

Unit 2

Waves

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PACS

February 18, 2025

1 Wave Vocabulary

- Wave Types

- mechanical waves
- electromagnetic waves

- Wave Properties

- amplitude
- wavelength
- frequency
- electromagnetic spectrum

mechanical waves

- ① require a medium, or material(i.e. gas, liquid, solid), for transmission
- ② energy comes from a vibrating source
- ③ the wave passes through a medium, but the medium itself does not travel along with the wave as energy is transmitted.

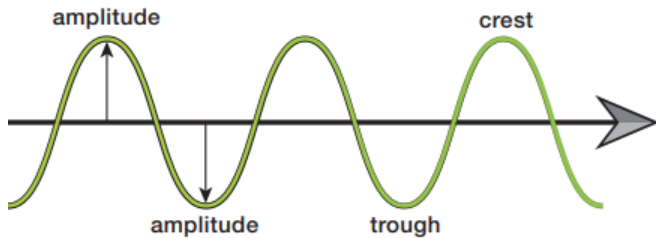
electromagnetic waves

- 1 do not need a medium
- 2 include visible light as well as infrared and ultraviolet light, microwaves, X-rays, and gamma rays.
- 3 These waves are generated by oscillations of electrical and magnetic fields from charged particles
- 4 All electromagnetic waves in a vacuum move at the same speed. This speed, 3×10^8 m/s, is known as the speed of light and is represented by the letter c .

amplitude

amplitude

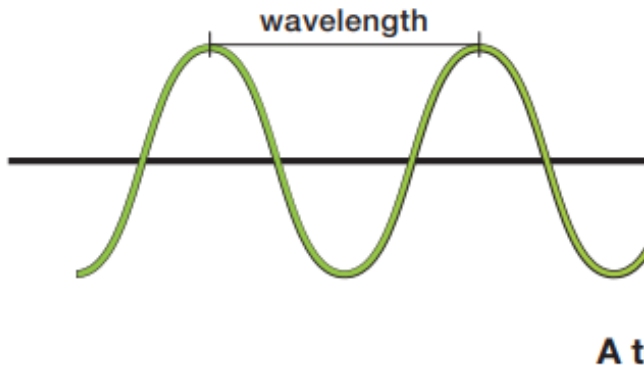
The distance from a midline to a crest or trough



wavelength

wavelength

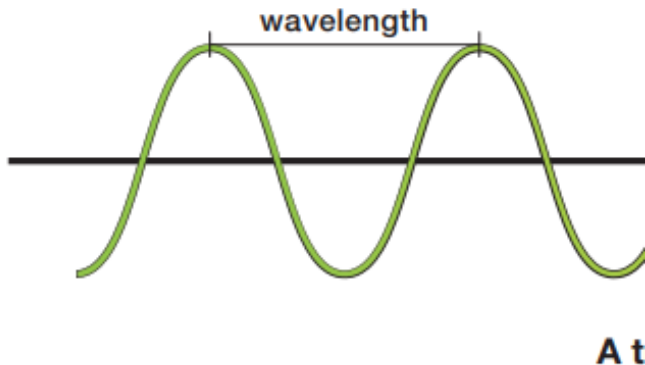
The distance from one crest or trough to the next



wavelength

wavelength

The number of wavelengths that pass a point in a given amount of time (usually one second) is the wave's frequency(f)



electromagnetic spectrum

