

Energy: Waves

How does energy travel?

What is wave motion?

A form of carrying energy



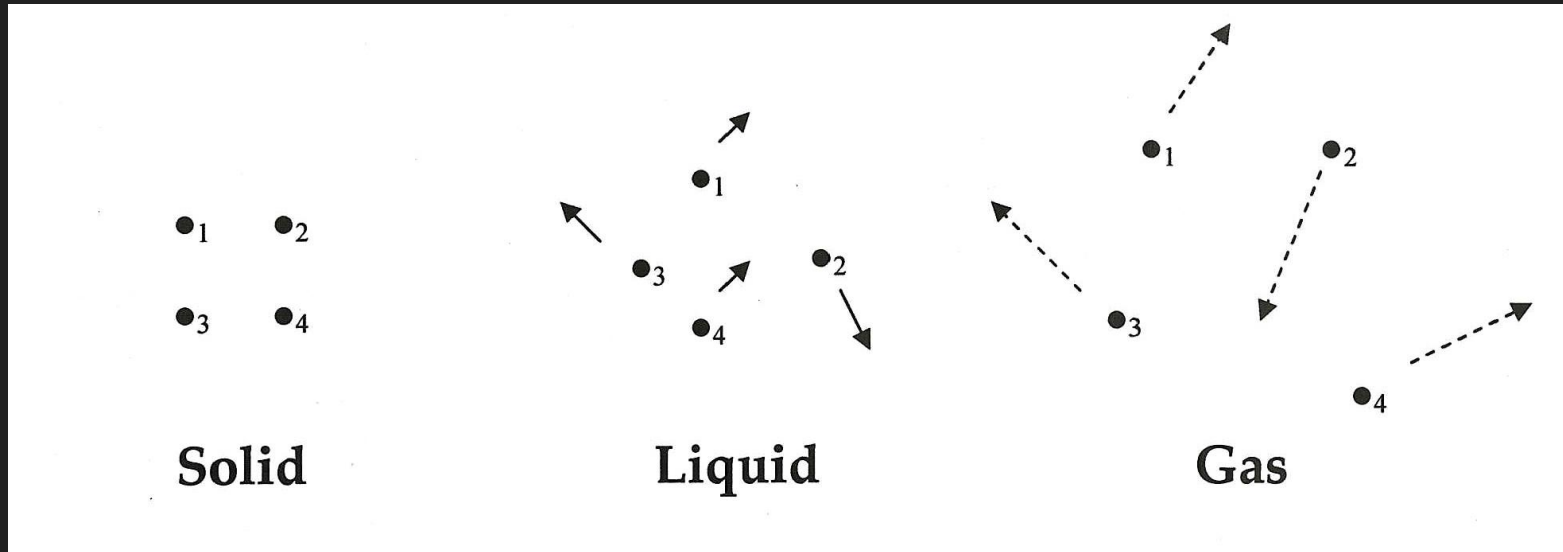
How does the motion of a wave begin?

With a vibration/force



What is a medium?

Any substance that a wave travels through.



What are the two classes of waves?

MECHANICAL

Waves that travel through a medium

Ex. Sound and seismic waves

ELECTROMAGNETIC

Waves that do not need a medium to travel.

Ex. light, microwaves, x-rays

What are the parts of a wave?

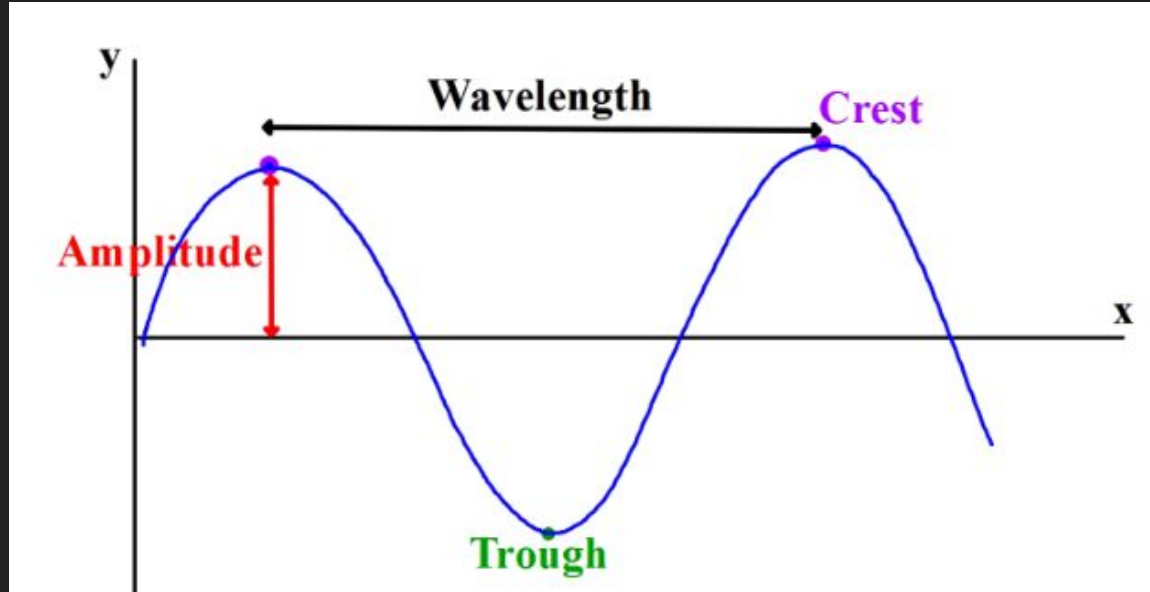
Crest- highest point on a wave.

Troughs- lowest point on a wave.

Amplitude- the height from the line of origin to a crest or trough

Wavelength- distance between two corresponding points on a wave.

Diagram of a wave

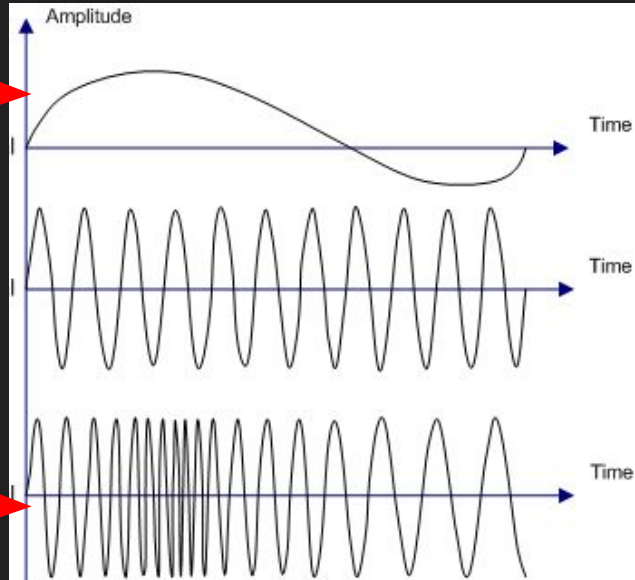
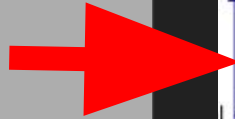


What is frequency?

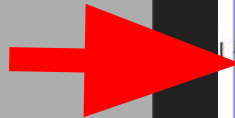
The number of waves that crosses a given point in a given time.

Measured in Hertz

Lowest Frequency



Highest Frequency



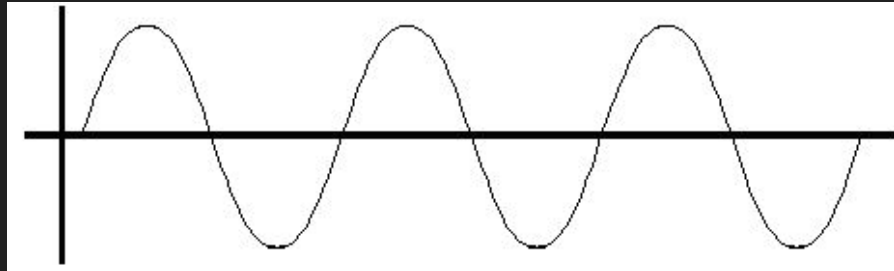
What is the speed of a wave?

Frequency x wavelength = wave speed

What is a transverse wave?

The motion of the medium is perpendicular to the motion of the wave.

ex light waves



What is a longitudinal wave?

The motion of the medium is parallel to the motion of a wave.

ex. sound waves

