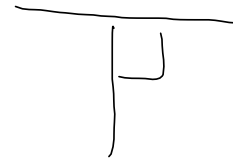


Mechanical Waves

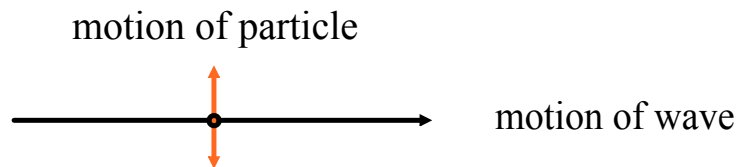
Each type of mechanical wave is defined in terms of the direction of the wave's motion as compared to the direction of the medium's motion.

1. Transverse Waves

Spring



The particles of the medium vibrate perpendicular to the direction of the wave's motion.



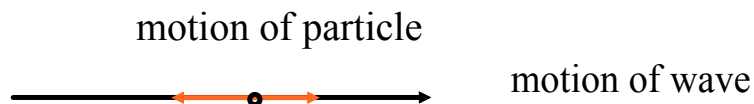
http://www.animatedscience.co.uk/blog/wp-content/uploads/focus_waves/tl-wave.html

2. Longitudinal Waves

Sound

// parallel.

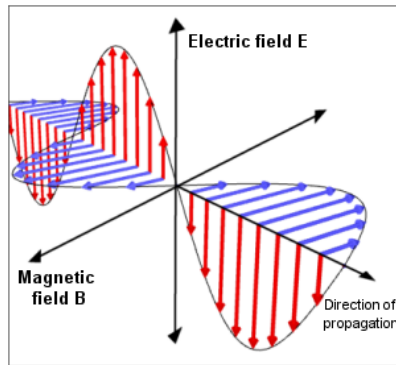
The particles of the medium vibrate parallel to the direction of the wave's motion.



http://www.animatedscience.co.uk/blog/wp-content/uploads/focus_waves/tl-wave.html

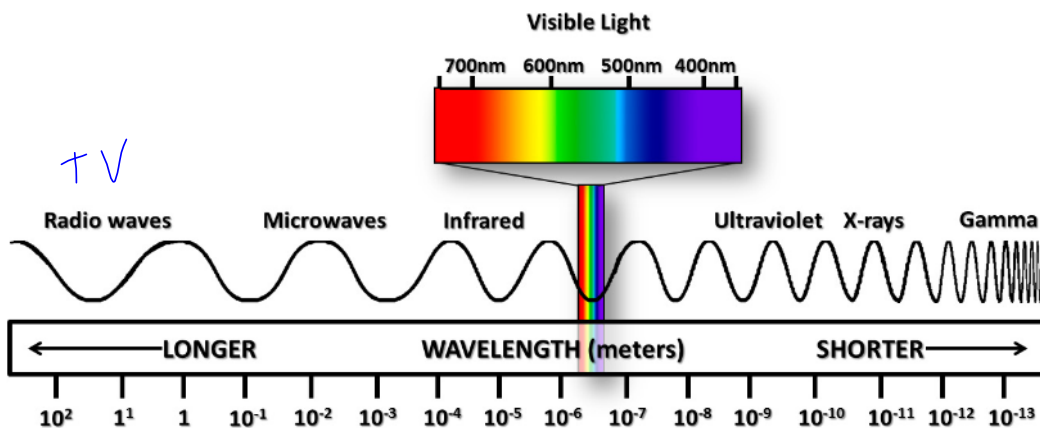
Electromagnetic Waves

Electromagnetic waves consist of a varying electric field, E, and a varying magnetic field, B, at right angles to each other. The wave is a transverse wave.



http://www.animatedscience.co.uk/blog/wp-content/uploads/focus_waves/emwaves.html

There is a spectrum of electromagnetic waves.



All electromagnetic waves travel at the speed of light in a vacuum.

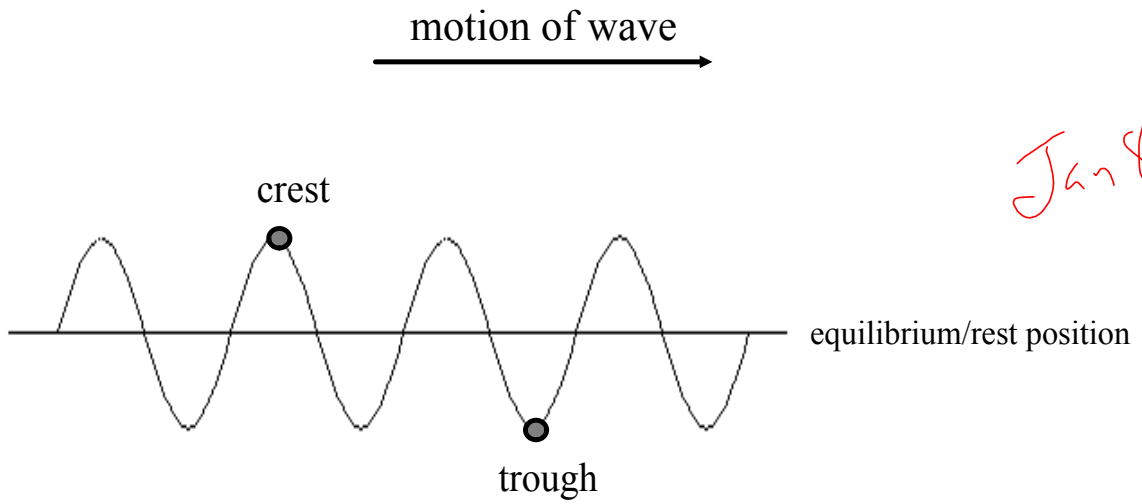
$$c = 3.00 \times 10^8 \text{ m/s}$$

constant

c -> speed of light in a vacuum

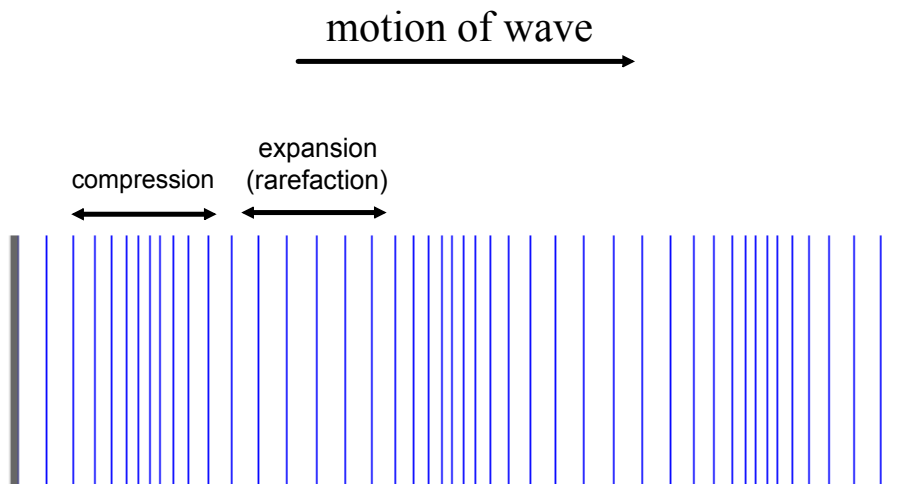
Parts of a Transverse Wave

*points



Parts of a Longitudinal Wave

*regions



Attachments



P112 - Superposition.notebook



P111-112 Lab Resonance.notebook