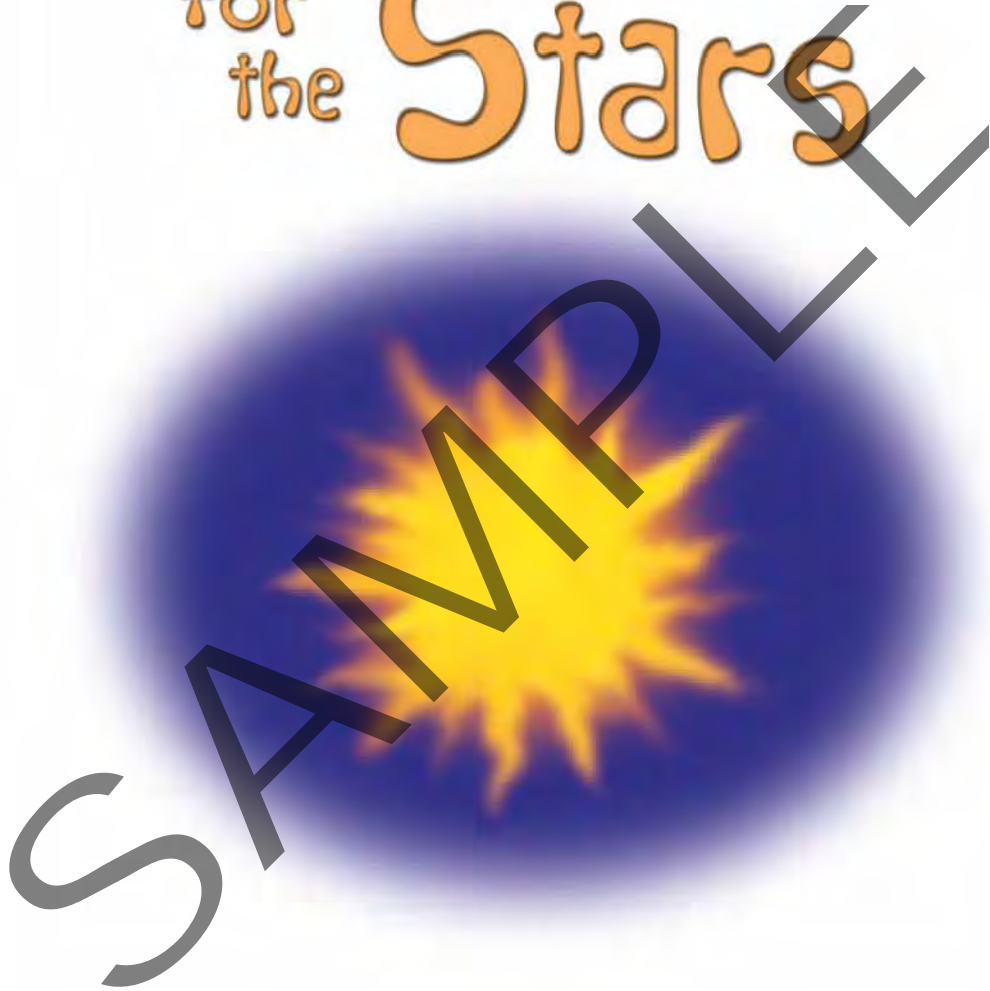


# Reach for the Stars



Fiona Macdonald

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"Evening Star" by Sappho (page 19), translated by Josephine Balmer, from *Classical Women Poets*, Bloodaxe Books, 1996.

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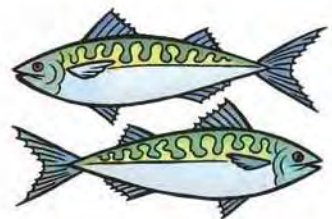
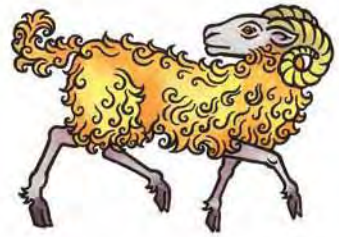
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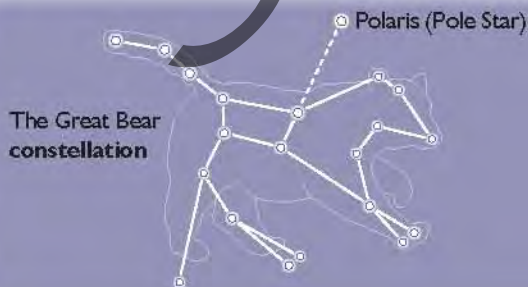
# What Is a Star?

A star is a ball of burning gas. Our Sun is a good example of a typical star. Like other stars, it is huge, measuring about 870,000 miles (1,400,000 km) in diameter. Also like other stars, it is astonishingly hot – its surface is 600 times hotter than boiling water, and the temperature at its center reaches millions of degrees. All stars are a very long way from Earth. The Sun is our nearest star, but even it is 92,957,000 miles (149,600,000 km) away.

## Starlight

We see the stars because they give off rays of brilliant light, which travel to Earth. Because they are so far away, they simply appear to be tiny, sparkling points in the sky. The beautiful, twinkling effect of starlight is produced when stars' rays pass through the Earth's **atmosphere** and the dust and moisture it contains bends or interrupts them.

Starlight takes a long time to reach us. Light from the Sun, which is close to us compared with all other stars, takes around eight minutes to travel to Earth. In comparison, light from Polaris (the Pole Star), which shines high above the North Pole, takes 680 years to arrive.



▲ On a starlit night, travelers can use the Pole Star to guide them, as it always shines above the North Pole.



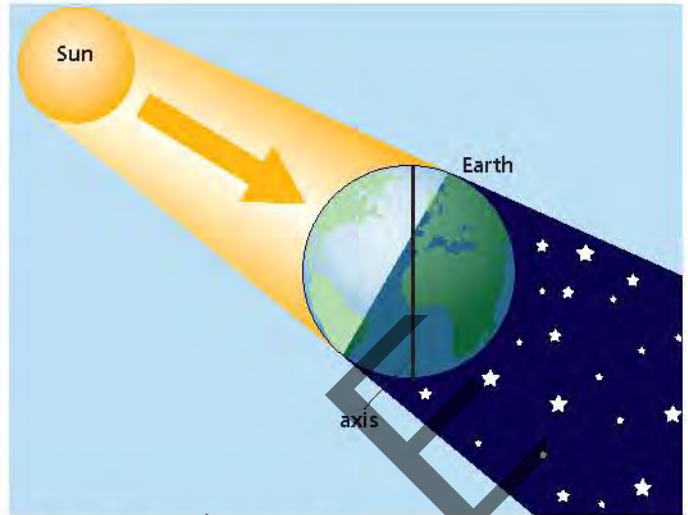
▲ The Sun is a burning mass of gas.



## Sanlight

The Sun's light is so strong that it keeps us from seeing all the other stars in the daytime – although, of course, they are still there. We can only see them at night, when the sky above us is dark. This happens once a day, when the half of the Earth we live on has rotated away from the Sun.

▼ The starry night sky with a full moon



▲ The Earth rotates on its axis approximately once every twenty-four hours, creating day and night, and determining when we are able to see the stars.



## Star Words

When writing about space, we often use words based on ancient Latin or Greek. This is because well-educated people used these languages in the past, and their scientific words have passed into our own vocabulary. For example, "astron" is the ancient Greek word for "star." Today, it forms part of the words "astronaut" ("star-sailor") and "**astronomy**" ("star-knowledge").

Here are some other star words:

**Astral** means starry, or about the stars. It comes from the Greek "astron" meaning "star."

**Scintillation** is the scientific name for twinkling starlight. It comes from the Latin "scintilla," meaning "tiny speck." Scintillating stars look like tiny specks of light in the night sky.

**Stellar** means very great or very famous. It comes from the Latin "stella," meaning "star," which is also a girls' name.