

CHAPTER 15: Light

- The source of light is the sun.
- **Light travels in a straight line:**
 - To understand this a small experiment is conducted in which one has to observe flame of a candle using a straight pipe and then with a bent pipe.
 - One can only see light appearing from the straight pipe.
- **LAWS OF REFLECTION:**
 - When light falls on a shiny or polished surface light gets reflected.
 - Reflection of light can be used to change the direction of light.
 - Stainless steel, mirrors, clear water can serve as polished surface.
 - Picture of an object generated due to reflection of light in mirror is called image.
 - Object is any material or item which on reflection of light can form an image.
 - Upright image is called erect.
 - Image formed in plane mirror is upright and similar in size of the object.
- **Left or right in mirrors:**
 - In mirrors left appears as right and right appears as left.
 - Side of image get interchanged and it does not become inverted.
- **SPHERICAL MIRRORS:**
 - This is a curved mirror whose shape is spherical and can have either concave or convex shape.
 - If reflecting surface of spherical mirror is concave, it is called a concave mirror.
 - The concave mirror forms image which is smaller or larger in size than the object.
 - The image may be real or virtual.
 - Concave mirrors are used by doctors to check eyes, ears, nose, throat, teeth
 - The reflectors of torches, headlights of cars and scooters are concave mirror.
 - If the reflecting of spherical mirror is convex, then it is a convex mirror.
 - If image can be observed on screen, it is called as real image
 - If image cannot be observed on screen, it is called as virtual image.
- **IMAGES FORMED BY LENSES:**
 - Magnifying glass is a type of lense.
 - Lenses used to make spectacles, telescopes and microscopes.
 - Convex lenses: lense which are thick in middle and edges are thinner.
 - Convex lens forms a real, inverted and diminished image.
 - These are converging lenses used in magnifying glasses
 - Concave lenses: lense which is thinner in the middle as compared to the edges.
 - Concave lens always forms a virtual, erect and diminished image.
 - They are also called as diverging lens and used to make camera lenses and binoculars.
- **SUNLIGHT — WHITE OR COLOURED?**
 - Sunlight is composed of seven colors.
 - These colors red, orange, yellow, green, blue, indigo and violet.

- Together they appear as white light.
- The white light if passed through a prism split into seven colors, it is called dispersion.