

# Discover the Summer Night Sky!

Follow Galileo Galilei's footsteps this summer for a spot of star gazing!

Whether exploring the night sky from a National Trust countryside viewpoint or simply from your back garden, star constellations, meteor showers and planets are there for you to discover!

*This dark sky guide is written for the months of July and August; for other monthly guides, please visit our website: [www.nationaltrust.org.uk/darkskies](http://www.nationaltrust.org.uk/darkskies)*

In the UK, we are in the **northern hemisphere** (the top half of the earth above the equator). The Earth takes **365 days** to orbit around the sun so we see different star constellations at different times of the year.

At a first glance the night sky can seem a jumble of stars but with a little know-how and practice you will soon be able to pick out the wonders of the night sky.

We have chosen **four star constellations** for you to find in **July** and **August** as well the planet **Jupiter** and the **Perseids meteor shower**. Remember to use our star map to help you!

## The North Star

...also known as the "Pole Star" or Polaris

The North Star is a bright star and is always fixed above the **north point** of the horizon. So, if the north star is in front of you, you are facing north.

It has been used for over 2,000 years to help navigators at sea and on land, find their way.

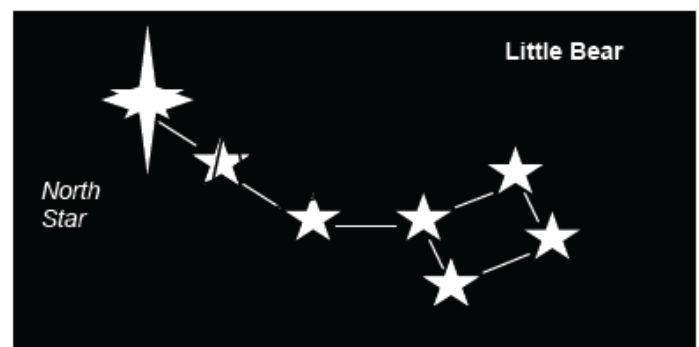
The North Star is part of the star constellation the **Little Bear** (Ursa Minor).



## Little Bear (Ursa Minor)

This constellation appears in the northern skies all year around. This is because it includes the **North Star** which is at the centre point of the night sky.

Use your imagination to draw the shape of a **bear**. The long line of stars is the tail; the North star is the last star in the line.



## Twinkle twinkle little star...

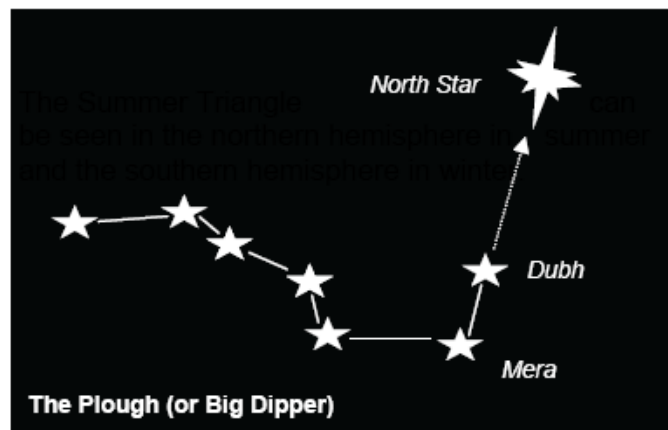
- ★ On a clear night you can see over 4,000 stars sparkling in our universe.
- ★ The light you see from a twinkling star has travelled across the universe for millions of years to reach you; so when looking at a star, you are actually looking back in time!
- ★ One light year is the distance light travels across the universe in a year - 5.88 million million miles.

# The Plough (or Big Dipper)

The Plough (or Big Dipper) is part of the larger star constellation the **Great Bear** (Ursa Major). The Plough forms the tail of the Great Bear.

The Plough is made up from **seven** bright stars.

Can you spot two stars "**Dubhe**" and "**Merak**" which line up with the North Star?

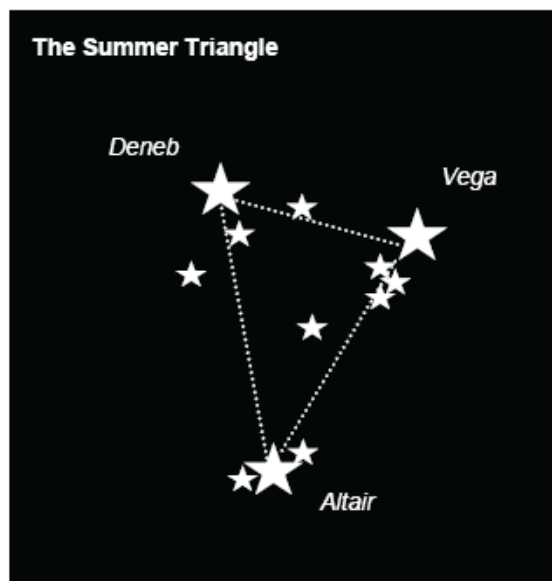


# The Summer Triangle

The **Summer Triangle** is a triangular shaped constellation made from three stars: **Deneb**, **Vega** and **Altair**.

- ★ **Deneb** is the brightest star in the constellation, it is 60,000 times brighter than the sun. The light we see from this star has taken 1,550 light years to reach us.
- ★ **Vega** is the fifth brightest star in the sky, it is 26 light years away.
- ★ **Altair** is a bright star with two pale stars on either side. It is one of the nearest stars to Earth at only 17 light years away!

These stars form part of three other constellations: Deneb in **The Swan**, Vega in **The Lyre** and Altair in **The Eagle**.

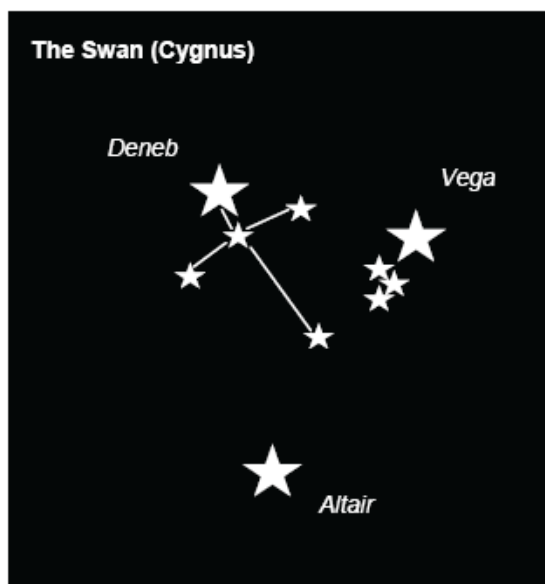


# The Swan (Cygnus)

This constellation shows a **Swan** flying down the Milky Way.

The bright star **Deneb** forms part of this constellation.

It is also called **The Northern Cross** because of its shape.



# Other wonders of the night sky...

The **Perseid Meteor Shower** returns on the 23 July and reaches a peak on **12 August**, when up to 80 meteors an hour have been recorded in previous years.

The moon will be out of the way this year for a good view. Around midnight is the best time but the meteors can be seen at any time when the sky darkens.

Use binoculars to spot **The Milky Way**, a ribbon of millions of twinkling stars stretching across the night sky.

The planet **Jupiter** can be seen in early evening, just above the horizon in the South East. It sits above the constellation **Capricornus**.

Jupiter is the largest planet in our solar system. It is **486 million miles** away from Earth. It takes **11.9 years** to orbit the sun, compared to 365 days on Earth. So one year on Jupiter is nearly **12 Earth years!**

# Summer Star Map

This simple Summer Star Map accompanies the fact sheets.

Remember that the location of star constellations moves gradually every day. This star map shows the location of constellations in **mid August**. If you are star gazing in **July** or **late August**, the constellation may be in a slightly different location.

## How to use

1. Hold the star map out flat in front of you.
2. Turn to face **South** and place the “**facing South**” side of the map nearest to you.
3. Raise the star chart in front of you to view the stars overhead. The Summer Triangle will be almost directly overhead, use this to orientate yourself.
4. Once you have located the **Summer Triangle**, try to find the other constellations on the fact sheet. The Little Bear, the North Star and the Plough will be behind you. **Happy star gazing!**

*Links to more detailed star maps and planispheres can be found on our website [www.nationaltrust.org.uk/](http://www.nationaltrust.org.uk/)*

