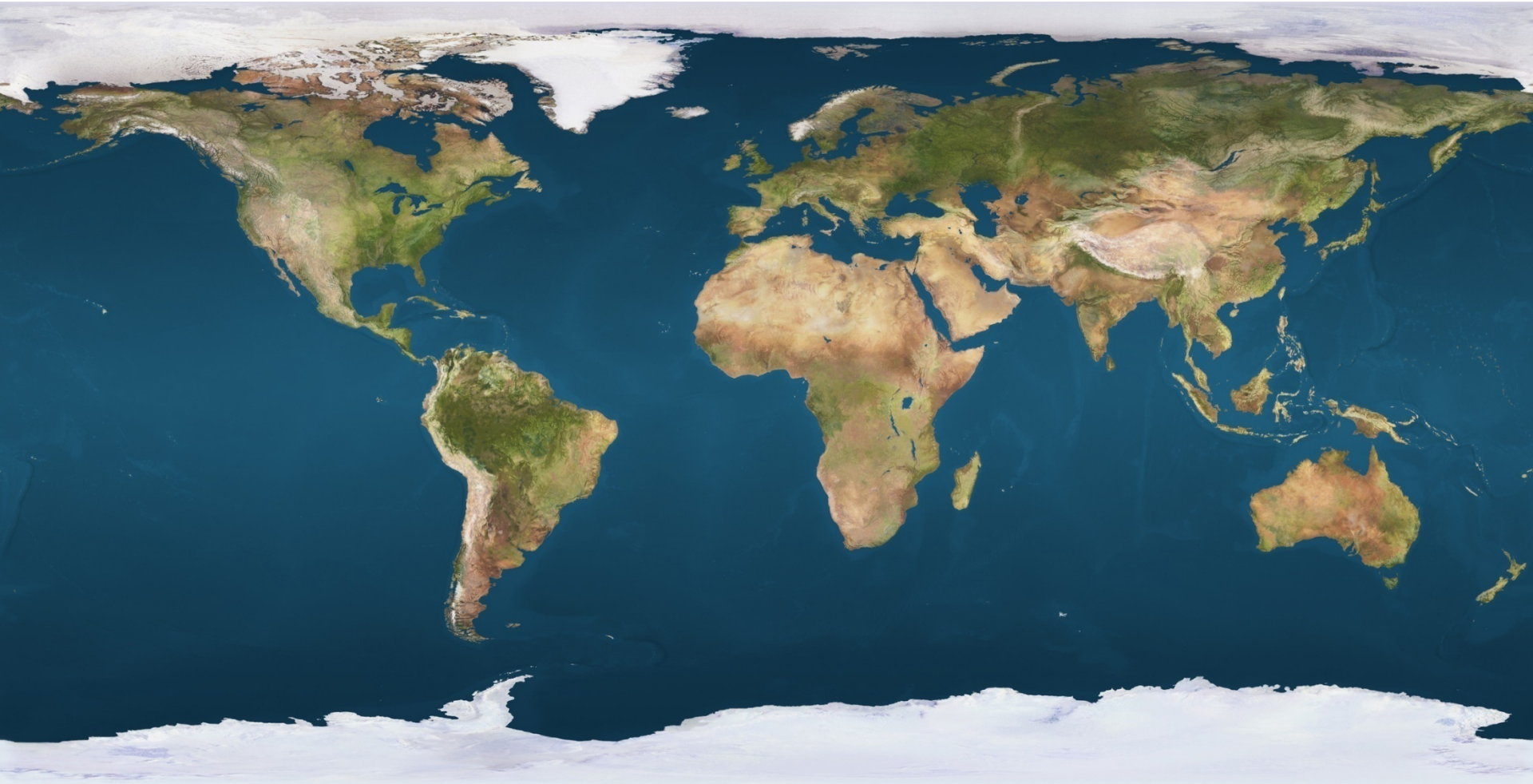


Earth

Erde: The goddess of the soil

The Earth's Surface

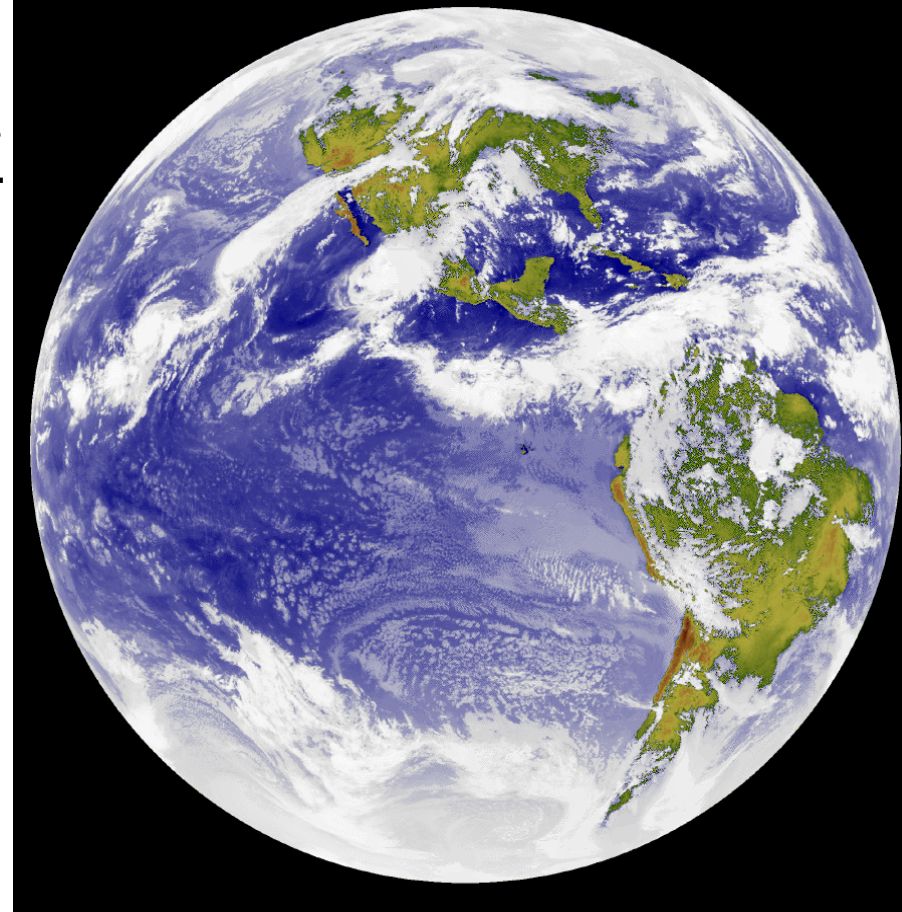


1) 71% Oceans

29% Continents

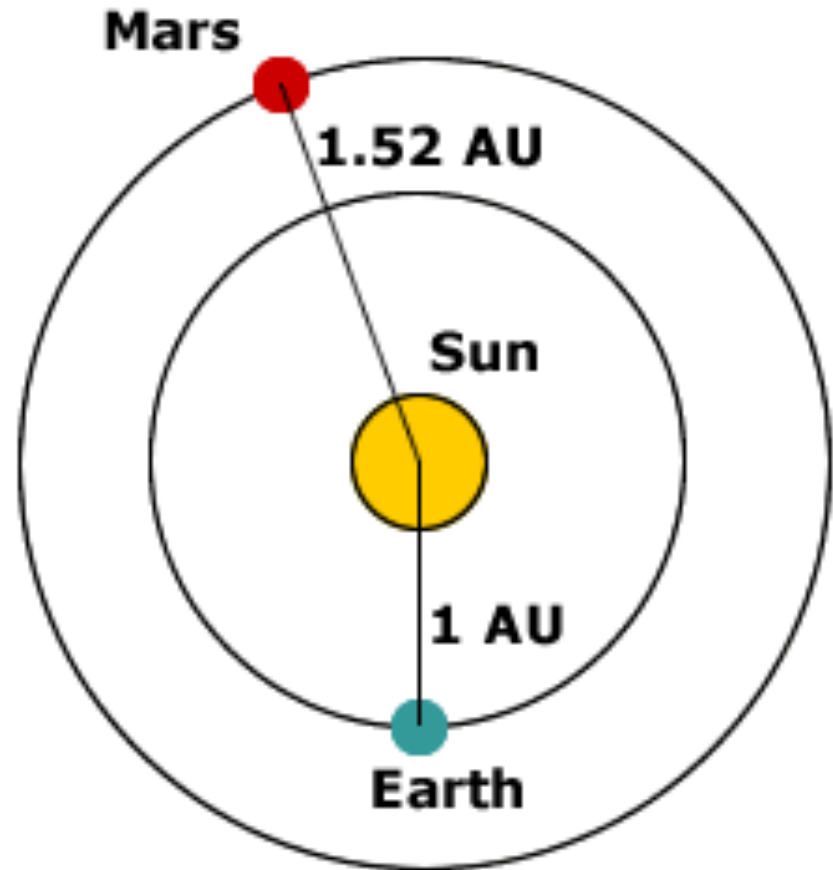
Earth Data

- 2) AGE = 4.6 Billion years old
- 3) Diameter: 8,000 miles
- 4) Temperature range:
136 °F (Sahara desert) to
- 136 °F (Antarctica)
- 5) GRAVITY = 9.81 m/sec²
 - (remember this number from physics?)



6) Average distance

- 1 AU
- 93 million Miles
- Distance from Earth to Sun

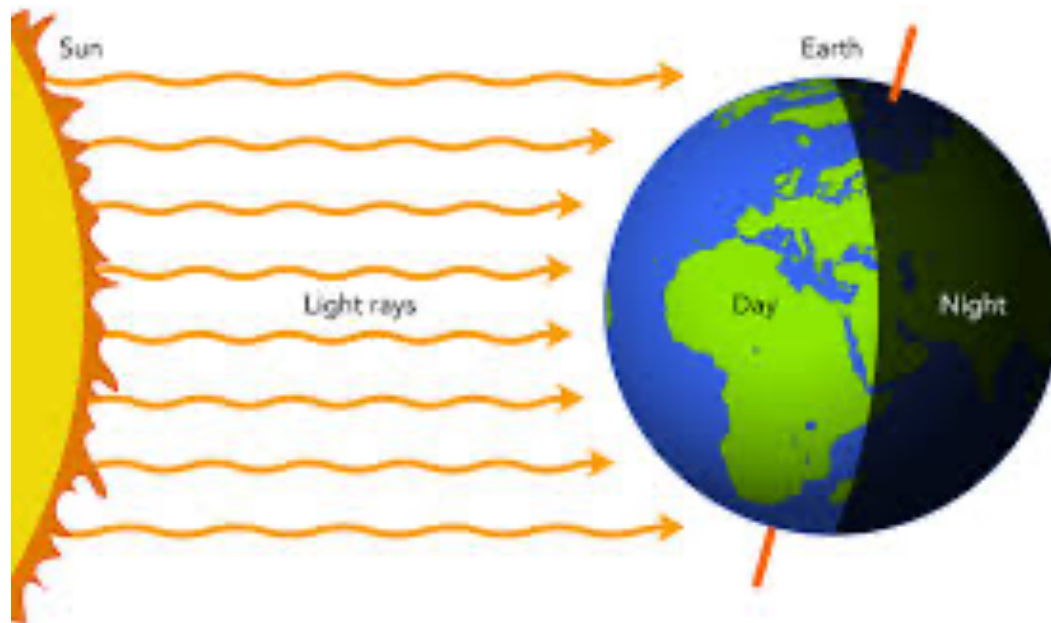
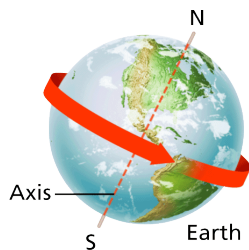


Motions of the Earth

- 7) ROTATION

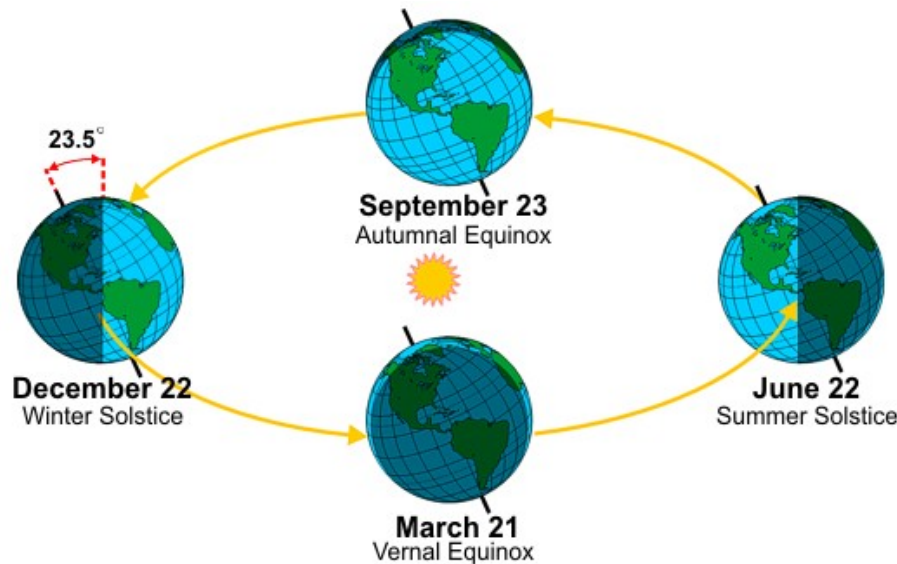
- daily motion

- it takes 24 HOURS for the earth to spin around AROUND ITS AXIS



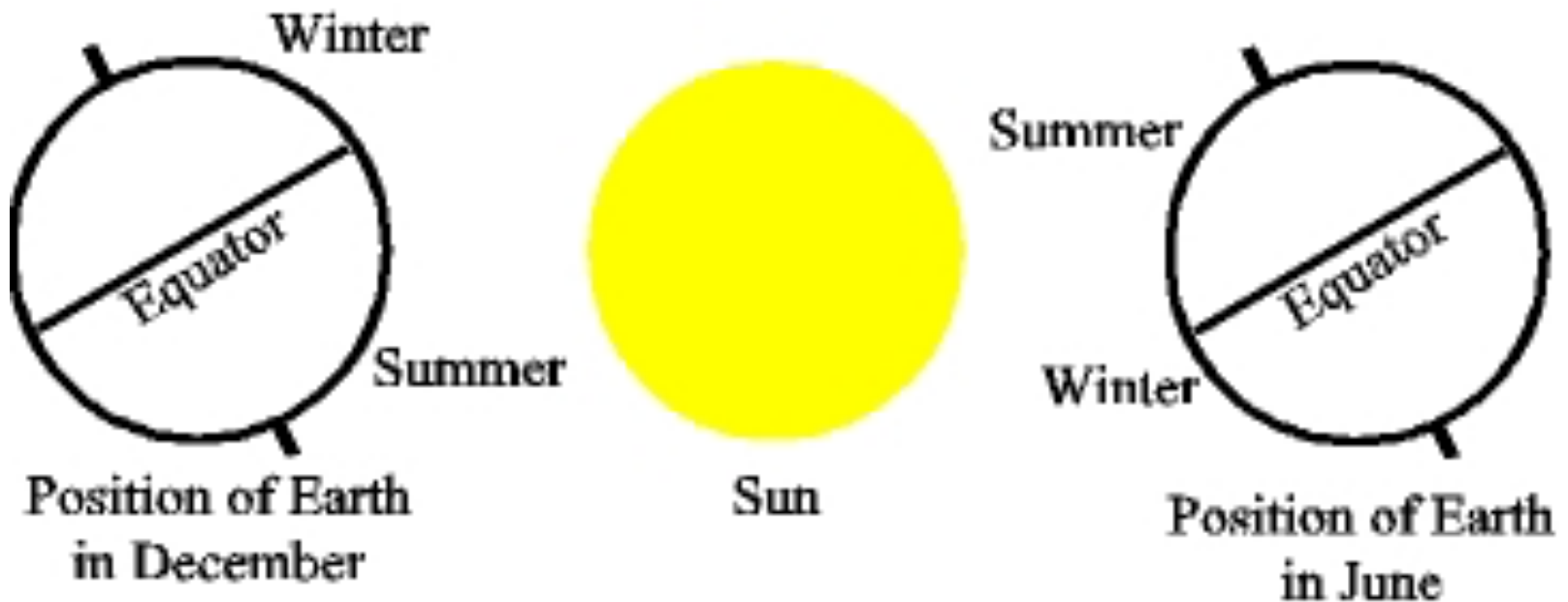
Motions of the Earth

- 8) REVOLUTION (ORBIT)
 - yearly motion
 - It takes 365.25 days for the earth to go around THE SUN ONCE. (page 365)



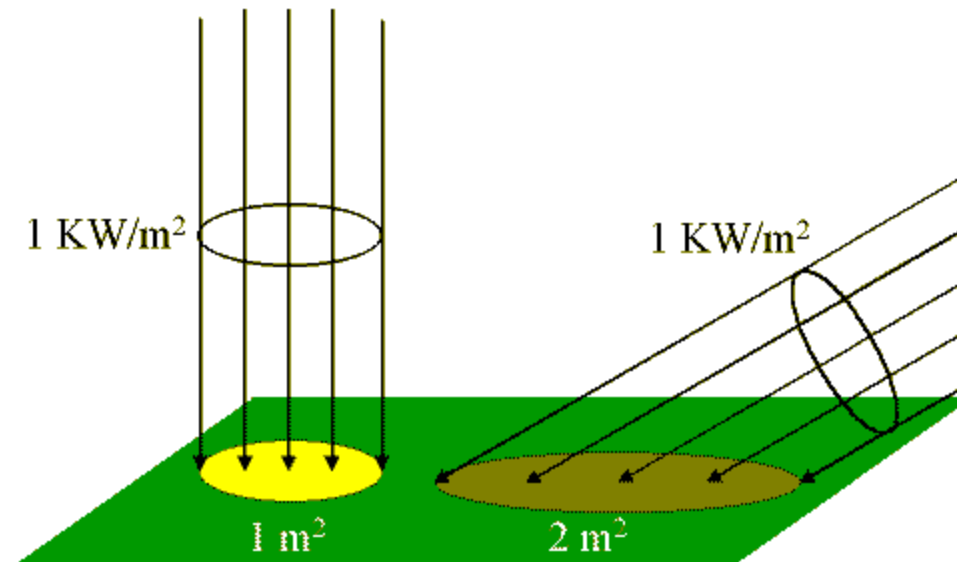
The Seasons

- 9) are caused by the **tilt of the EARTH**
- *NOT* due to changes in the distance of the Earth from the Sun!!!



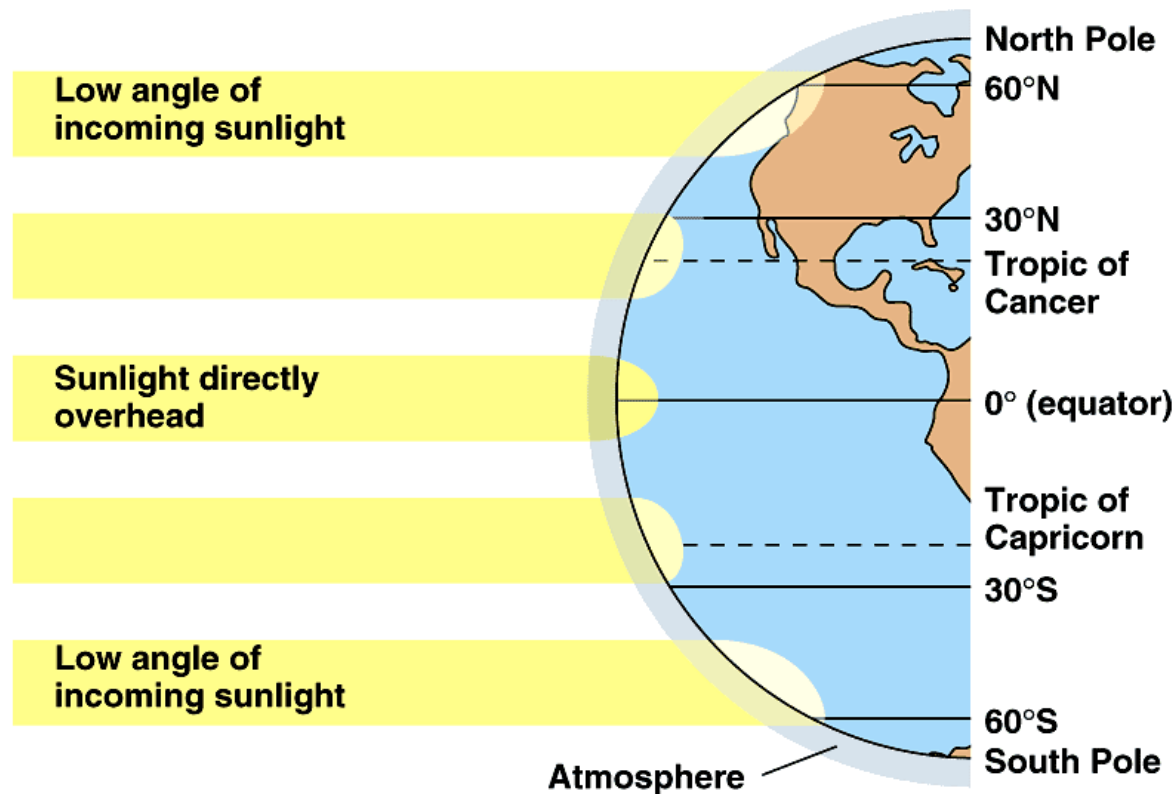
The tilt of the Earth's axis affects:

- 10a) amount of daylight (Insolation)
 - Insolation: how directly the rays of the sun hit the ground



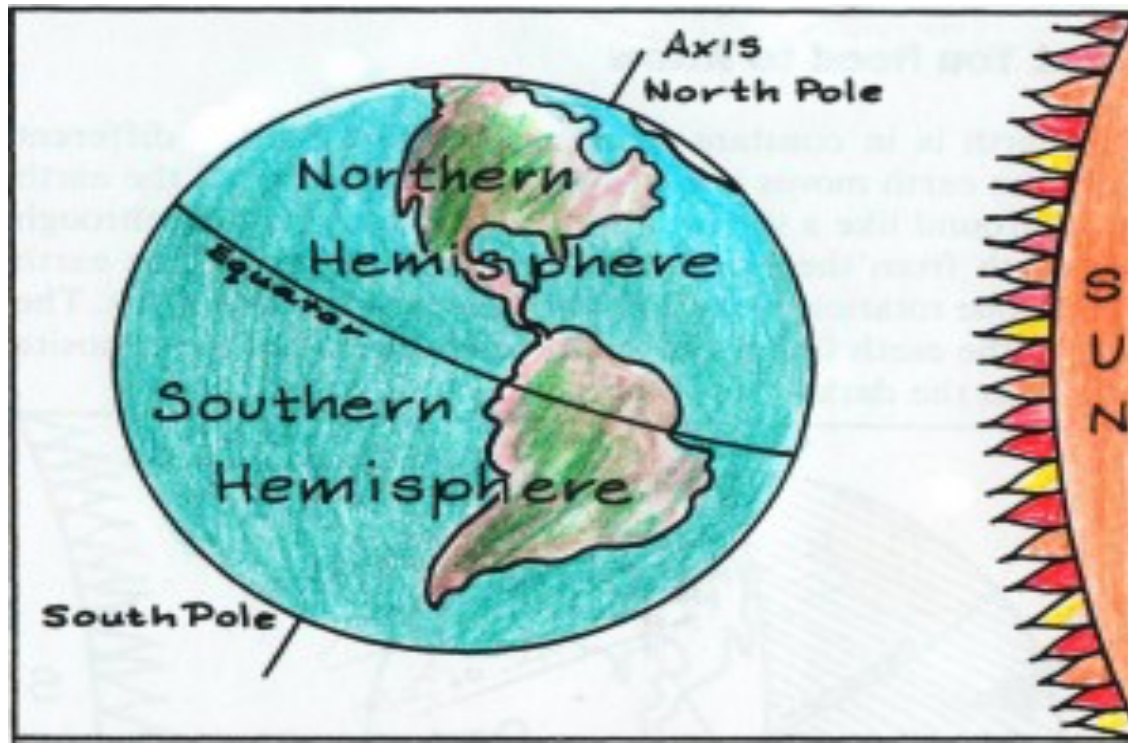
And the tilt also affects:

10b) length of day



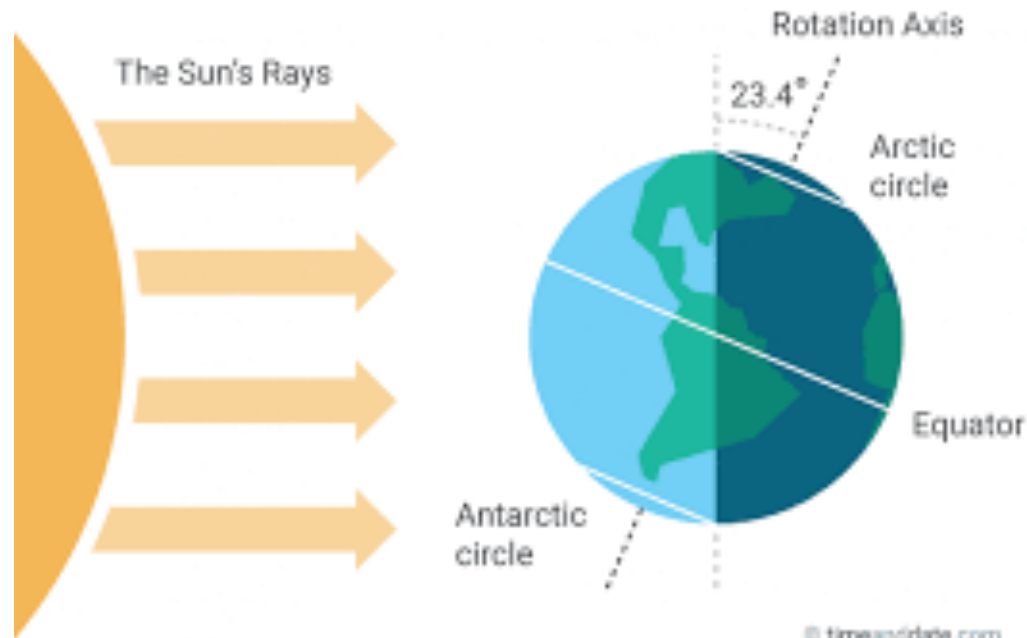
11) Summer in Livermore

- JUNE 21 (Summer Solstice) MORE insolation for us
 - Length of the Day: 14 hours
 - NORTHERN hemisphere tilted towards the Sun
 - Distance from the Sun: 152 Million km FAR
- Hottest Month : JULY



12) Winter in Livemore

- DEC 21 (Winter Solstice) LESS insolation for us
 - Length of the Day: 9 hours 50 min
 - SOUTHERN hemisphere tilted towards the Sun
 - Distance from the Sun: 147 Million km CLOSE
- Coldest Month: JANUARY



13) Equinoxes: Day = Night equal length

- March 21
 - Insolation = medium
 - Length of day = 12 hours
 - "Spring" in the Northern Hemisphere
- September 21
 - Insolation = medium
 - Length of day = 12 hours
 - "Fall" in the Northern Hemisphere

