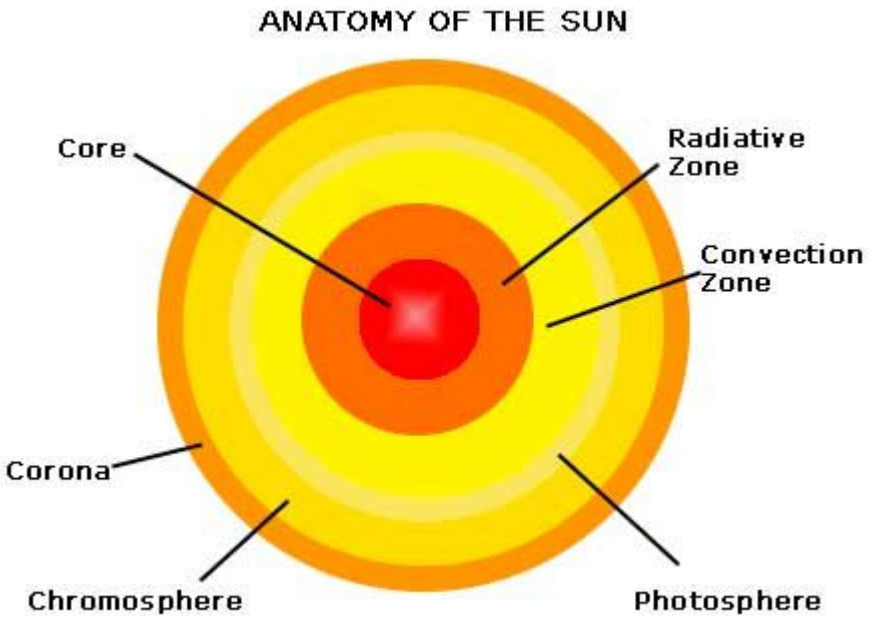

Core: high temperature (15 million °C), high pressure, nuclear fusion, (turning 4 hydrogen nuclei into a single helium nucleus plus energy),releases gamma rays (high-energy photons) and neutrinos (particles with no charge and almost no mass).

Radiation zone: temperature from 15 million °C to one million °C, photons (light) of radiation need millions of years to pass through the radiative zone,

The Convective zone: photons continue to make their way outwards, lower temperature and pressure, the temperature ranges from one million °C to 6,000 °C, heated material rising then cooling happens in big bubbles called convection cells

Solar atmosphere

1. Photosphere: part of the sun that we first see (since it emits light at visible wavelengths), it is about 300 miles (500km) thick, temperature is about 5,500 °C.
2. Chromosphere: temperature ranges from 6000 °C (at lower altitudes) to 50000 °C (at higher altitudes), it is a few thousand miles (or kilometers) thick, appears red because hydrogen atoms are in an excite state and emit radiation near the red part of the visible spectrum, visible during solar eclipses (= moon blocks the sun)

3. Corona: outer layer of the atmosphere, it extends for millions of miles, holes in the corona (magnetic field loops causes a stream of energetic particles = solar wind) ,20,000-25,000 km away from the solar surface the corona has an average temperature of 1 million to 2 million °C , very low density (about 1 billion times less dense than water)