

LIGHT & WAVES GLOSSARY

Term	Definition
Wave	A disturbance that transfers energy without transferring matter.
Mechanical wave	Waves that need a medium to pass through.
Electromagnetic wave	Waves that do not need a medium to pass through.
Transverse wave	A wave in which the particles travel at right angles to the direction of propagation of the wave.
Longitudinal wave	A wave in which the particles travel in the same or opposite direction to the propagation of the wave.
Light wave	A type of electromagnetic wave that can travel through a vacuum.
Vacuum	Where there are no particles or very few particles that are spaced very far apart. Outer space is an example.
Medium	Anything natural or manmade that is made up of particles e.g. air, water, brick, concrete,
Sound wave	An example of a longitudinal wave that has compressions and rarefactions.
Compression	A portion of a longitudinal wave where particles are closer together and therefore have a higher pressure.
Rarefaction	A portion of a longitudinal wave where particles are further apart and therefore, a lower pressure.
Amplitude	The distance from a particles undisturbed position to the highest or lowest displacement on a wave.
Frequency	The number of complete waves passing a point per second. Measured in hertz.
Wavelength	The distance between two consecutive points of a wave.

LIGHT & WAVES GLOSSARY

Term	Definition
Crest	The position of highest displacement above the undisturbed position on a wave.
Trough	The position of highest displacement below the undisturbed position on a wave.
Undisturbed position	Where the particles would be if there was no energy passing through them.
Particle direction	The movement of the particles from their original position or undisturbed position.
Wave propagation	The direction the wave is carrying the energy.
Reflection	The bouncing back of light or energy from a surface.
Refraction	The bending of light due to a difference in refractive index between two mediums.
Angle of reflection	The angle the reflected ray makes with the normal.
Angle of refraction	The angle the refracted ray makes with the normal
Angle of incidence	The angle the incident ray makes with the normal
Incident ray	The ray of light coming from the light source towards the medium / surface.
Reflected ray	The beam of light that bounces back off a mirror or reflective surface.
Refracted ray	The beam of light that is bent upon contact with a medium of different refractive index
Emergent ray	The beam of light that emerges out the other side of a transparent or translucent medium
Opaque	A medium or surface that light cannot pass through.

LIGHT & WAVES GLOSSARY

Term	Definition
Transparent	A surface light is able to pass through.
Absorption	When some or all of the energy from light is passed into a surface.
Colour	Part of the electromagnetic spectrum between 400 – 700 nanometers that is visible to the human eye.
Velocity	Speed of a wave in m/s
Mirror	A reflective surface that light can bounce off.
Lens	A transparent medium that causes the bending of light
Concave lens	A transparent medium that curves inward causing light to refract and diverge on the opposite of the lens
Convex lens	A transparent medium that curves outward causing light to refract and converge to a single point on the other side of the lens
Concave mirror	A reflective surface that curves inward and causes the reflected beams to converge to a single point
Convex mirror	A reflective surface that curves outward and causes the reflected beams to diverge
Focus	The point at which all converging rays of light meet.

