

from not visibly illuminated through partially illuminated to fully illuminated, then back through partially illuminated to not illuminated again. 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 in FIG 10–2–3.

*FIG 10–2–3*  
**Phases of the Moon**



New Moon – The Moon’s unilluminated side is facing the Earth. The Moon is not visible (except during a solar eclipse).



Waxing Crescent – The Moon appears to be partly but less than one–half illuminated by direct sunlight. The fraction of the Moon’s disk that is illuminated is increasing.



First Quarter – One–half of the Moon appears to be illuminated by direct sunlight. The fraction of the Moon’s disk that is illuminated is increasing.



Waxing Gibbous – The Moon appears to be more than one–half but not fully illuminated by direct sunlight. The fraction of the Moon’s disk that is illuminated is increasing.



Full Moon – The Moon’s illuminated side is facing the Earth. The Moon appears to be completely illuminated by direct sunlight.



Waning Gibbous – The Moon appears to be more than one–half but not fully illuminated by direct sunlight. The fraction of the Moon’s disk that is illuminated is decreasing.



Last Quarter – One–half of the Moon appears to be illuminated by direct sunlight. The fraction of the Moon’s disk that is illuminated is decreasing.



Waning Crescent – The Moon appears to be partly but less than one–half illuminated by direct sunlight. The fraction of the Moon’s disk that is illuminated is decreasing.