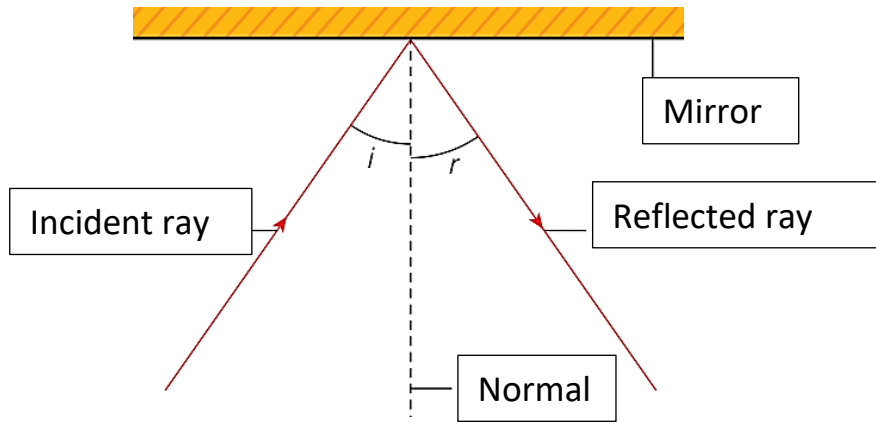


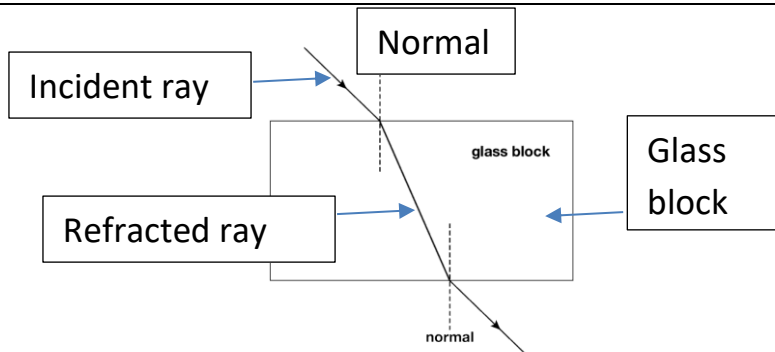
1. Reflection

Law of reflection - Light is reflected at equal angles: the angle of incidence (i) is equal to the angle of reflection (r).



2. Refraction

Refraction happens whenever light travels from one medium to another.



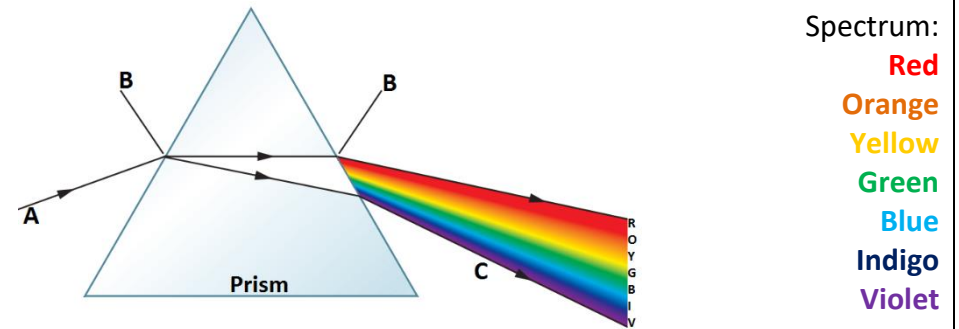
When light enters the block the light is refracted (bent) towards the normal line because the block is more dense so the particles are closer together.

3. Key words

Transparent	A material that allows all light to pass through it.
Translucent	A material that allows some light to pass through it.
Opaque	A material that allows no light to pass through it.

4. Dispersion

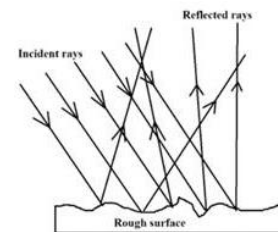
Dispersion - The splitting up of a ray of light of mixed wavelengths by refraction into its components.



5. Scattering and Reflection

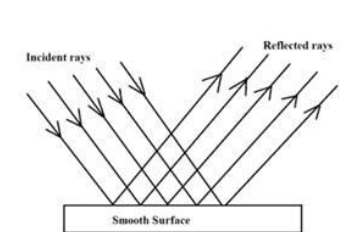
Scattering

When light rays are reflected in all different directions off a rough surface.



Reflection

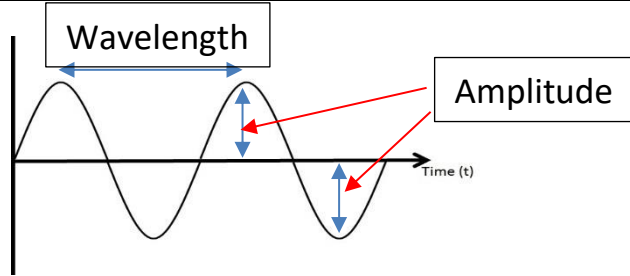
When light rays are reflected in the same direction off a shiny, smooth surface.



6. Key words

Vacuum	A space with no particles of matter in it.
Frequency	The number of waves passing a fixed point in one second.
Decibel	Unit used to measure sound intensity or loudness (dB).
Hertz	Units used to measure frequency.

7. Waves



Wavelength – the length of one full wave.

Amplitude – the height of the wave.

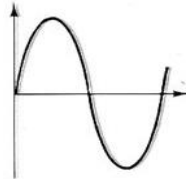
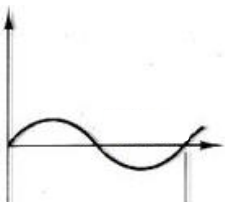
Relationships

High frequency = high pitch

Large amplitude = louder sound

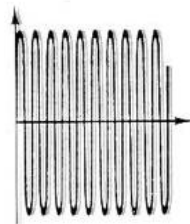
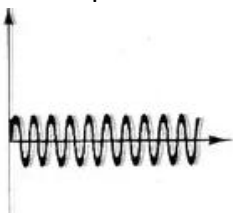
Low pitch and quiet

Low pitch and loud

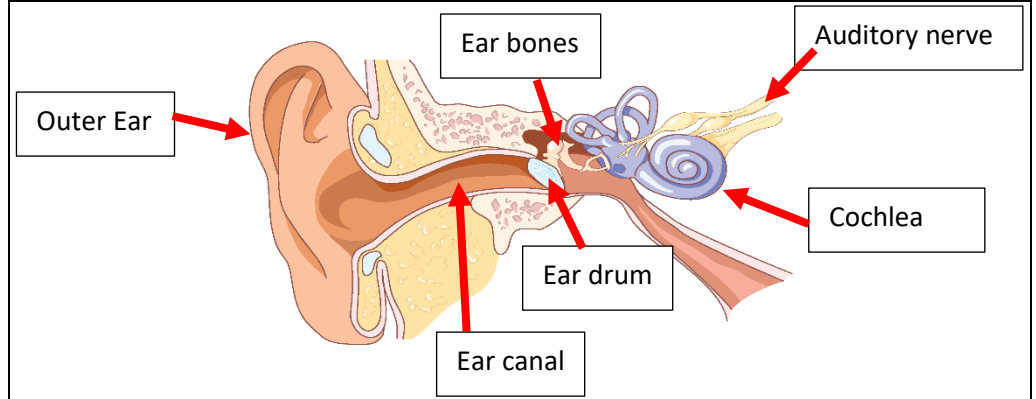


High pitch and quiet

High pitch and loud



8. The ear

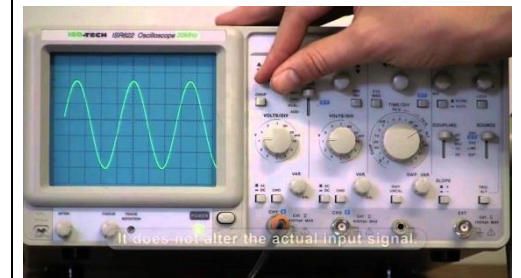


Outer Ear	Funnels vibrations into the ear canal.
Ear canal	The passage in the ear from the outer ear to the ear drum.
Eardrum	A membrane that transmits sound vibrations from the outer ear to the middle ear.
Ear bones	Vibrates are amplified through the bone.
Cochlea	Snail-shaped tube in the inner ear with the sensory cells that detect sound.
Auditory nerve	Transmits an electrical impulse to the brain.

9. Equipment



Ray Box



Oscilloscope