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LIGHT, SHADOW AND REFLECTION

Light

Light is a form of energy.

Light enables us to see objects from which it comes (or from which it is reflected). Without light, things can not be seen

During daytime, sun's light allows us to see objects.

At night, it is the light of a candle, tubelight or electric bulb which makes us see the objects

Luminous Objects

Luminous objects are the objects which have their own light.

- Eg- Sun (Stars), Glowing bulb, glowing tube light, CFL, LED, lighted candle, firefly etc.

Non-luminous Objects

- Non-luminous objects are those objects which do not emit their own light.
- ∴ They become visible only when light from other source falls on them and it is reflected to our eyes.
- Eg- Planets like Earth 🌍, moon, human body, trees, chair, table etc

Sources of Light

Hot sources of light - are the sources of light which become hot to emit light.

Eg- Sun, lighted candle, glowing bulb etc.

Cold sources of light - are those sources of light which do not have to become hot to emit light

Eg- CFL, LED, firefly etc.

When the light falls on any surface it can either bounce back, pass through or get absorbed.

Examples-

Most of the light bounces back when it falls on the surface of a miror

Most of the light falling on the surface of wall gets absorbed.

Most of the light falling on ~~the surface~~ transparent window pane passes through it

On the basis of the above concept, different objects are classified as Transparent, Translucent and Opague.

Properties of light

Light travels along a straight line. This property of light is known as Rectilinear Propagation of Light.

Light can also travel through vacuum. The speed of light in vacuum is 3 lakh km per second.

When light falls on any surfaces it can either bounce back, pass through or get absorbed.

Write an activity to prove that light travels in a straight line.

Activity

Show that light travels in a straight line.

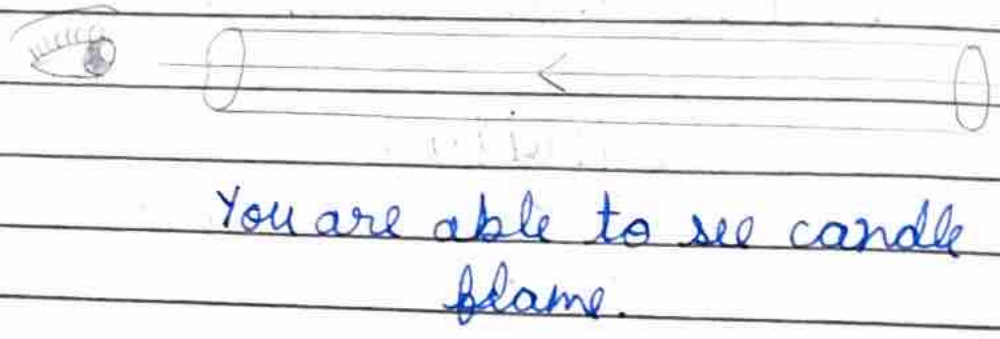
Fix a lighted candle on a table.

Take a rubber tube / pipe, stretch it and look at the flame of the candle.

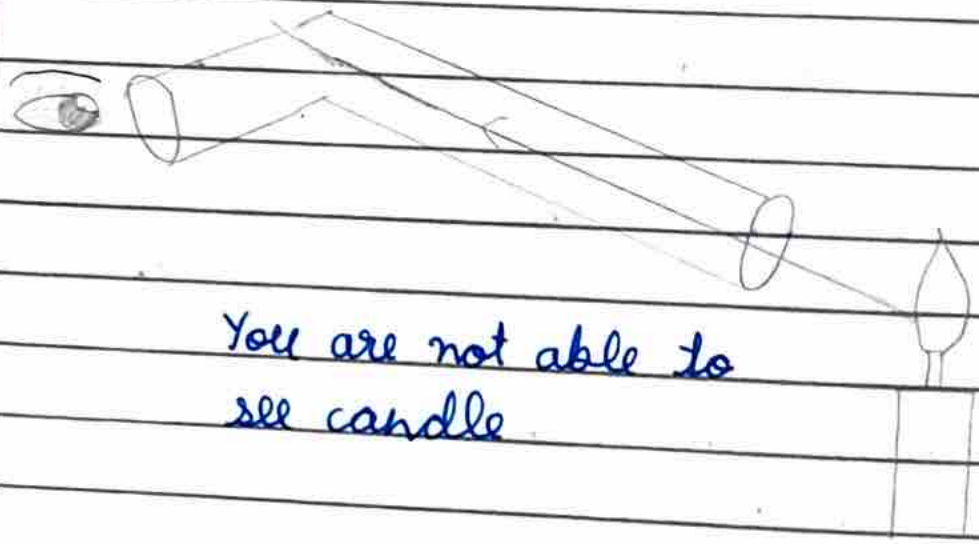
Now bend the tube and look through it at the candle flame again.

You will notice that the flame is not visible when the tube is bent.

This proves light travels in straig line.



You are able to see candle flame.



You are not able to see candle