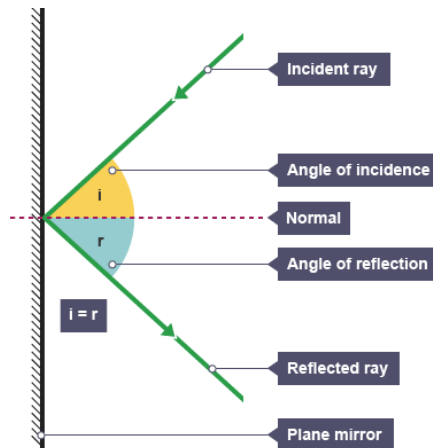
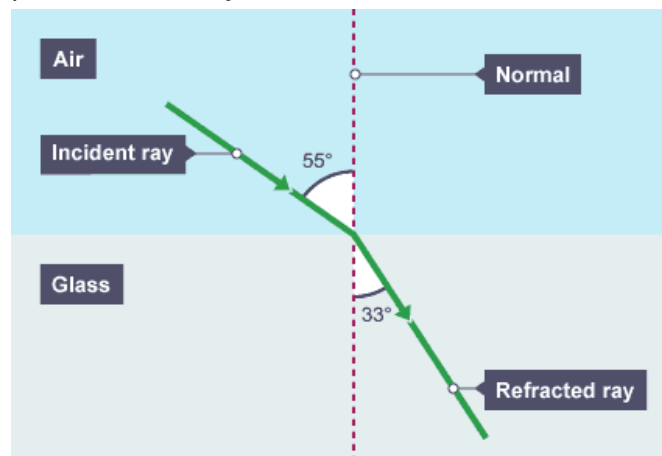


Year 8: Light

- When a light ray meets a different medium, some of it is **absorbed** and some **reflected**.
- For a mirror, the angle of incidence **equals** the angle of reflection.



- When light enters a denser medium it slows down and bends towards the normal; when it enters a less dense medium it speeds up and bends away from the normal. This is called **refraction**.

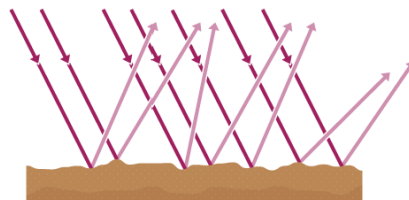


- Light travels at 300 million metres per second in a vacuum.
- The light that we see is made up of a spectrum of colours (ROYGBIV).
- When white light passes through a coloured **filter**, all colours are absorbed except for the colour of the filter. For example, a red filter **transmits** red light but absorbs all the other colours.
- There are three **primary colours**: red, green and blue. They can be combined in different ways to make every other colour. The colour of an object is determined by the wavelength of light that it reflects.

Keywords

Absorption: when energy is transferred from light to a material.

Diffuse reflection: diffuse reflection happens at rough surfaces; instead of forming an image, the reflected light is scattered in all directions.



Dispersion: spreading out of the different wavelengths of light, caused by refraction of light as it passes through a prism, creating a spectrum.

Opaque: a material that allows no light to pass through it.

Refraction: change in the direction of light going from one material into another.

Specular reflection: is reflection from a smooth, flat surface e.g. a mirror; light travelling towards a surface in one direction is all reflected in one direction.

Translucent: a material that allows some light to pass through it.

Transparent: a material that allows all light to pass through it.