

Our Sun

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Our Sun is a 4.5 billion-year-old star. A

steaming hot, glowing ball of hydrogen and helium, at the centre of our solar system. It is about 150 million kilometres from Earth, and without its energy, life as we know it

OBSERVING THE SUN

The easiest way to observe the Sun safely is by projecting its image onto paper or card. A small hole can be put in a card and the light projected onto paper. The outline of the Sun can then be seen. Never leave this unattended as the Sun is a powerful source of heat and may combust your materials. This is called telescopic projection.

SUNSPOTS

Sunspots are patches that appear on the sun's surface, seeming dark by contrast with its surroundings because they're cooler. They are caused by disruptions in the Sun's magnetic field. The interior and exterior of the sun rotate separately ; over time all the messy and uneven movement distorts the sun's main magnetic field. The spots have so much magnetic power that they push back the hot gases beneath them and prevent the heat from rising to the surface.

SOLAR WIND

Solar wind is a continuous stream of particles that flows outward from the Sun through the solar system. The particles escape from the Sun because its outer atmosphere is very hot, and the atoms there move too quickly for the Sun's gravity to hold them down. But fear not, little of the solar wind reaches Earth's atmosphere, because the charged particles are deflected by our planet's magnetic field. Although, it can disrupt communications, navigation systems, and satellites. Solar activity can even cause power outages. This solar wind mostly consists of electrons, protons and alpha particles (two protons and two neutrons bound together into a particle).

NUCLEAR FUSION

Inside the Sun, protons fuse together and are turned into helium. This fusion process occurs inside the core of the Sun, and results in a release of energy that keeps the sun hot. This can only happen at **very** high temperatures.