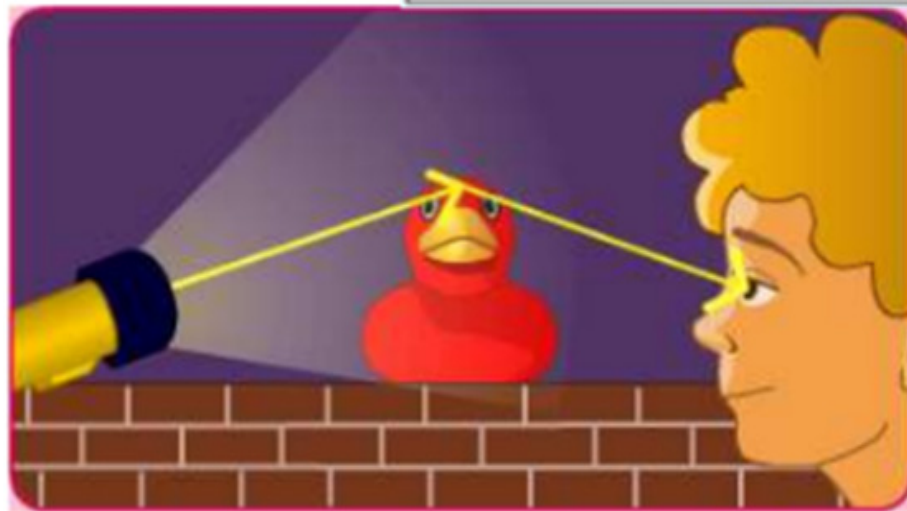


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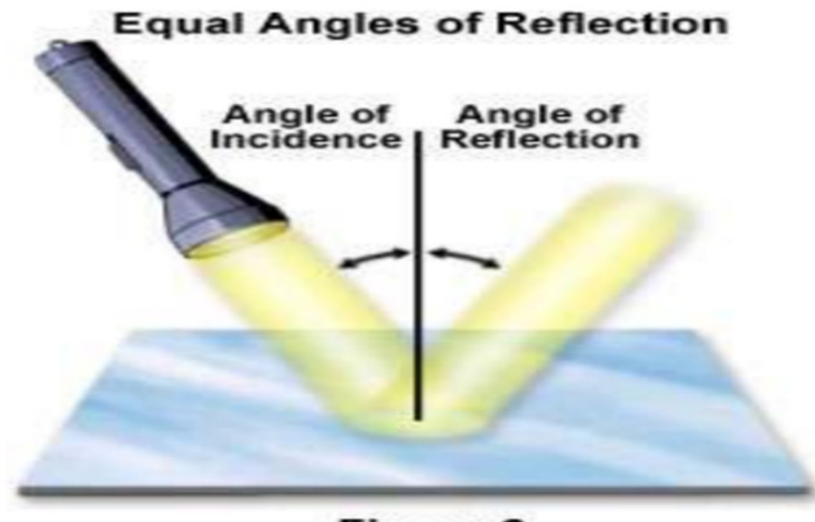
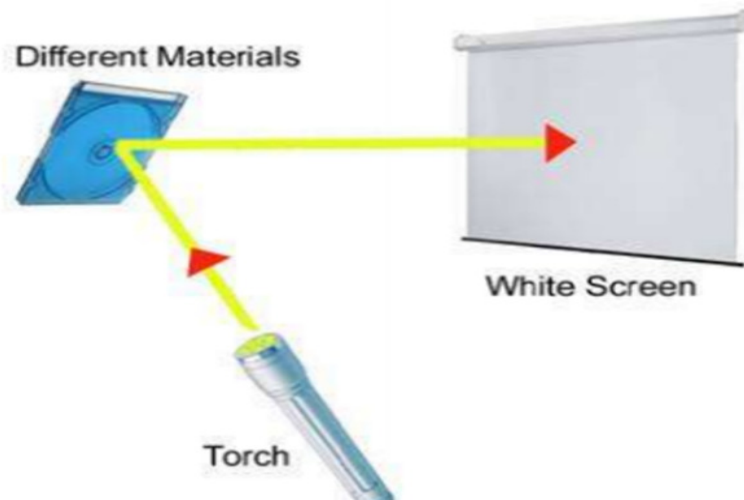
LIGHT

Light help us to see objects. We cannot see the objects in dark.



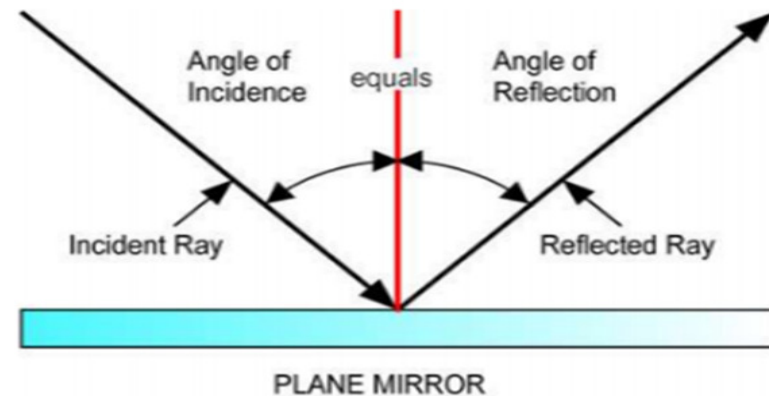
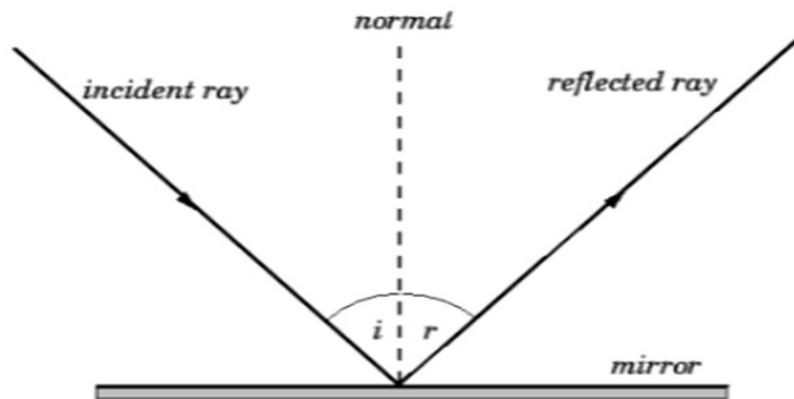
Reflection of Light:

When the light falls on a polished or shiny surface it changes its direction. This phenomena is called reflection



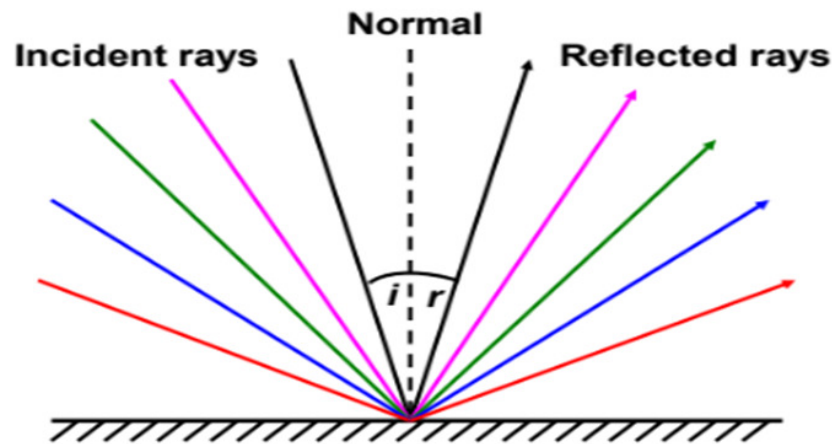
Terms used in reflection

- The Ray of light that strikes the surface is called incident ray
- The ray which come back after reflection is called reflected ray.
- The perpendicular drawn at the surface is called normal.



Laws of Reflection:

- (i) The angle of incidence is equal to the angle of reflection.
- (ii) Incident ray, reflected ray and the normal drawn at the point of incidence to the reflecting surface, lie in the same plane.

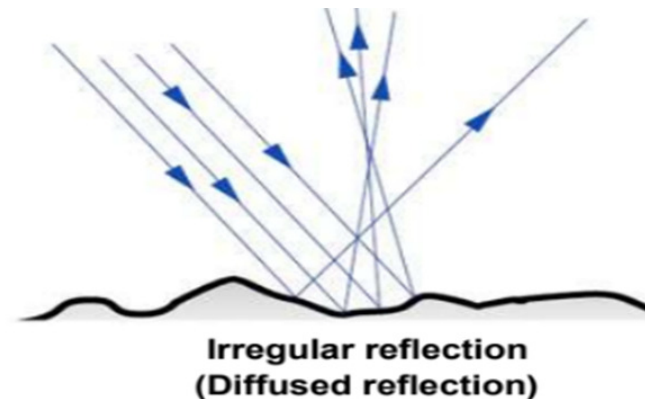
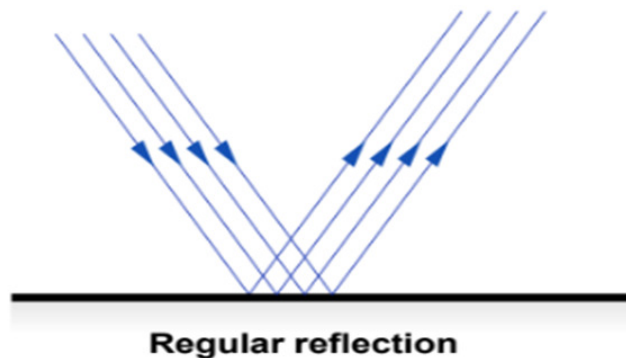


Characteristic of image formed by plane mirror

- Erect
- Laterally Inverted
- Same Size
- Same distance behind the mirror as the object is in front
- Virtual

Regular and Diffused reflection

- Regular reflection: When all the parallel rays reflected from a plane surface are parallel, the reflection is known as **regular** reflection.
- Diffused reflection: When all the parallel rays reflected from a plane surface are not parallel, the reflection is known as **diffused** or **irregular** reflection.



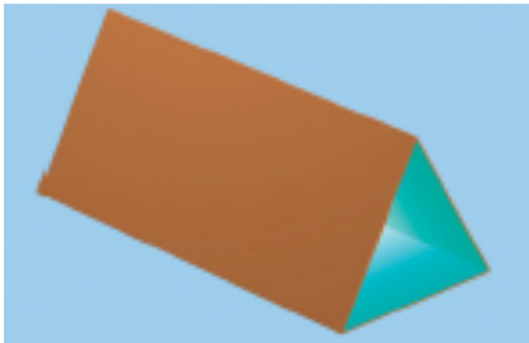
Multiple reflection

- When two mirrors are kept at an angle, they can form multiple images because image formed by one mirror acts as an object for the other mirror.



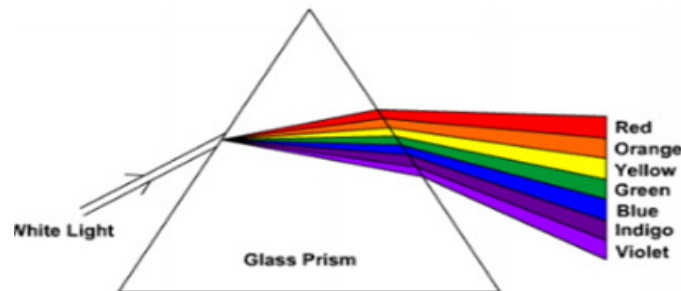
Kaleidoscope

- It is a device used to see multiple images of an object.
- It has three mirrors inclined at an angle of 60°
- The arrangement is kept in a cylindrical box.
- It has few pieces of coloured glass.



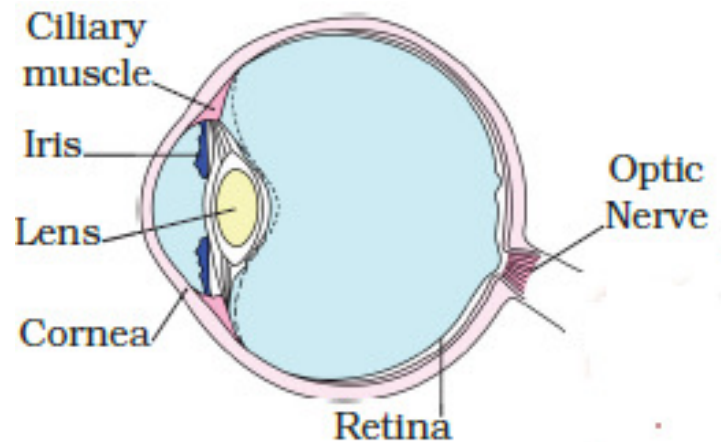
Dispersion

- Splitting up of white light into its constituents coloured is called dispersion
- Rainbow is caused due to dispersion of sunlight by the water drops in the atmosphere



The Human eye

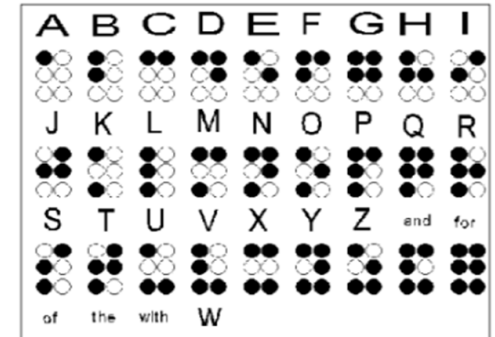
Human eye is a sense organ which helps us to see the objects around us. Light enters the eye through a transparent membrane called cornea. Behind the cornea is a muscular diaphragm called iris which has an opening called pupil. The pupil controls the amount of light entering the eye. The eye lens helps to focus the image of objects on the retina.



Care of the human eye

- Do not look at the sun or bright objects.
- Never rub your eyes. If particles of dust go into your wash your eyes with clean water.
- Too little or too much light is bad for eyes..
- Always read at the normal distance for vision.
- Take food rich in vitamin A

Braille system



- Louis Braille, developed a system for visually challenged persons
- and published it in 1821
- Braille system has 63 dot patterns or characters.
- Each character represents a letter, a combination of letters, a common word or a grammatical sign.
- Dots are arranged in cells of two vertical rows of three dots each.
- Patterns of dots to represent some English alphabets and some common words