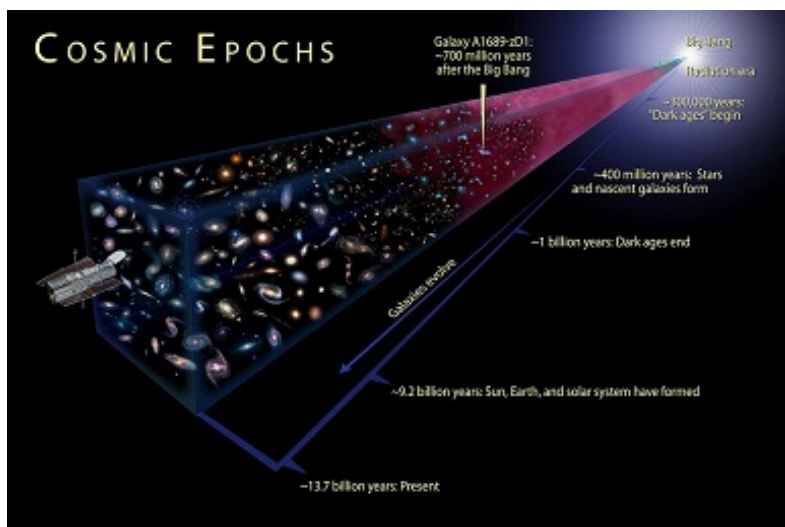


Our Sun is not unique in the universe. It is a **common middle-sized yellow star** which scientists have named Sol, after the ancient Roman name. This is why our system of planets is called the Solar System.

There are trillions of other stars in the universe and many of these stars are much bigger.

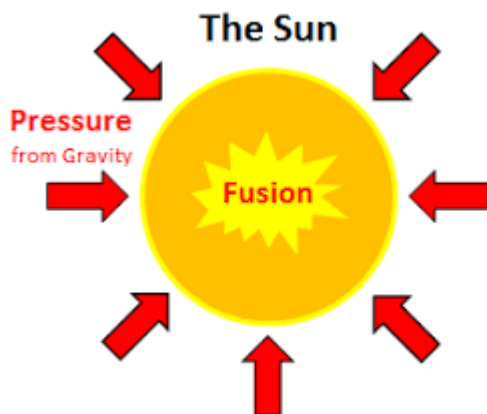


The universe was born approximately **13,7 billion** years ago and our sun about **4,5 billion** years ago.

The Sun was born in a vast cloud of gas and dust. Indeed, these vast nebulae are the

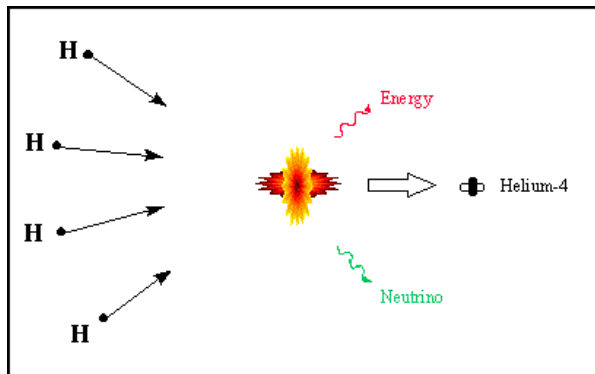
birth places of all stars. Over a period of many millions of years, this gas and dust began to fall into a common center under the force of its own gravity.

At the center, an ever growing body of mass was forming. As the matter fell inward, it generated a tremendous amount of heat and pressure. As it grew, the baby Sun became hotter and hotter.



Eventually, when it reached a temperature of around 1 million degrees, its **core ignited**, causing it to begin **nuclear fusion**. When this happened, the Sun began producing its own light, heat, and energy.

What is Thermonuclear Fusion?



Thermonuclear fusion is the process in which a star produce its light, heat, and energy. This happens at the core of the star. The core is superheated to millions of degrees. This heat travels towards the surface and radiates out into the universe.

Hydrogen to Helium

Through this thermonuclear process, **stars "burn" a fuel** known as hydrogen. The result is that they create another type of fuel known as helium. However, stars do not burn in the same way that a fire does, because stars are not on fire.

When all the fuel is burnt the star 'dies'

