

Astronomy & Space Science Textbook

Section 2: The Moon - Earth's Satellite

The Earth's gravitational pull on the moon causes the moon to move in an orbit around the Earth. The changing relative positions of the moon, Earth, and sun cause the phases of the moon, eclipses, and tides. The different forms of the moon you see from Earth are called **phases**. The sequence of phases is the lunar cycle, which lasts 29.5 days. The phase of the moon you see depends on how much of the sunlit side of the moon faces Earth.

An **eclipse** is when the Earth or the moon casts a shadow on the other. From where we are on Earth, two types of eclipses occur. A **solar eclipse** is when the moon's shadow appears on the Earth's surface. A **lunar eclipse** occurs when the moon moves into Earth's shadow.

The moon has unique features on its surface, including craters, maria, and highlands. **Craters** are large, round pits caused by impacts of meteoroids, which are chunks of rocks from space. The dark, flat areas that formed from lava billions of years ago are called **maria**. It also has **highlands**, which are old and the most highly cratered regions on the moon.

Review:

1. Explain an eclipse, a solar eclipse, and a lunar eclipse.
2. How are craters formed?
3. Draw a picture of the different phases of the moon.

