

Waves

Can be transverse or longitudinal.

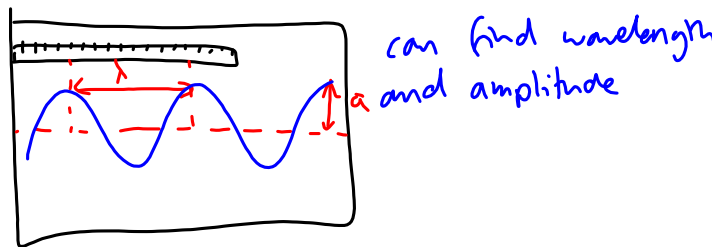
Transverse: vibrations are **perpendicular** to direction of propagation.

Longitudinal: vibrations are **parallel** to direction of propagation.

transverse	longitudinal
E-M S-waves	p-waves Sound

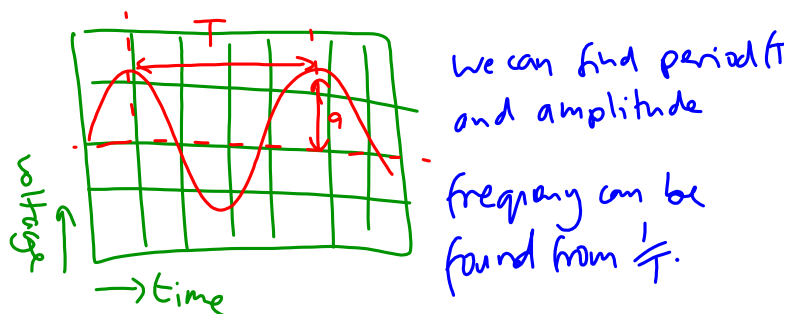
Waves transfer energy and information without transferring matter.

photo of wave on rope



can find wavelength and amplitude

oscilloscope trace of sound wave



We can find period (T) and amplitude

frequency can be found from $\frac{1}{T}$.

The frequency is the number of cycles of a wave that pass a point per second.

$$\text{wave speed} = \text{frequency} \times \text{wavelength}$$

$$c = f \lambda$$