

Name of the Book: Inspired Social Studies (Book – 5)

Lunar Eclipse

A lunar eclipse occurs when the Earth passes between the Moon and the Sun, causing the Earth to cast a shadow over the Moon. The shadow cast by the Earth consists of the umbra and penumbra. The umbra shadow is a region where the Earth blocks all direct sunlight from reaching the Moon. The penumbral shadow is a region where the Earth blocks some of the Sun's rays from reaching the Moon.

Types of lunar eclipse

There are two types of lunar eclipses.

- A **total lunar eclipse** occurs when the Moon, the Sun and the Earth are all in one straight line, causing the Moon to fall completely within the Earth's umbral shadow. Even during a total lunar eclipse, however, the Moon can be seen because some of the sunlight reflected from the Moon manages to reach the Earth. However, while passing through the Earth's atmosphere, the green to violet portion of the light Spectrum is filtered out, allowing only the red light waves to reach the Earth. This makes the Moon appear deep red during a total lunar eclipse.
- A **partial lunar eclipse** occurs when the Moon, the Sun and the Earth are not exactly in one line. As a result, only a part of the Moon comes under the Earth's shadow.

A lunar eclipse can be seen from the Earth at night. While partial lunar eclipses happen every year, total lunar eclipses are rare. Unlike a solar eclipse, a lunar eclipse usually lasts for a few hours.

HOW TO SAFELY VIEW AN ECLIPSE

Looking at the Sun directly at any time can be very harmful for our eyes. We should be even more careful about looking at the Sun directly during a solar eclipse. Harmful rays from the Sun can damage our eyes. A solar eclipse must always be viewed in the presence of adults, and only through special solar eclipse glasses, which filter out the harmful rays of the Sun. However, it is safe to view a lunar eclipse directly.

ASSIGNMENT

Write True/False and rewrite the correct ones.

- 1.The Earth's shadow falls on the Moon during a lunar eclipse.
- 2.We should never view a lunar eclipse without wearing special glasses.

Answer the following:

- 1.What is a lunar eclipse? Draw a diagram of Lunar eclipse. What are the different kinds of lunar eclipse?
- 2.Differentiate between a total solar eclipse and a total lunar eclipse.
- 3.What precautions should we take while viewing a solar eclipse?