The basic properties (parts) of a wave include: frequency, amplitude, wavelength and speed.

**Frequency**

* Frequency is a measure of how many waves pass a point in a certain amount of time.
* The higher the frequency, the closer the waves are together and the greater the energy carried by the waves will be.

**Amplitude**

* Amplitude is a measure of the distance between a line through the middle of a wave and a crest or trough.
* The greater the force that produces a wave, the greater the amplitude of the wave and the greater the energy carried by the wave.
* The highest point of a transverse wave is the crest and the lowest point is called a trough.​
* In a transverse wave the higher the wave, the higher the amplitude.
* Sounds with greater amplitude will be louder; light with greater amplitude will be brighter.

**Wavelength**

* Wavelength is a measure of the distance from the crest on one wave to the crest on the very next wave.
* Shorter wavelengths are influenced by the frequency.
* A higher frequency causes a shorter wavelength and greater energy.

**Speed**

* Speed is a measure of the distance a wave travels in an amount of time.
* The speed of a wave is determined by the type of wave and the nature of the medium.
* As a wave enters a different medium, the wave’s speed changes. Waves travel at different speeds in different media.
* All frequencies of electromagnetic waves travel at the same speed in empty space.​

