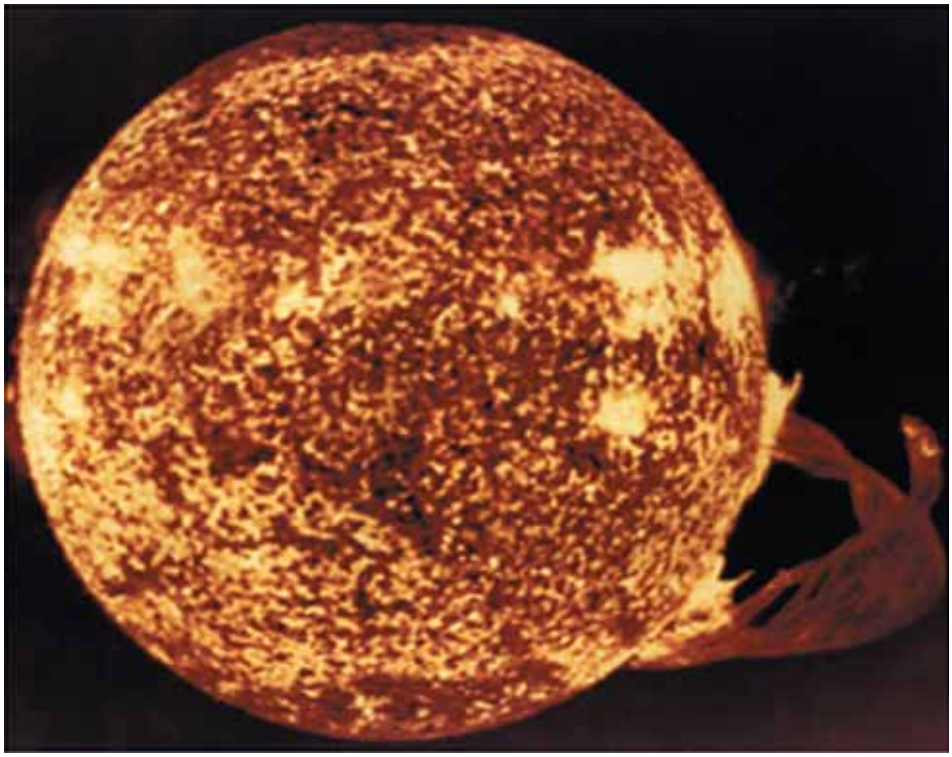
7 The Sun

The Sun is a star. Its burning gases produce sunlight.

The Sun is a star. We see it as a large yellow disc, and not a point of twinkling light, simply because it is so much closer to us than any other star.
The Sun is a burning mass of **GAS**. The surface is burning at a temperature of about 6,000°C (Picture 1). Inside the Sun the gases are violently churning over and over. From time to time, huge masses of this gas shoot out of the surface and into space (Picture 2).



▲ **(Picture 1) This is a photograph of the Sun. Notice the darker patches – these are the relatively cool regions. There is also a loop of boiling gases rising from the surface. Although common, these loops cannot be seen from Earth because of the brightness of the Sun. They are only seen during eclipses.**

Sunlight

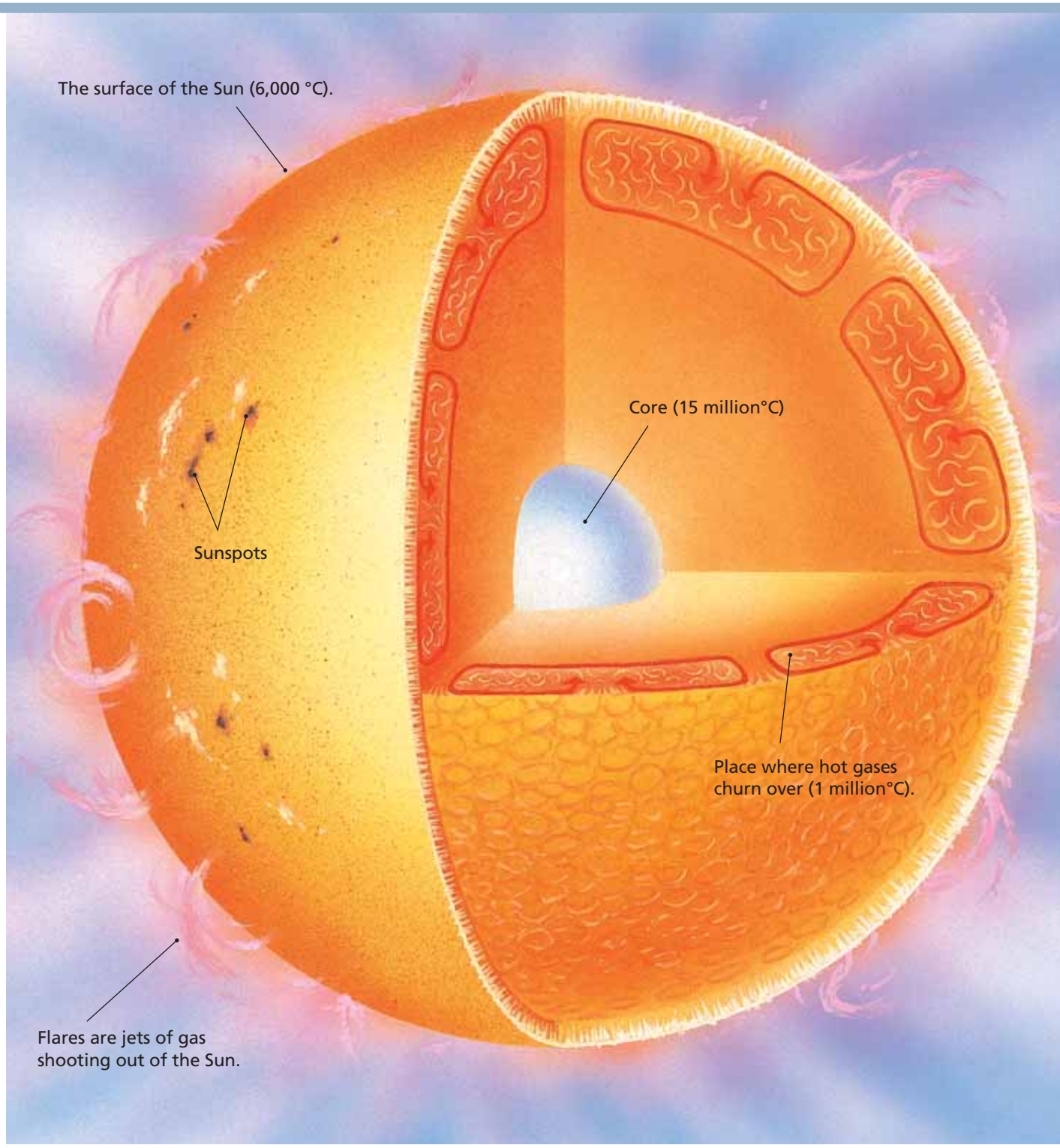
The Sun sends out light in every direction. That is why, no matter where the Earth is in its orbit, it is bathed in sunlight. Even though the Earth is 150 million kilometres away from the Sun, sunlight is so powerful that the small amount of sunlight we receive is enough to provide the energy for all life on Earth.

The pull of the Sun

Everything in the Universe has a pulling force we call **GRAVITY**.

The larger something is, the more gravity it has and the harder it pulls. Because it is so large, the Sun's gravity is immense, and it continually tries to pull the Earth towards it. However, the Earth is also continually being pulled away by the other planets.

Everything is balanced so nicely that the Earth, like all of the other planets, keeps going around the Sun, never getting much closer or further away.



▲ **(Picture 2) A diagram of the Sun. Its yellow colour is caused by its high temperature. The Sun glows yellow (almost white hot) because its surface is about 6,000°C. The core of the Sun is much hotter – about 15 million°C. This is the region which acts like a stupendous nuclear power station, and where most of the Sun's energy is generated. The energy-making processes have gone on for about five billion years. The Sun makes a complete turn once every 25 days.**

Summary

- **The Sun is a star.**
- **The Sun is a burning mass of gas that produces sunlight.**
- **The Sun's gravity traps the planets in orbits around it.**