

LIGHT, SHADOWS and REFLECTIONS

Class 6

Light: Light is form of energy. Light help us to see other objects

Luminous Objects: Objects which emit their own light are called luminous objects

eg: Sun, Star, Torch bulb

Non-Luminous Objects: Objects which do not emit their own light are called Non-Luminous Objects.

Eg: Table , Chair

How do we see Other objects: Light from the sun or other source fall on other objects and then travels

Towards our eyes. (Reflected)

Transparent objects: Objects which allow light to pass through them are called transparent objects

Objects though which we can see clearly is called transparent objects.

E.g.: Glass. Air, Water

Translucent objects: Objects which allow light to pass through them partially are called Translucent Objects.

Eg: oiled paper, ice, Tracing paper, Butter paper, cloud, some kind of polythene

Opaque Objects: Objects which do not allow light to pass through them are called Opaque objects

Eg: Wood, Cardboard, Metal sheet

Shadow: Shadow is formed when an opaque object blocks the path of light.

Properties of shadows:

1. For the formation of shadow, a source of light, an opaque object and a screen are needed
2. Shadows have dark in color
3. Shadows are formed opposite to the source of light
4. Shadow is always obtained on a screen
5. Shadows can give information about the shape of the object.(but not always)
6. Size of the shadows can be increased or decreased if the distance between the source and object or object and the screen are changed.

Rectilinear Propagation of light: LIGHT travels in straight line. This is called Rectilinear Propagation.

Activity to show that Light Travels in straight line:

Procedure	Observation	Inference
Arrange two pipes One straight and the other bent pipe		
Observe a burning candle through the straight pipe	Candle is seen	Light travels in straight line
Observe the candle through the bent pipe	Candle is not seen	Light does not bent

Result: This activity indicates that light travels only in straight line

PIN HOLE CAMERA: is a toy device to study that light travels in straight line

Properties of image formed by a Pin Hole Camera:

1. Image formed by a pin hole camera is coloured
2. Image formed by a pin hole camera is inverted (upside down)
3. Image formed by a pin hole camera is smaller in size.

Never look directly at the Sun: Reason: Sunlight has UV light (ultra violet) rays which are harmful. Even UV light can cause blindness.

Mirror: A mirror is a polished surface which can make the image of an object.

Types of Mirror: Plane mirror – image formed is of the same size

Concave mirror: reflecting surface is bent –in

Convex Mirror: reflecting surface is bulged-out.

Reflection: When light falls on a mirror, it is bounced back. Bouncing back of light is called reflection.

Home Activity :

- 1) Study reflection pattern using a plane mirror, comb and a torch
- 2) Make a pin hole camera
- 3) Collect transparent, translucent and opaque objects with your friends.(Group Activity)

