**Lunar Eclipse Compared To Solar Eclipse**

A "lunar eclipse" and a "solar eclipse" refer to events involving three celestial bodies: the Sun ("solar"), the moon ("lunar"), and the Earth. **A lunar eclipse occurs when the Earth passes between the Moon and the Sun, and the Earth's shadow obscures the moon or a portion of it. A solar eclipse occurs when the Moon passes between the Earth and the Sun, blocking all or a portion of the Sun.**  
An eclipse can be total, partial, or annular. A total solar eclipse is when the moon blocks out the Sun entirely, a partial eclipse is when it blocks out a portion of the Sun, and an annular eclipse is when the moon is at its furthest point in orbit. It will not cover the Sun completely that's when you can see a thin ring of light emerging from the outside rim of the moon.   
  
**How are a lunar eclipse and solar eclipse different?**   
  
A lunar eclipse occurs at night and a solar eclipse occurs during the day. There are only certain times when either of them can occur. A lunar eclipse can only occur when the moon is directly opposite the Sun in the sky — a full moon. Even though there is a full moon each month, obviously a lunar eclipse does not occur on a monthly basis because the Sun isn't *exactly* in line with the Earth and the moon. The moon's orbit is actually tilted 5 degrees more than that of the Earth; otherwise, we would see a lunar eclipse each month.   
  
We can see lunar eclipses more readily than solar eclipses, and it has to do with proximity. **The Moon is much closer to the Earth (well over 300 times closer than the Sun!)**, so the Earth has a much greater chance of blocking sunlight to the Moon, compared to the Moon blocking light from the Sun. Also, a lunar eclipse can be seen from a greater portion of the Earth. Solar eclipses, on the other hand, are more rare and when they do happen can only be seen by a very narrow segment of people on Earth, for a short period of time.   
  
**It is quite safe to watch a lunar eclipse with the naked eye**, while **watching a solar eclipse without eyewear protection can seriously damage your eyesight**. You can use a telescope to get a clearer view of the moon during an eclipse and really see what is happening.   
  
A solar eclipse has always had a more profound effect on humans than a lunar eclipse. This is probably because of the importance of the Sun to all life on Earth. In ancient China, a solar eclipse was thought to be the dragon coming to eat the Sun. The effect that an eclipse has on all life on Earth is of particular interest to scientists. They eagerly await a solar eclipse because it helps them to gather more knowledge about the Sun and its position with respect to Earth.

**At special times during the year, the earth, moon, and sun do in fact "line up".** When the moon blocks the sun or a part of it, it's called a **solar eclipse**, and it can only happen during the **new moon phase**. When the earth casts a shadow on the moon, it's called a **lunar eclipse**, and can only happen during the **full moon phase**. Roughly 4 to 7 eclipses happen in any given year, but most of them minor or "partial" eclipses. Major lunar or solar eclipses are relatively uncommon.