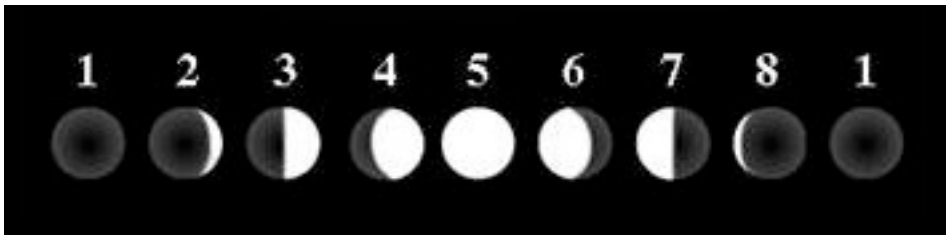
Moon Phase Descriptions

Although this cycle is a continuous process, there are eight distinct, traditionally recognized stages, called phases. The phases designate both the degree to which the Moon is illuminated and the geometric appearance of the illuminated part. These phases of the Moon, in the sequence of their occurrence (starting from New Moon), are listed below



(1) **New Moon** - When the Moon is roughly in the same direction as the Sun, its illuminated half is facing away from the Earth, and therefore the part that faces us is all dark: we have the new moon. When in this phase, the Moon and the Sun rise and set at about the same time.

(2) **Waxing Crescent Moon** - As the Moon moves around the Earth, we get to see more and more of the illuminated half, and we say the Moon is waxing. At first we get a sliver of it, which grows as days go by. This phase is called the crescent moon.

(3) **Quarter Moon** - A week after the new moon, when the Moon has completed about a quarter of its turn around the Earth, we can see half of the illuminated part; that is, a quarter of the Moon. This is the first quarter phase.

(4) **Waxing Gibbous Moon** - During the next week, we keep seeing more and more of the illuminated part of the Moon, and it is now called waxing gibbous (gibbous means "humped").

(5) **Full Moon** - Two weeks after the new moon, the moon is now halfway through its revolution, and now the illuminated half coincides with the one facing the Earth, so that we can see a full disk: we have a full moon. As mentioned above, at this time the Moon rises at the time the Sun sets, and it sets when the Sun rises. If the Moon happens to align exactly with the Earth and Sun, then we get a lunar eclipse.

(6) **Waning Gibbous Moon** - From now on, until it becomes new again, the illuminated part of the Moon that we can see decreases, and we say it's waning. The first week after full, it is called waning gibbous.

(7) **Last Quarter Moon** - Three weeks after new, we again can see half of the illuminated part. This is usually called last quarter.

(8) **Waning Crescent Moon** - Finally, during the fourth week, the Moon is reduced to a thin sliver from us, sometimes called waning crescent.

A while after four weeks (29.5 days, more precisely) the illuminated half of the Moon again faces away from us, and we come back to the beginning of the cycle: a new moon. Sometimes, when the Moon is almost new, it is possible to dimly see its darkened disk. The light from the Sun cannot reach this part of the Moon directly; but at this time the Earth (as viewed from the Moon) is at its full and very bright, and what we see is light reflected from the Earth, that then bounces back at us from the Moon. It's a long trip for this light: from the Sun to the Earth, to the Moon, and back to the Earth.

Moon Phase Comparison

The moon's cycle is a continuous process that is in constant change. The moon never stays at any one phase for more than an instance in time. Starting with a new moon on day one and ending with a waning crescent moon on day 29, the moon's light shape and intensity in always changing.

These phases of the Moon, in the sequence of their occurrence (starting from New Moon) is listed to the left.

As noted the moon reaches a major phase every seven days after the new moon. The first of which is the first quarter moon occuring after 7.4 days. Between the new and first quarter is the time of the waxing crescent moon. 14.8 days into trip around the earth we see a full moon, but not before the waxing gibbous make an appearance. After the full moon a state of waning begins on the 15th day. Along with a last quarter moon both a waning gibbous and crescent moon is visible before a new moon cycle starts a new on the 29th day.