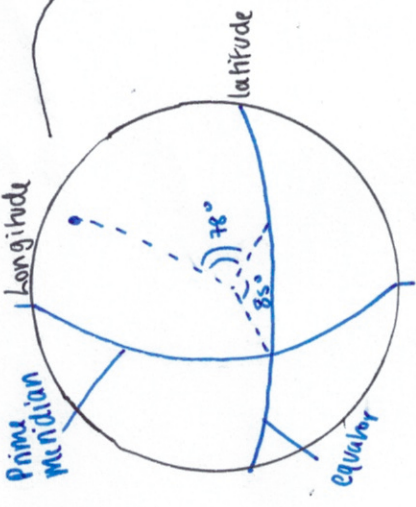
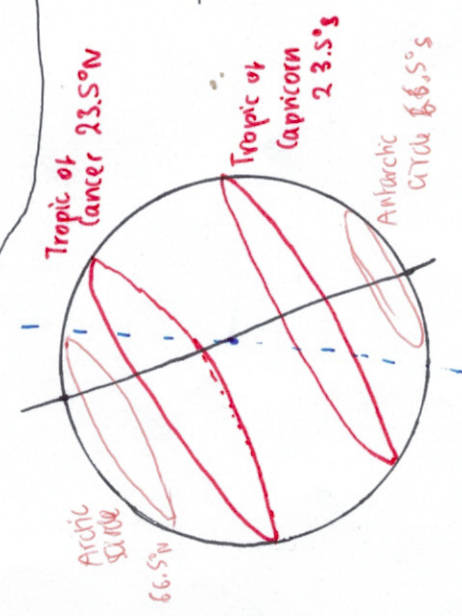


Planet Earth



- Spring equinox: March 21st
- Autumn equinox: September 21st
- Summer solstice: June 21st
- Winter solstice: December 21st



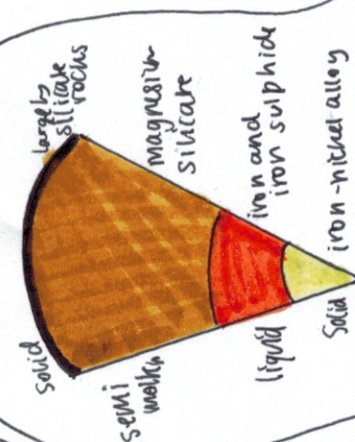
Our Atmosphere:

- provides oxygen to breathe
- absorbs solar UV and X-ray radiation
- regulates planet temp. to mean 15°C
- protects from most meteoroid strikes

The sky is blue because light is scattered by nitrogen and oxygen molecules. Most scattering occurs at shortest wavelengths.

Skyglow is rusty orange haze caused by urban area light making most stars invisible

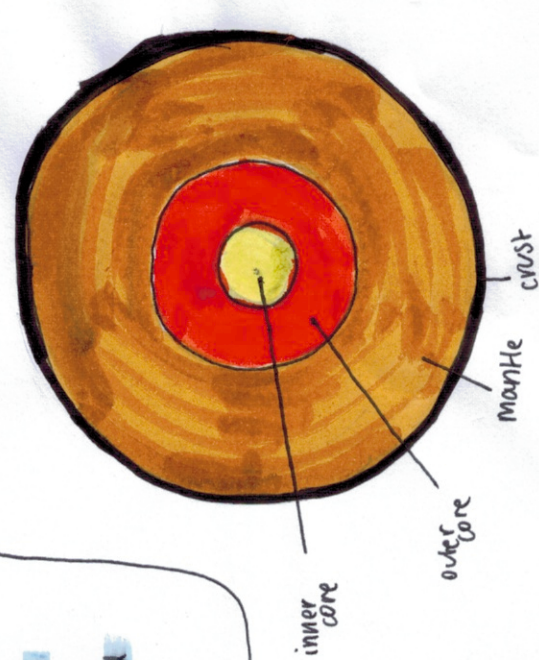
Local glare blinds our eyes at night



Astronomical scintillation caused by ~~high~~ turbulent motion of different air densities, causing light to refract and change direction

the shape is oblate spheroid
mean diameter $\approx 13,000$ km
over 70% of surface covered in water

the atmosphere mainly consists of nitrogen and oxygen



Mantle:

- 80% of Earth's volume
- lower mantle solid
- upper mantle semi molten
- -500°C - 9000°C
- mainly consists of oxygen, magnesium and silicon

Crust:

- 0-70 km thick
- older continental crust = low density rock over 4bn years e.g. granite
- oceanic crust up to 10 km thick denser rocks e.g. basalt
- most common elements are oxygen, silicon, aluminium and iron
- tectonic plates float on silicate mantle

Outer Core:

- liquid iron and nickel
- 5000 K
- currents of charged particles responsible for magnetic field
- mostly iron and iron sulphide
- some nickel

Inner Core:

- solid
- 5500 K
- high pressure prevents melting
- iron-nickel alloy