

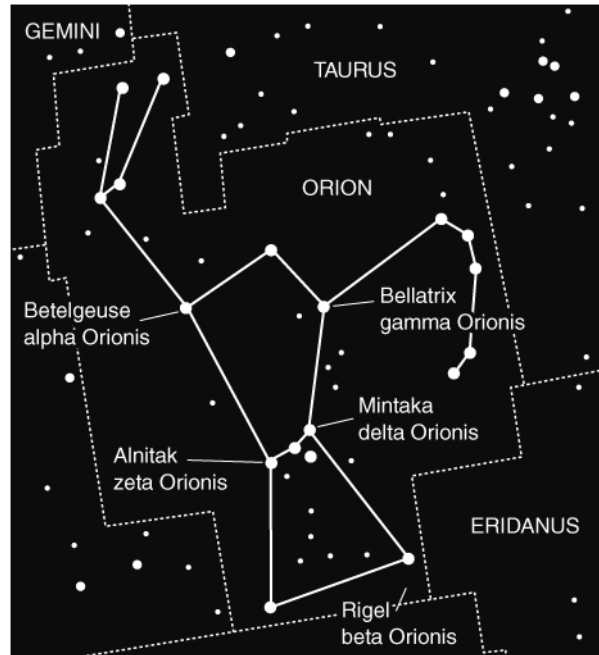
A constellation is a pattern that people think they can see in the stars. Navigators of ships used to measure the angle of some stars above the horizon to help them to work out where they were. The patterns helped them to locate particular stars.

Today we don't use constellations for navigation. Astronomers still use constellations to identify stars, but in a slightly different way. The sky is divided into different areas, and each area is named after a constellation inside it.

These areas of sky are used to name stars. Some bright stars were given names by ancient peoples who studied the sky. Many stars have names beginning with 'Al', such as *Aldebaran* and *Algol*. These names come from the Arabic language.

When telescopes were invented, people could see many more stars. There were too many to give them all individual names. In 1603, a German astronomer called Johann Bayer published a catalogue of stars. He named each star after the area of sky it was in, and gave each one a Greek letter. The order of the Greek letters was the order of brightness of the stars. The brightest star in Orion is called *alpha Orionis*.

Unfortunately the Greek alphabet only has 24 letters, so Bayer soon ran out of letters to name stars. John Flamsteed made a star catalogue in 1712, where he used numbers instead of Greek letters.



The first four letters in the Greek alphabet are alpha, beta, gamma and delta.

- 1 a How were constellations useful to navigators in the past?  
b How do modern astronomers use the constellations?
- 2 Write a list of the *four* brightest stars in Orion in order of brightness.

3 The table shows some stars with their Bayer names.

- a Write the three stars in the constellation Taurus in order, starting with the brightest.
- b Write the three stars in the constellation Gemini in order, starting with the brightest.

4 Which star in the table is the brightest? Pick *one* answer and explain why you chose it.

- A Aldebaran
- B Castor
- C You can't say.

Aldebaran	alpha Tauri
Alhena	gamma Genimorum
Ambrosia	gamma Tauri
Castor	alpha Geminorum
Elnath	beta Tauri
Pollux	beta Geminorum

**I can...**

- explain how people use the constellations
- explain why stars need to be catalogued, and how this was done.