed (v): _____

Student name:

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Equation: Wave Speed = Frequency x Wavelength



The speed of light c is 300,000 km / second. Write this in scientific notation: _____

Very Fun Math Problem Section

A wave has a frequency of $5 \frac{1}{\text{sec}}$ and has a wavelength of 10 m. How fast is the wave moving?

A wave is moving $3 \frac{\text{km}}{\text{sec}}$ and has a wavelength of 1.5 km. What is its frequency?

Light from the sun has a frequency of $100 \frac{1}{\text{sec}}$. What is the wavelength of this light?