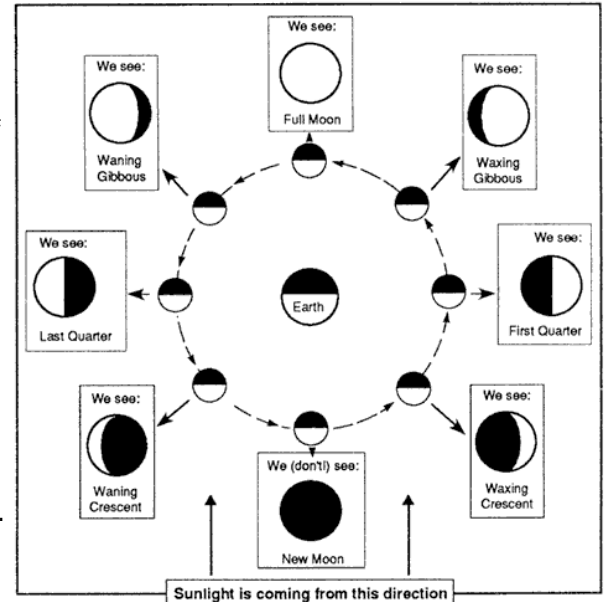


THE MOON

- ▶ The Moon revolves around the Earth once every 27.3 days.
- ▶ The Moon also rotates on its axis once every 27.3 days.
 - ▶ Because these periods are the same, we only ever see one side of the Moon from Earth.
- ▶ The Moon appears to rise 50 minutes later each night.

Lunar Phases

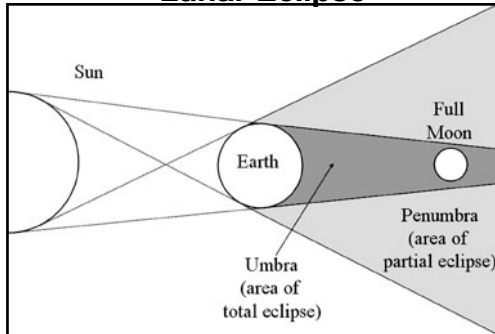
- ▶ Only the side of the Moon facing the Sun is illuminated...the other side is dark.
- ▶ When the Moon revolves around the Earth, we see varying amounts of this illuminated side...this is why we see the phases of the Moon.
 - ▶ Waxing means the illuminated portion is getting bigger each night.
 - ▶ Waning means the illuminated portion is getting smaller each night.



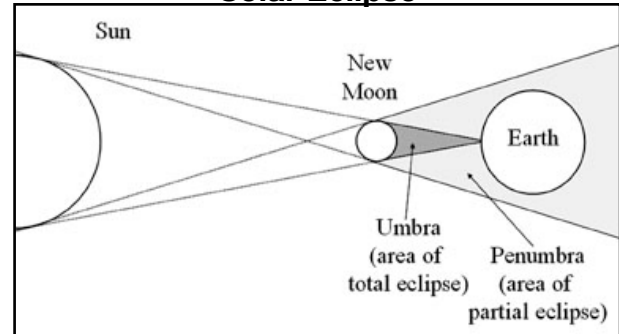
Eclipses

- ▶ A lunar eclipse occurs when the Earth passes between the Sun and the Moon causing the Moon to be blocked out by the shadow of the Earth.
 - ▶ Lunar eclipses only occur during the Full Moon phase.
- ▶ A solar eclipse occurs when the Moon passes directly between the Sun and Earth causing the Sun to be blocked out by the Moon.
 - ▶ Solar eclipses only occur during the New Moon phase.
- ▶ Eclipses don't occur every month because the Moon's orbit is slightly tilted relative to the Earth's path around the Sun. This causes the Moon to be either above or below the Earth most months.

Lunar Eclipse



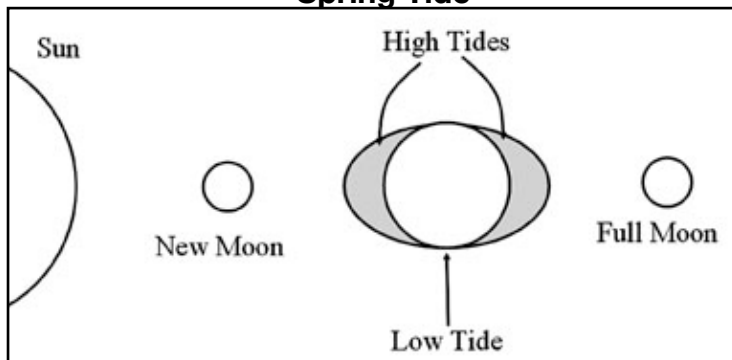
Solar Eclipse



Tides

- ▶ Tides occur because of the gravitational pull of the Moon and Sun.
- ▶ There are two high and two low tides each day.
- ▶ Spring Tides occur when the Earth, Sun, and Moon are lined up causing higher than normal tides
 - ▶ Spring tides occur only in the New and Full Moon phases.
- ▶ Neap Tides occur when the Moon acts on its own causing less severe high tides.
 - ▶ Neap tides occur only in the First and Last Quarter phases.
- ▶ Tides are cyclic and predictable.

Spring Tide



Neap Tide

