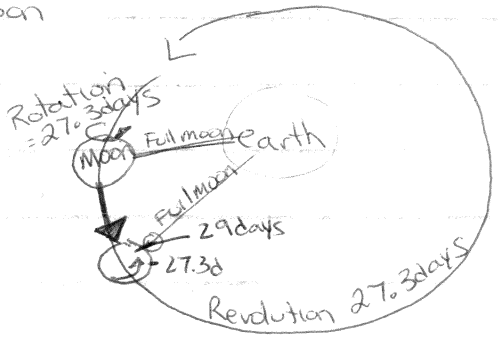
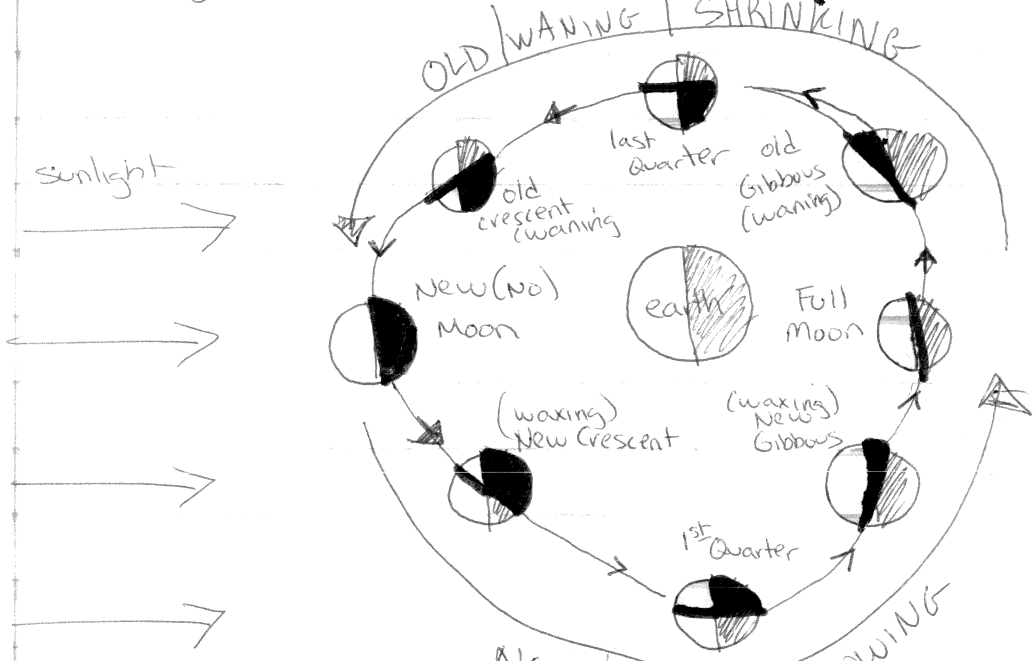
Aim: Why does the Moon change Phases?

- Moon revolves (orbits) around the Earth ~ 1 moonth.
- Moon rotates on its axis also ~ 1 moonth.
  - Period of Rotation = Revolution (27.3 days)
- This results in us always seeing the same side / face of the Moon

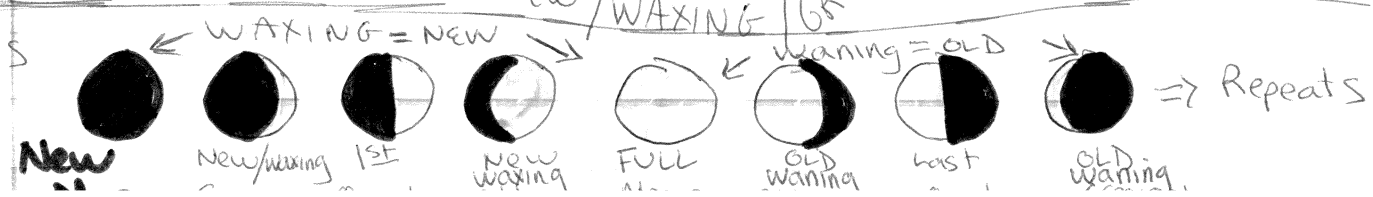


- Moon has No atmosphere, many impact craters
- perigee: closest to earth, biggest, faster, stronger gravity | apogee: far from earth, smallest, slower, weak gravity
- As moon orbits Earth half is always lit by the Sun.
- The amount of the lighted half of the moon we see changes over one month. ~29 days for a cycle of phases.



1. Half the Moon is always lit.
2. The amount of Moon we see changes as it orbits Earth

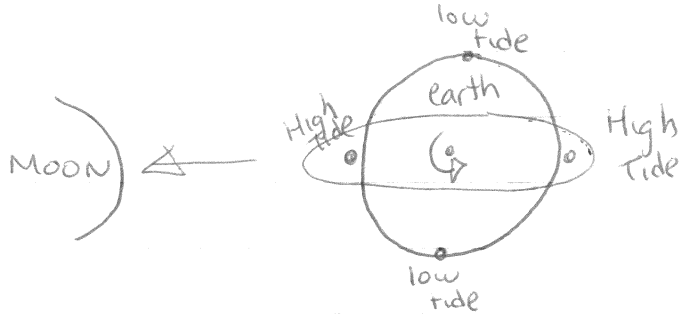
Moon Phases as seen from Earth:



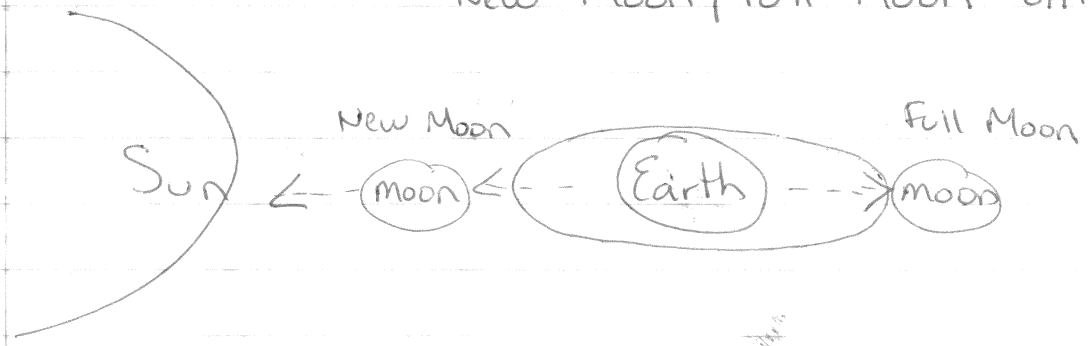
Tides

- Gravitational pull of the Moon + Sun cause Tides on Earth.
- Gravity pulls earth's water toward's it = creating tides.

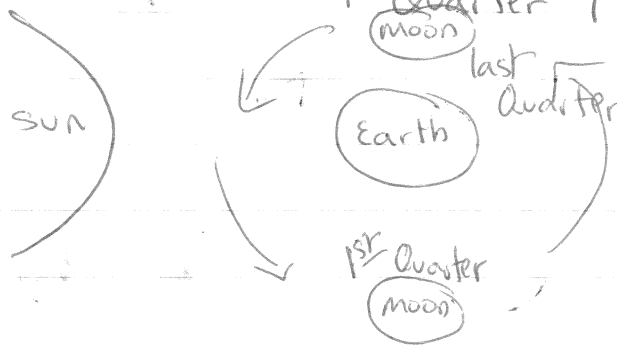
Two high tides + Two low tides every day due to Earth's Rotation.



Spring Tide = Highest high / Lowest low
Biggest tidal range
New Moon / Full Moon only



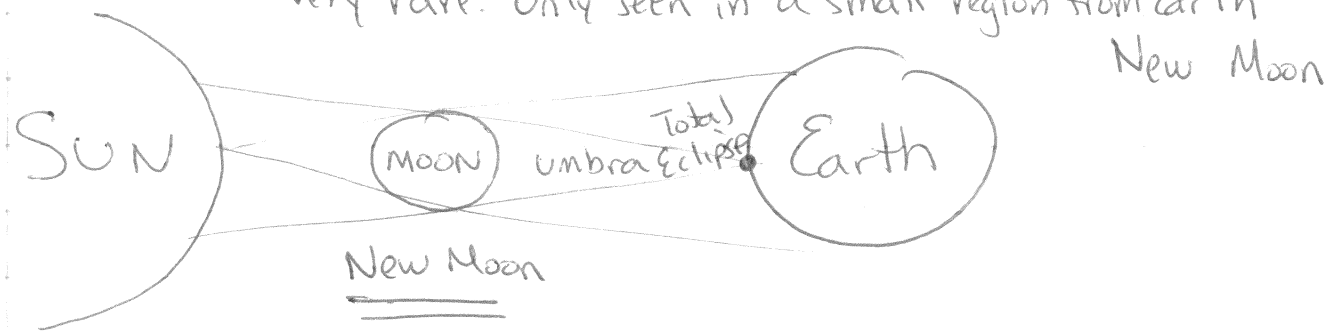
Neap Tide = Medium tides
Small Tidal Range
1st Quarter / Last Quarter



Eclipse's

Solar Eclipse = Sun is blocked by Moon

Very rare. Only seen in a small region from Earth



Lunar Eclipse = Moon is blocked by Earth's shadow.

Seen from many areas on Earth.