

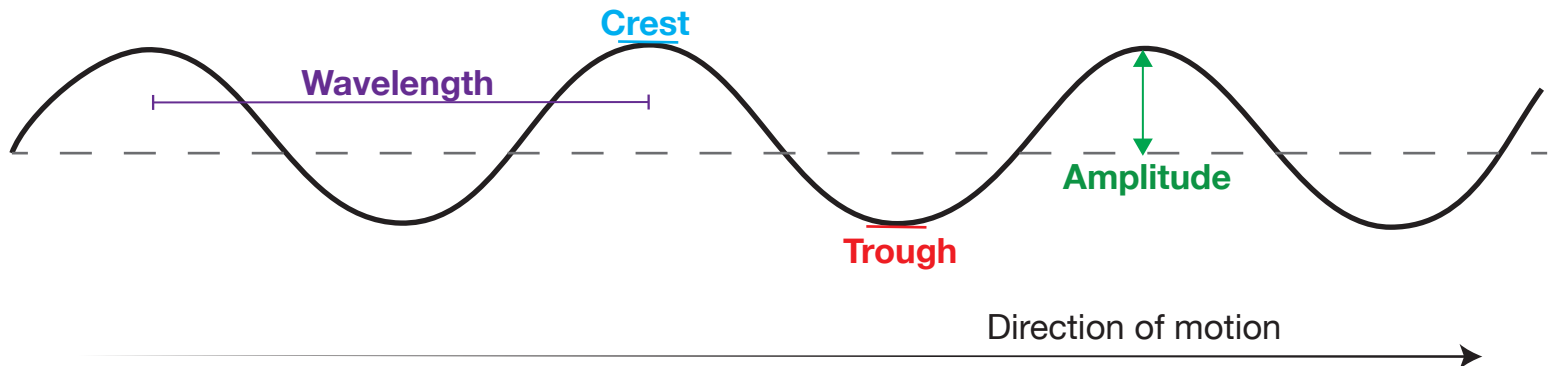
# Waves

**Wave** – a disturbance that transports energy through a medium

**Vibration** – a periodic back and forth motion of particles

Sound waves must move through a material or medium. Light waves are vibrations of pure energy and do not have to travel through a medium.

## Wave Anatomy



**Crest** – high point of wave

**Trough** – low point of wave

**Amplitude** – distance from the midpoint to the crest of a wave

**Wavelength** – distance from the top of one wave crest to the top of the next wave crest

**Frequency** – the number of waves that pass a certain point per unit time

**Interference** – when the crest of one wave overlaps the crest of another wave, their individual effects add together. This is *constructive interference*. When the crest of one wave overlaps the trough of another wave, their individual effects are reduced. This is *destructive interference*.

## Units of Measurement for Wavelength

Beach waves	—	Meters
Pond ripples	—	Centimeters
Light	—	Micrometers



# Waves Review

True or False. Answer the following true or false questions about a wave.

1. Sound travels in waves. \_\_\_\_\_
2. The highest point of a wave is called the trough. \_\_\_\_\_
3. Waves are disturbances that transport energy through a medium. \_\_\_\_\_
4. Light waves must travel through a medium. \_\_\_\_\_

Identify the part of the wave indicated by the arrow.

