



GILGANDRA OBSERVATORY

FACTS SHEET

SCIENCE & TECHNOLOGY

K - 6

THE SUN

Our Sun is a star, just like many of the stars you see shining in the night sky. It is about 5 billion years old and about 150 million kilometres from Earth or 8 light-minutes away. Its radius is 696,000 km, so it is nearly 100 times larger than earth. The colour of our Sun is yellow/orange, but some stars (or suns) are bluish-white or even red. The colour depends on the temperature of the star. The temperature of the centre of our Sun is about 80 million degrees Kelvin. Zero degrees Kelvin (absolute zero or 0° K) is the same as minus 276 degrees Centigrade (-276° C).

The core or centre of the Sun is made up of various gases, such as helium and hydrogen. Helium is what is used to make modern-day airships rise, as when it is heated it expands and rises. Hydrogen is the most common element, or gas, in the Universe. Every second about 584 million tons of H (hydrogen) are converted into 580 million tons of He (helium) in the Sun's core

The Sun also has an atmosphere, called a corona, which is able to be seen only when there is an eclipse of the Sun. A wind of particles is constantly streaming outwards from the corona. When this wind is very strong it can affect the magnetic field of the Earth, which in turn affects many things, from radio or satellite communication, the aurora borealis and the aurora australis (the northern and southern lights) to the size of the rings of a tree trunk. Dark spots, known as sunspots, can sometimes be seen on the surface of the Sun. These are areas where magnetic forces are concentrated and extend through the outer layers of the Sun. Where this occurs, the Sun's atmosphere is cooled down so the areas are seen as dark spots against the bright surface of the Sun.

The mass of the Sun is measured from its gravitational pull on planets such as our Earth. The pull depends on the distance of the planet from Sun and the length of the planet's year.

