

31.2: Introduction

A wave is a disturbance in a medium (material). All waves begin as a vibration, and this vibrational energy is carried from one location to another by the wave. The basic properties of waves include wavelength (λ), frequency (f), period (T), wave speed (v), and amplitude (A). Standing waves occur when one end of the medium is fixed; this allows the wave to make reflections of itself. In certain places, the vibrations will add to produce maximum amplitude and in other places the vibrations will cancel each other resulting in no vibration.

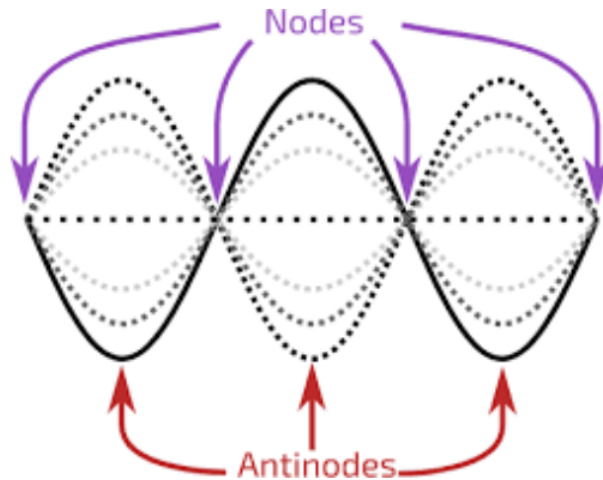


Figure 31.2.1: The Wave

Frequency & Period:

$$f = \frac{1}{T}$$

Speed & Frequency:

$$v = \lambda f$$

Speed & Period:

$$v = \frac{\lambda}{T}$$

Contributors and Attributions

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