Light and Shadow

Light- Light is a **form of energy**. Light enables us to see objects.

Source of light

- **Natural**: Sun and stars are the **natural source of light.**
- **Artificial:** Torch, bulb, candle are **artificial source of light.**

Luminous and Non-luminous objects

- Luminous objects- The object which emit light of their own are **Luminous objects**
- Non-luminous objects- The object which do not emit light of their own are **Non-Luminous objects.** Moon is also a non-luminous object. Moon reflects the light of the sun.

Type of objects

- **Transparent object-** Objects that allows light to pass through it are called **transparent objects**
- **Translucent object-** Objects that partially allows light to pass through it are called **Translucent objects**
- **Opaque object-** Objects that do not allow light to pass through it are called **Opaque objects**

Shadow- A shadow is a dark area or shape produced by a body coming between rays of light and a surface.

Conditions required for the formation of a shadow

- A source of light
- An opaque object that comes in the way of source of light
- A screen or a surface on which the shadow is formed

Characteristics features of the shadow

- A shadow can be formed only in the presence of a source of light.
- A shadow is always formed on the opposite side of the source of light.
- A shadow is always black in colour.
- The size of the shadow depends on the distance between the objects and the source of light. As the distance decrease size of the shadow increases/
- Position of shadow changes with the position of the source of light.

Rotation and Revolution of Earth

Axis- An imaginary line running through the centre of the earth is called its **axis**.

***Rotation*- The circular movement of the earth on its axis** is called rotation. Due to rotation of the earth on its day and night occurs.

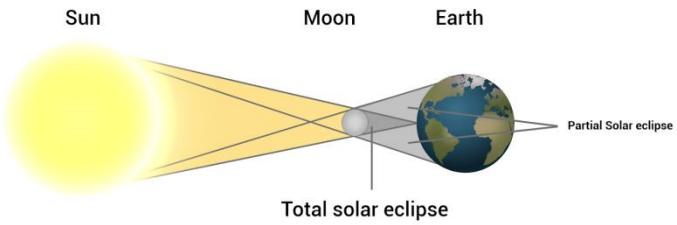
***Orbit*-** The earth moves around the sun in a fixed path called the orbit

***Revolution*-** The movement of the earth around the sun is called revolution. It takes 365 ¼ days to complete a revolution. The revolution of the earth is responsible for the change in seasons.

***Eclipse*-** The total or partial blocking of sunlight by a heavenly body such as the moon or earth is called **eclipse.**
When earth, moon, and sun comes in a straight line, the light of the sun is blocked by the earth or moon and it casts a shadow on the third body, then the third body is eclipsed.

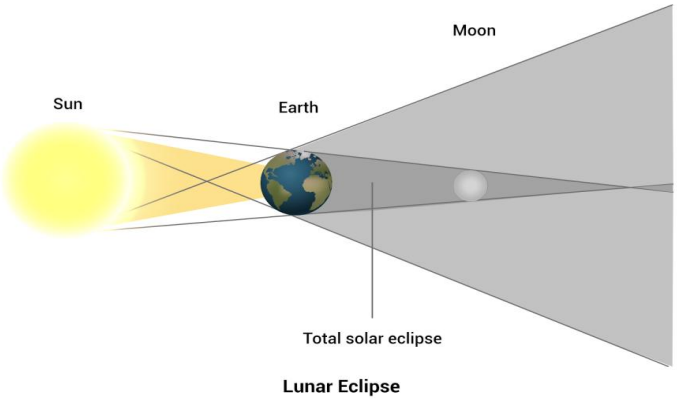
Types of eclipse

- **<u>Solar Eclipse-</u>** When the earth, sun, and moon are in the straight line and moon blocks light from the sun from reaching the earth and cast its shadow on the earth is called Solar eclipse. When the moon fully hides the sun is called a **total solar eclipse.** When the moon partially hides the sun is called a **partial solar eclipse**



Solar Eclipse

- **Lunar eclipse**- When the earth, sun, and moon are in the straight line and earth blocks light from the sun from reaching the moon and cast its shadow on the moon is called a lunar eclipse. When the earth's shadow fully covers the moon is called a **total lunar eclipse.** When earth's shadow partially cover the moon is called a **partial lunar eclipse.**



Lunar Eclipse

Mind Map