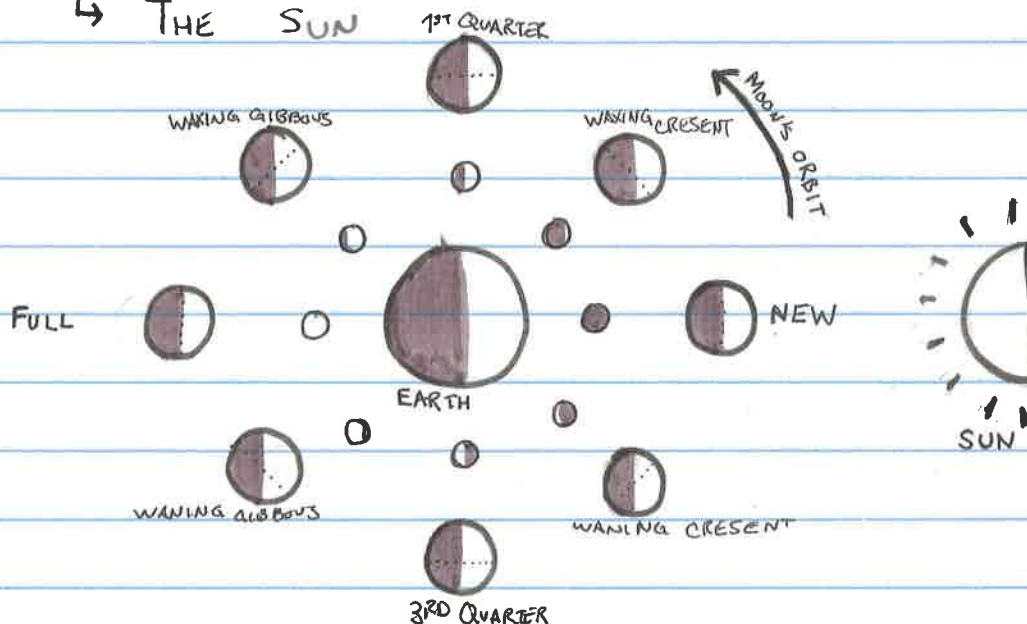


# THE MOON

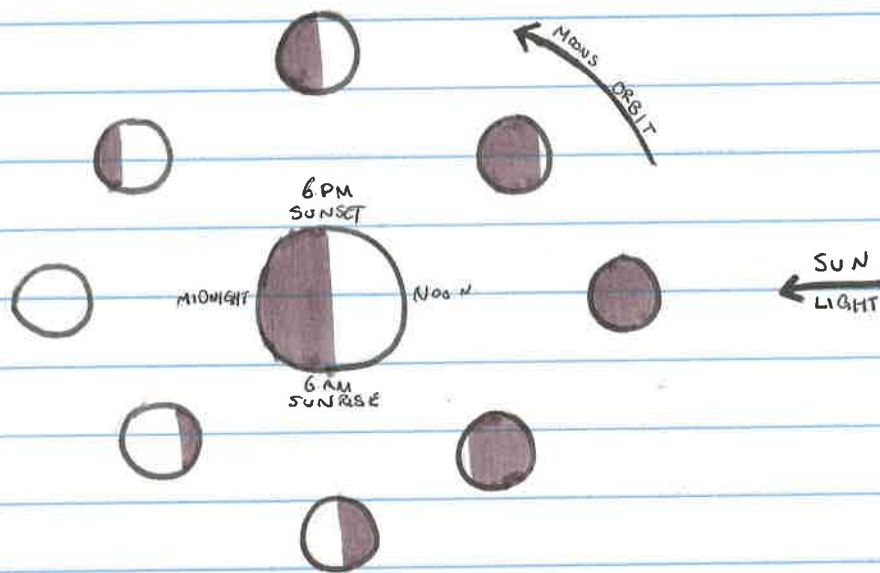
## PHASES OF THE MOON

- THE PHASE OF THE MOON IS DETERMINED BY THE FRACTION OF THE ILLUMINATED PORTION OF THE MOON'S SURFACE FROM EARTH
- 3 FACTORS → PHASES RESULT FROM THEIR RELATIVE POSITIONS
  - ↳ THE MOON
  - ↳ A VIEWER ON EARTH'S SURFACE
  - ↳ THE SUN



- THE MOON IS ALWAYS 50% ILLUMINATED.  
WE ONLY SEE A PORTION FROM EARTH
- MOON TAKES 29.5 DAYS TO ORBIT

- THE MOON RISES AND SETS. YOU CAN ONLY SEE CERTAIN PHASES AT CERTAIN TIMES OF THE DAY



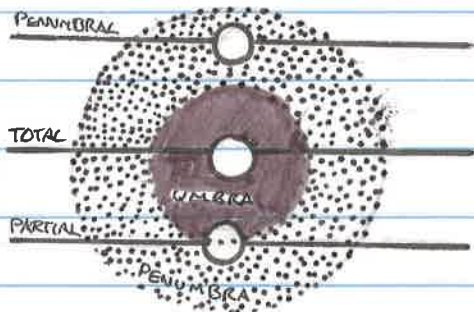
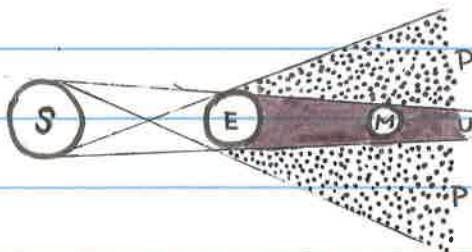
PHASE	RISE	HIGHEST	SETS
NEW MOON	6AM	NOON	6PM
WAXING CRESCENT	9AM	3PM	9PM
1 <sup>ST</sup> QUARTER	NOON	6PM	MIDNIGHT
WAXING GIBBOUS	3PM	9PM	3AM
FULL MOON	6PM	MIDNIGHT	6AM
WANING GIBBOUS	9PM	3AM	9AM
3 <sup>RD</sup> QUARTER	MIDNIGHT	6AM	NOON
WANING CRESCENT	3AM	9AM	3PM

# ECLIPSES

- ECLIPSES ARE NAMED FOR WHAT IS ECLIPSED

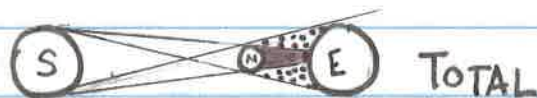
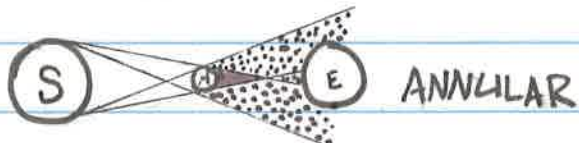
## • • LUNAR • • •

- MOON IS ECLIPSED BY EARTH
- EARTH'S SHADOW HAS 2 PARTS, UMBRA + PENUMBRA
- 3 TYPES
  - PARTIAL, TOTAL, PENUMBRAL



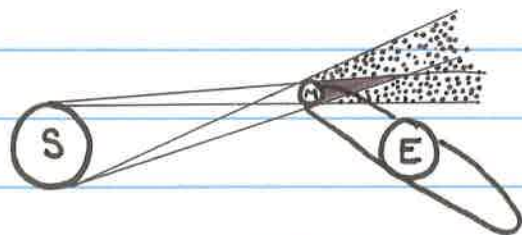
## • • SOLAR • • •

- MOON ECLIPSES THE SUN
- MOON'S SHADOW HAS TWO PARTS, UMBRA + PENUMBRA
- 3 TYPES
  - PARTIAL
  - TOTAL
  - ANNULAR



• WHY DON'T WE GET AN ECLIPSE EVERY MONTH?

↳ TILTY BOI!



• MOON'S ORBIT IS TILTED (PICTURE IS EXAGGERATED)

• SINCE ITS TILTED WE DON'T GET TOO MANY ECLIPSES, MANY ARE NOT VISIBLE IN MY LOCATION

• ECLIPSE LIMIT PER YEAR

↳ SOLAR: 2 min, 5 max

↳ LUNAR: 2 min, 7 max