

Subject	Physics
Unit/Topic	Year 11 Waves

Key Vocabulary	Definition
Amplitude	The maximum displacement of a point on a wave from its undisturbed position (distance from mid - point to peak or mid - point to trough).
Black body	An object that absorbs all of the (infra red) radiation incident on it (it does not reflect or transmit (give out) any radiation).
Compression (longitudinal wave)	The part of a longitudinal wave which is squashed together.
Diffuse reflection	Reflection from a rough surface causing scattering.
Electromagnetic waves	Waves that are made up of an electric wave and a magnetic wave at right angles to each other. There are 7 electromagnetic waves in the electromagnetic spectrum. They are all transverse and all travel at the same speed in a vacuum ($300\,000\,000\text{ m/s} = \text{speed of light}$).
Focal length	Distance from the centre of a lens to its focal point.
Frequency	The total number of waves per second. Measured in hertz (Hz).
Lens	Form an image by refracting light.
Longitudinal wave	A wave in which the vibrations are parallel to the direction of energy travel. Sound waves and primary seismic waves are longitudinal.
Magnification	The ratio of image height to object height. It has no units as it is a ratio.
Period	The time taken for one wave to pass.
Rarefaction (longitudinal wave)	The stretched out part of a longitudinal wave.
Real image	An image that can be projected on to a screen. Only produced by convex lenses.

Reflection	A wave bouncing back as it hits the boundary between two materials.
Refraction	When a wave changes direction as it hits a boundary at an angle and moves to a medium that is more or less optically dense. The change in direction is caused by a change in speed.
Seismic waves	A wave which travels through or over the surface of the Earth when an earthquake happens. They give us evidence for the structure of the Earth.
Specular reflection	Reflection from a smooth surface in a single direction.
Transverse wave	A wave in which the vibrations are at right angles to the direction of energy travel. All electromagnetic waves are transverse waves along with secondary seismic waves.
Ultrasound	Sound waves above 20 000 Hz in frequency (above the human range of hearing).
Virtual image	An image that appears to have come from behind the lens. Can be produced by convex and concave lenses.
Wavelength	The distance between two successive identical points on a wave (e.g. distance from one peak to the next peak).