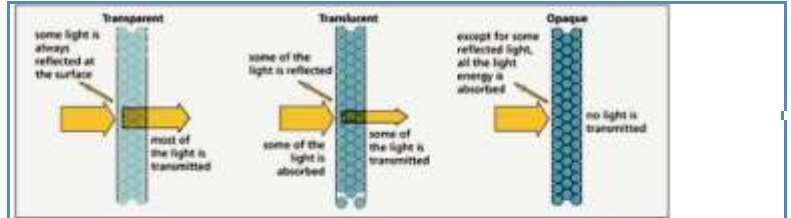
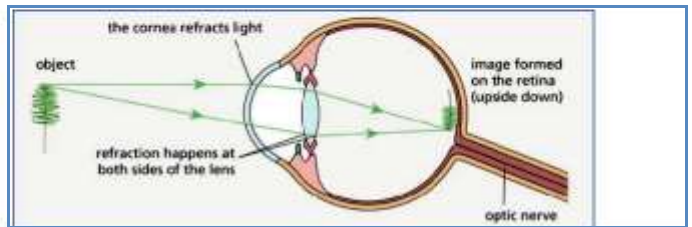
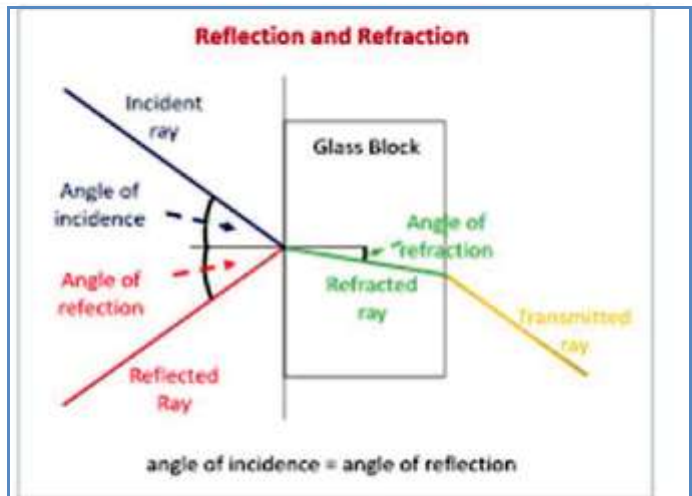


Physics knowledge
organiser
Waves – Light and Sound



Transparent	Transparent objects allow all the light to pass through them
Opaque	Opaque objects allow no light to pass through
Translucent	Translucent objects allow partial light to pass
Absorption	The way in which the energy of a photon is taken up by matter
Scattering	When light hits a rough surface the light is reflected in all directions.
Reflection	When light bounces off an object
Incident ray	A ray of light that strikes a surface.
Reflected ray	The ray that represents the light reflected by the surface.
Normal line	a line drawn at right angles to the reflector.
Refraction	the bending of light as it passes from one substance to another.
Concave lens	a lens that possesses at least one surface that curves inwards
Convex lens	a lens that possesses at least one surface that curves outwards
Focus	Light can be <i>focused</i> so it appears to meet at a single point. Makes a clear image
Prism	When white light passes through a prism , it is dispersed and the different colours of the spectrum separate
Optic nerve	Bundle of sensory neurones at back of eye. Carries impulses from the eye to the brain.
Spectrum	A continuous range of wavelengths



Sound waves are longitudinal waves, made by particles vibrating. These vibrations are passed along to nearby particles, which then pass them on again. This is how sound waves travel along through solids, liquids and gases. When the particles vibrate near your eardrum, your eardrum vibrates. This movement gets turned into an electrical signal, which is then passed on to your brain.

Vibrate	move continuously and rapidly to and fro
Longitudinal wave	A wave that oscillates back and forth
Decibel (dBI)	a unit for expressing the relative intensity of sounds
Volume	a measure of loudness
Amplitude	a, of a wave is the distance from the centre line (or the still position) to the top of a crest
Pitch (high/low)	Determined by how quickly the sound wave is making the air vibrate
Wavelength	the distance between the crests (tops) of two waves next to each other
Oscilloscope	a laboratory instrument commonly used to display and analyze the waveform of electronic signals
Microphone	for transmitting your voice electronically
Particle	a substance which cannot be split up into smaller pieces
Vacuum	a space with no (air) particles present
Hypothesis	an idea or explanation that you then test through study and experimentation
Reflect	when light or sound bounces off an object.
Absorb	to take in or soak up
Soundproofing	reducing noise

