

Notes: Fill-In-The-Blank

Phases of the Moon

- only half the moon is lit at one time by the sun
 - phases depend on how much of that lit side of the moon we can actually see
 - depends on the angles / positions of the Earth, moon and sun
 - moon takes 27 and $\frac{1}{3}$ days to orbit Earth, Earth spins on axis once every 24 hours
 - phases are NOT the Earth casting its shadow on the moon!
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- i.e. a new moon is only "visible" during the day (we are "seeing" the dark side only)
 - a full moon is only visible at night (rises as the sun sets, sets as the sun rises), we are seeing the entire lit side
 - note: the moon's orbital plane is inclined 5 degrees to our orbital plane around the sun, that is why we don't see eclipses normally, just phases
 - note of interest: moon's rotation takes as long as revolution so the same side always faces Earth! (always see the "man in the moon")

