

Lunar Phases

The Study of the Moon



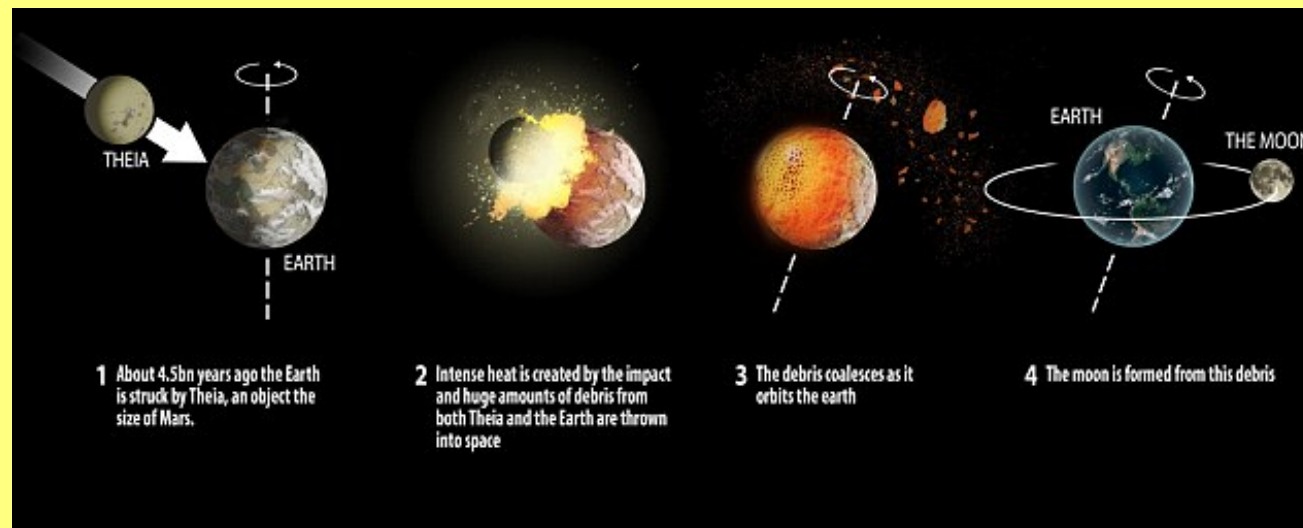
Foldable Notes

#1

Moon-Natural Satellite of the Earth

*Probably created by a huge impact
-approximately 4.5 billion years old

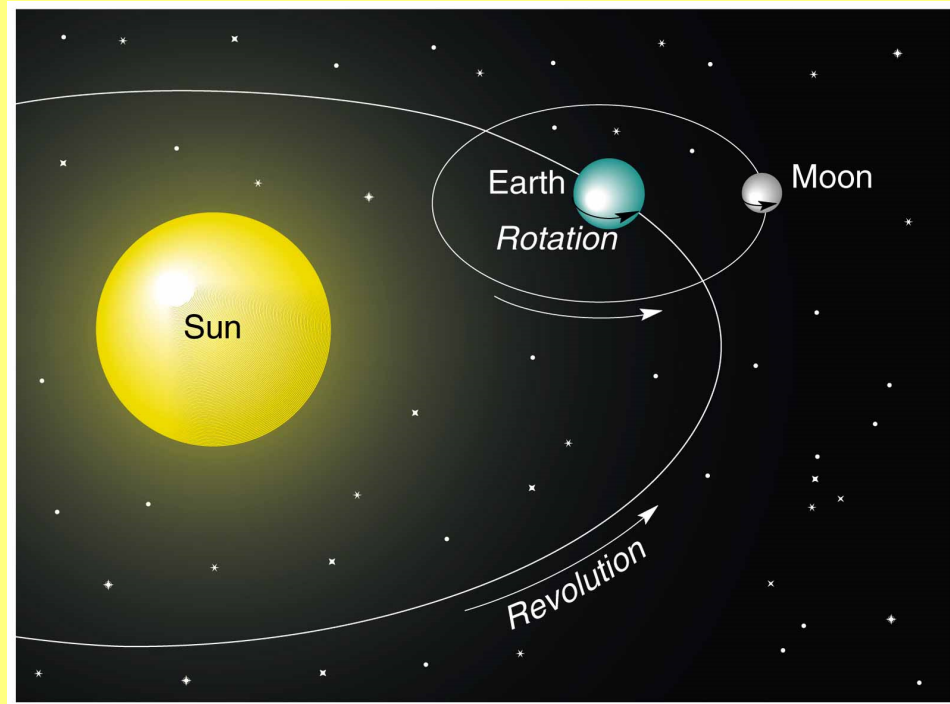
*Earth's gravity keeps the moon at the perfect distance to orbit the Earth.



Rotation & Revolution:

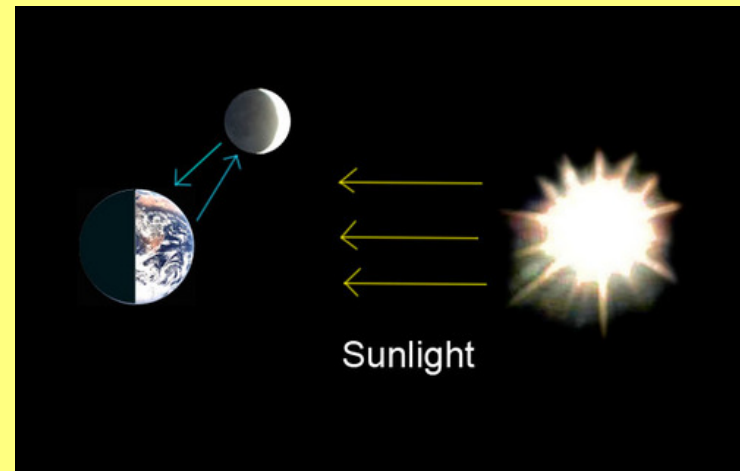
#2

- *The moon both rotates and revolves
- *The same side of the moon ALWAYS faces Earth.
- *The side we never see is sometimes called the "dark side of the moon."



Why can we see the moon in the night sky? #3

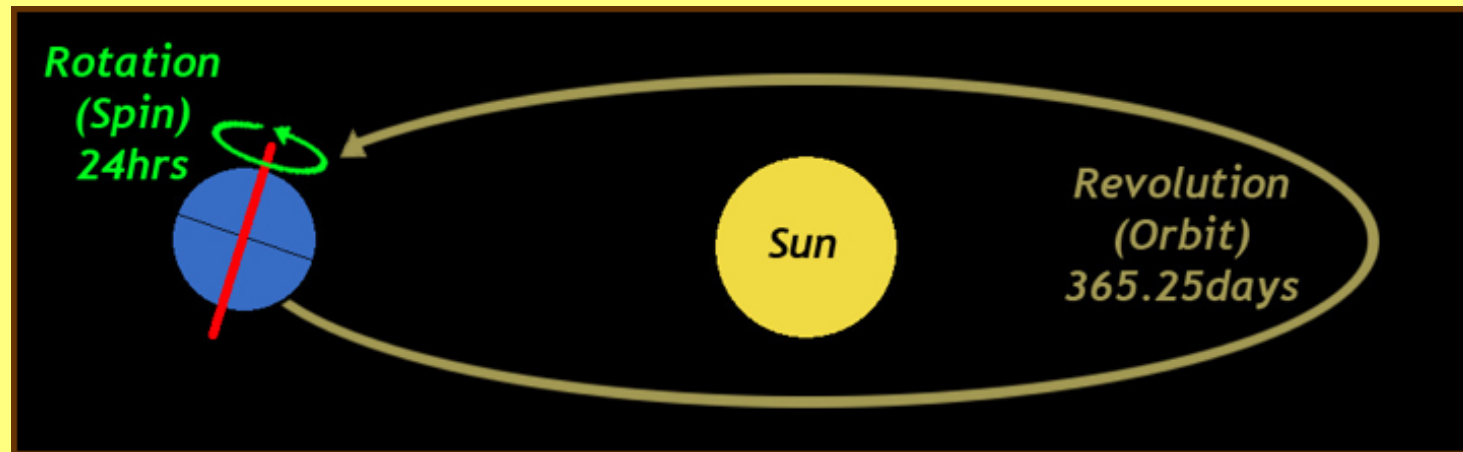
- *The moon reflects light from the sun.
- *The shape of the moon looks different over time because the amount of reflected light changes.
- *Due to the moon's rotation, we see only part of the half that is visible.



Lunar Cycle:

4

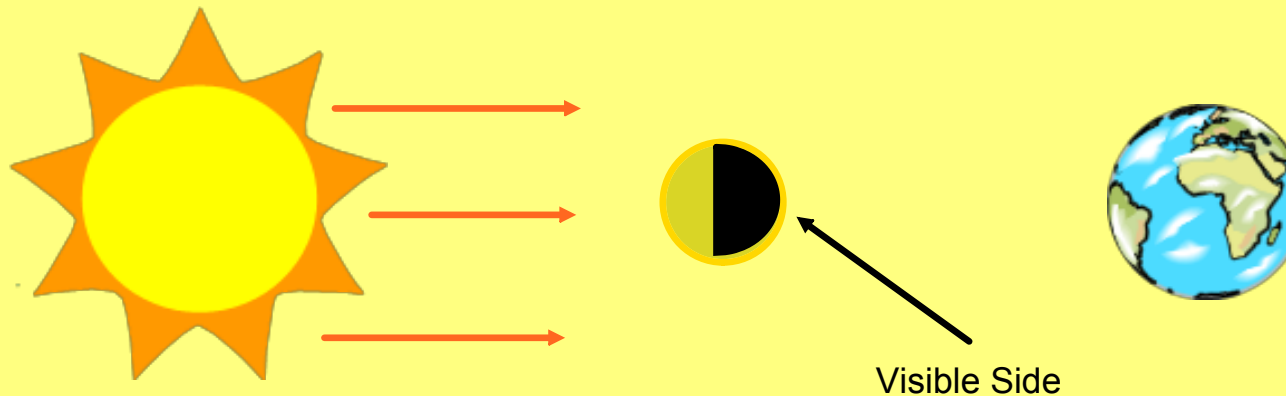
- *The moon travels counter clockwise around the Earth
- *It takes 29.5 days for the moon to make a complete revolution around Earth (nearly 1 month)
- *There are 4 principle phases.



#5

New Moon

- *The moon is positioned between the Sun and the Earth.
- *The moon is not visible in the night sky.

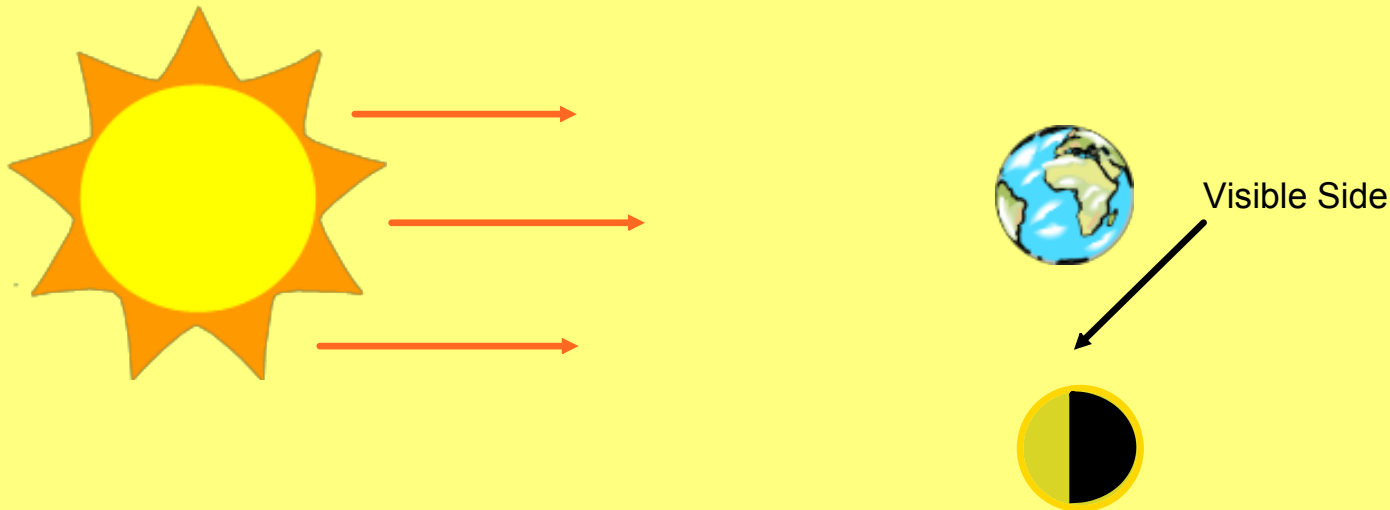


#6

First Quarter

*The moon is next to Earth.

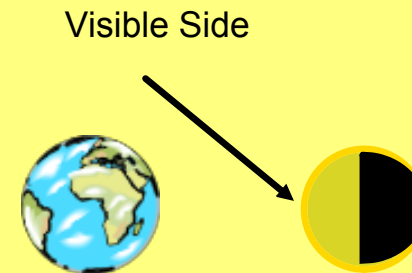
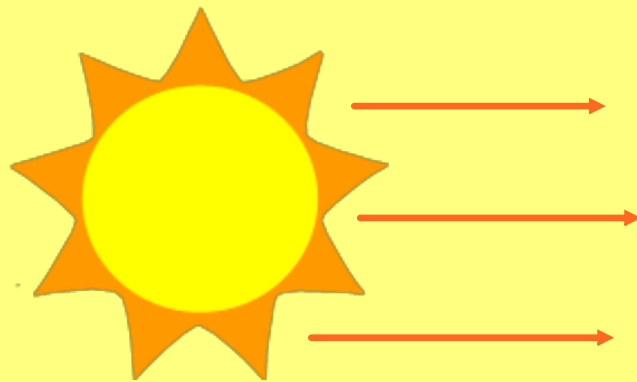
*Only half of the visible half of the moon is visible. ($\frac{1}{2} \cdot \frac{1}{2} = \frac{1}{4}$)



Full Moon

#7

- *The moon is opposite Earth.
- *The entire visible half is lit by the sun.



#8

Third Quarter

*The moon is next to Earth but opposite of first quarter.

*Half of the visible half is lit.

