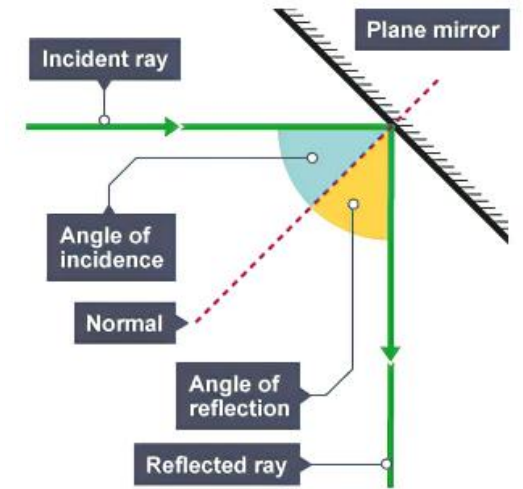


Physics Topic P14: Light.

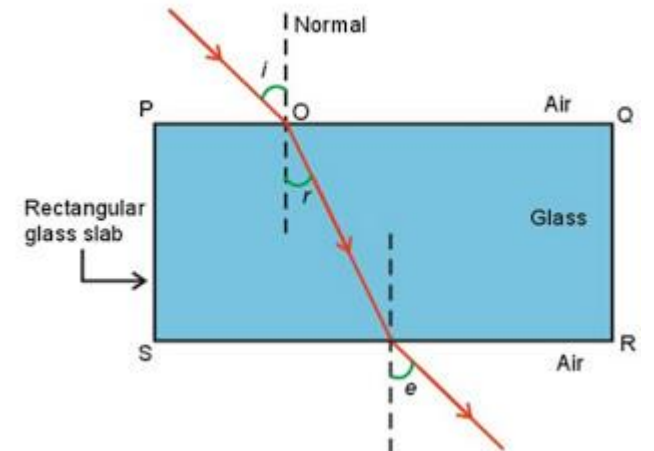
Light keywords

1. Reflection	The change of direction of a light ray or wave at a boundary when the ray stays in the same (incident) medium.
2. Refraction	The change of direction of a light ray when it passes across a boundary between two transparent substances.
3. Primary colours	Colours which can't be made from other colours.
4. Secondary colours	Colours which are made from primary colours.
5. Concave lens	A lens which makes light diverge (spread out).
6. Convex lens	A lens which makes light converge (focus).
7. Focal length	The distance from the centre of a lens to the point where the light rays are focussed.
8. Virtual image	An image that light rays do not pass through; they only appear to come from the image.
9. Real image	An image formed by a lens that can be projected.

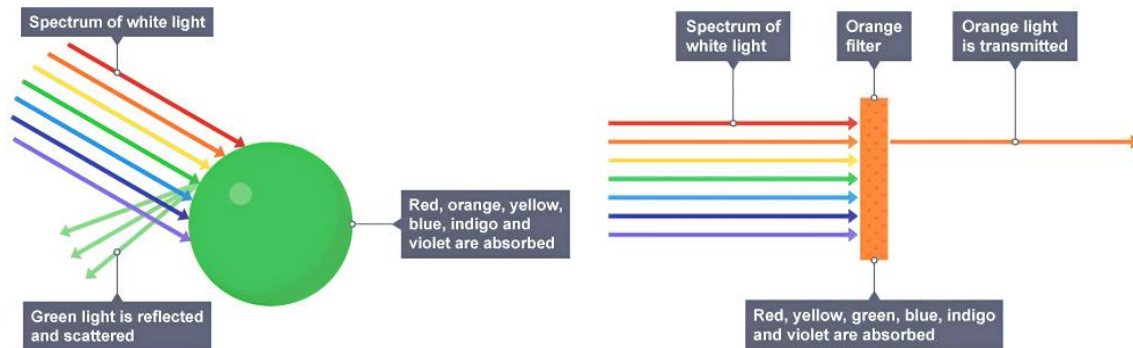
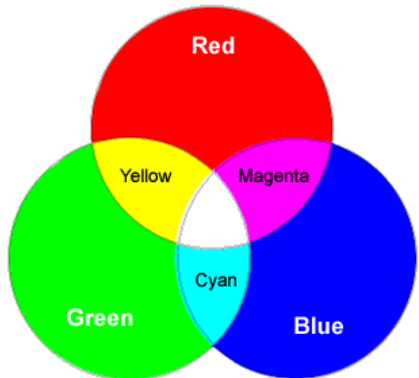
Reflection



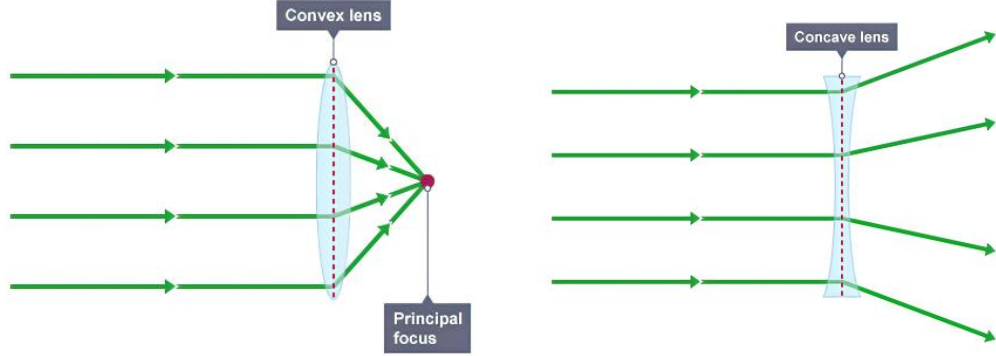
Refraction



Colour



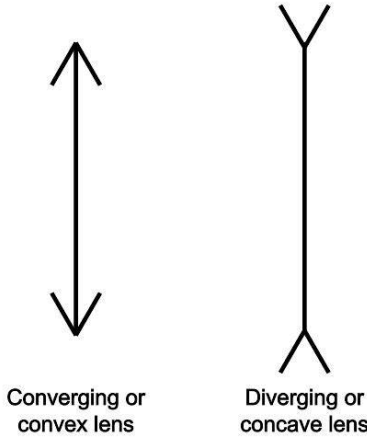
Lenses



Convex (converging lens)

Concave (diverging lens)

Symbols for lenses

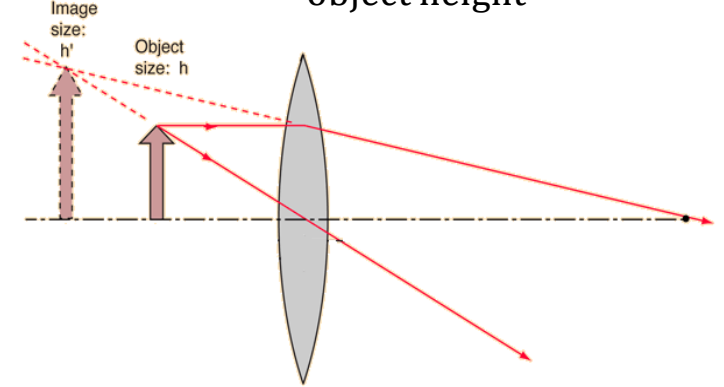


Converging or convex lens

Diverging or concave lens

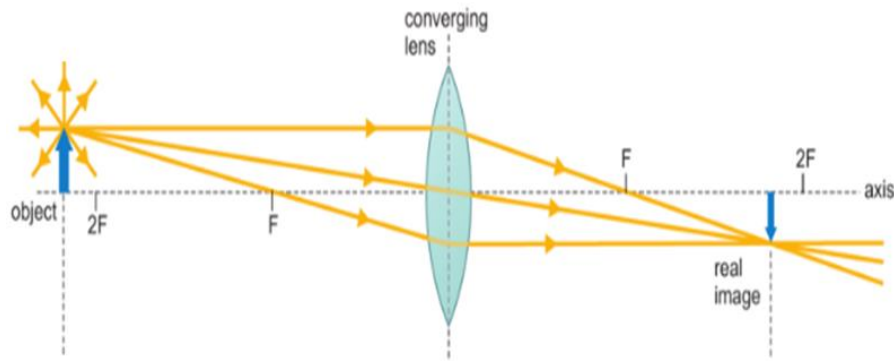
Magnification

$$\text{Magnification} = \frac{\text{image height}}{\text{object height}}$$



Types of images

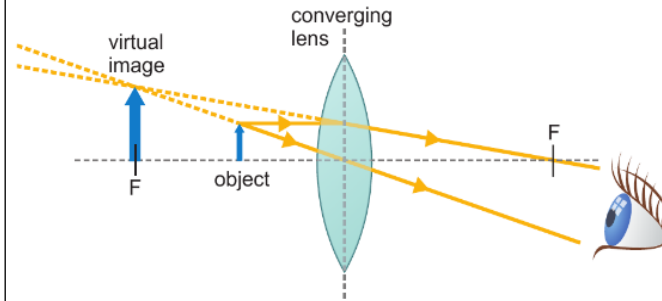
Real images – produced by convex lenses if the object is further than 1 focal length away.



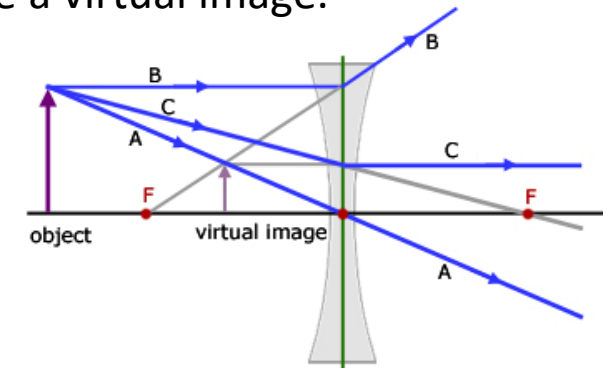
Real image as this is a convex lens and the object is more than 1 focal length away.

Virtual images – produced by convex lenses if the object is less than 1 focal length away (magnifying glass).

All concave (diverging lenses) produce a virtual image.



Virtual image as this is a magnifying glass.



Virtual image as this is a concave (diverging) lens.