May night sky

As the year advances the days get longer, meaning you'll need to wait up later for dark stargazing skies. It's definitely worth it though, as there are many interesting constellations and astronomical objects to see in May. Venus in particular is very well-placed, so now is the ideal time to track down this planet. You can see it easily with your unaided eye, but if you use a telescope you may well notice that it has phases like the Moon. Talking of the Moon, it appears close to Jupiter before dawn on 9 and 10 May, and is near Saturn on 22 May. Catch them if you can!

Planetarium

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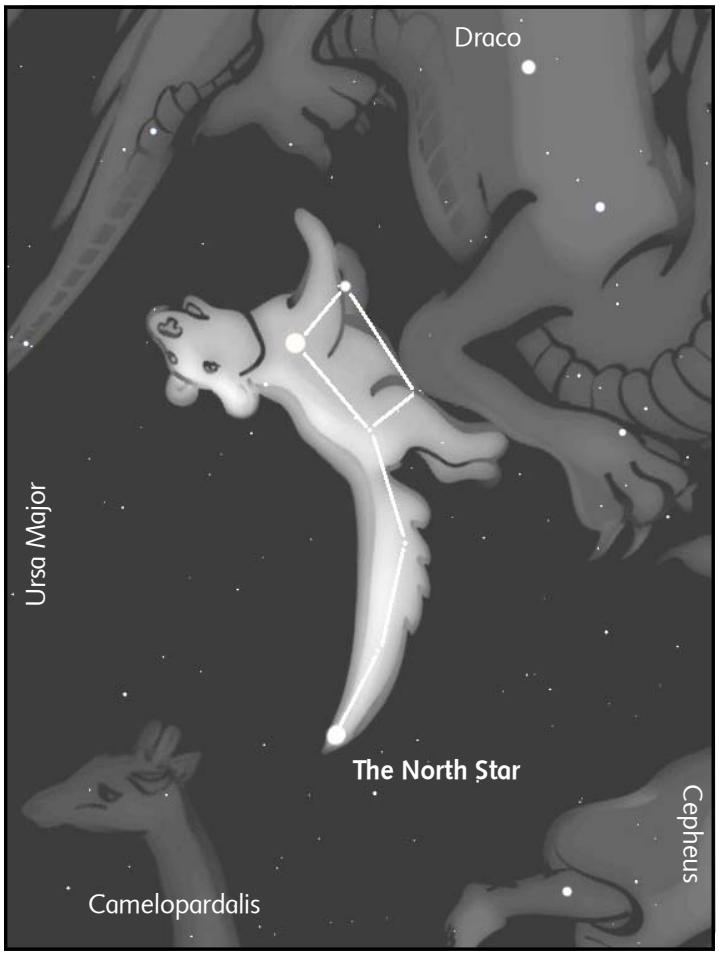
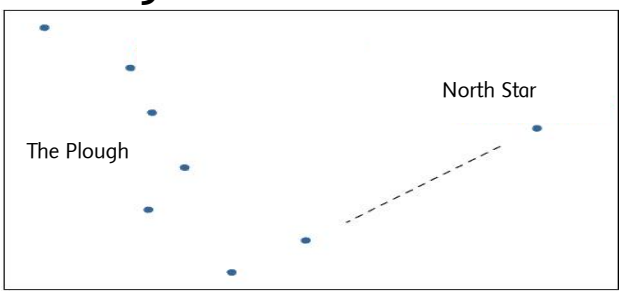
Constellation of the month: Ursa Minor

Ursa Minor is Latin for "Little Bear", and it looks like a smaller version of the well-known collection of stars called The Plough. As the Earth is rotating in space, the stars appear to move in the night sky. This is actually an optical illusion, as it is the Earth which is spinning. The North Star is directly above the Earth's axis, so seems to stay in the same place. If you trace out the shape of Ursa Minor, you'll see that his tail is very long. According to legend it's stretched because it's tied to the North Star which the sky seems to spin around.



Finding Ursa Minor



The easiest way to find Ursa Minor is to use the end stars in The Plough to point to the North Star, which is the end of Ursa Minor's tail.

Look out for…

Ursa Minor is small and faint, but is important because it contains Polaris, the North Star. The fact that it points north is just a coincidence due to its position in space. Polaris has been used since ancient times to help with navigation, and is still useful today. It's a common misconception that the North Star is the brightest star in the sky. Actually the brightest star in the sky is… the Sun! The brightest in the *night* sky is called Sirius which is an impressive sight in the winter.

News flash: Hubble Space Telescope celebrates 20 years of discovery

For the last two decades the Hubble Space Telescope, a powerful observatory in orbit around the Earth, has been sending back incredible images. These have led to many discoveries which have revolutionised nearly all areas of astronomy, from planetary science to cosmology. 20 years of service is a milestone for any piece of scientific equipment, let alone one above the Earth! A crucial reason for Hubble's success is that it is beyond our blurry atmosphere so can obtain very sharp images. The Hubble Space Telescope is a project between the European Space Agency and NASA, which helps to spread costs and share expertise.

The planets in May

Mercury	cannot be seen as it is drowned out by the Sun's light.
Venus	is very bright and sets unusually late, around midnight.
Mars	is heading eastwards, ahead of Venus.
Jupiter	rises before dawn in the east, toward the end of May.
Saturn	is fairly bright and sets around 3:45am.

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Theme of the month: the Moon

Our own planet Earth has one natural satellite, which is the Moon. It is a familiar sight in our skies, and our nearest celestial neighbour. It is around 250,000 miles (384,400 kilometres) from the Earth, meaning If you could (somehow!) drive there in a car, it would take about four months. The Moon has dark patches which are dried and cool lava, as well as tall mountain ranges. It is almost as ancient as the Earth – around 4.5 billion years old.

The Moon is so bright that sometimes you can even see it during the day. But at night and through binoculars and telescopes we can see the most detail. People often assume that it is best to look at the Moon when it is full, but then the Sun's light is shining head on so it is hard to make features out. It is best to observe when the Moon is a crescent, as then there are long shadows along the "terminator" – where light meets dark.

It is a common misconception that there is a "dark side" of the Moon. Sunlight reaches both sides of our satellite. There is, however, a "far side" which we never see from Earth because of how the Moon and Earth spin. So, the Moon always shows the same face to us. The far side was only seen for the first time by the Russian space probe Luna 3 in 1959.

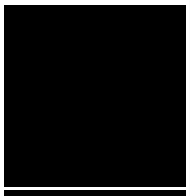
Only 12 people have walked on the surface of the Moon. The first was Neil Armstrong in 1969. The last was Eugene Cernan in 1972.

Astronaut Buzz Aldrin on the surface of the Moon. Image courtesy of NASA.

Moon Calendar

06 May
Last Quarter

14 May
New Moon



21 May
First Quarter

28 May
Full Moon

Would you like to know more?
Details of our planetarium shows and back issues of this handout can be found at:
http://www.at-bristol.org.uk/theplanetarium

Stellarium is a planetarium program for your computer, showing a realistic 3D sky just as you would see if looking with your eyes or a telescope. Best of all, it's completely free. Download it at *www.stellarium.org*

Heavens Above is a website that lets you create customised sky maps and see when satellites like the International Space Station will be visible. Head over to *www.heavens-above.com* and try it out.

Do you have an astronomy question for the At-Bristol planetarium team?
E-mail **lee.pullen@at-bristol.org.uk** and our keen astronomers will try to quench your thirst for knowledge!