

October night sky

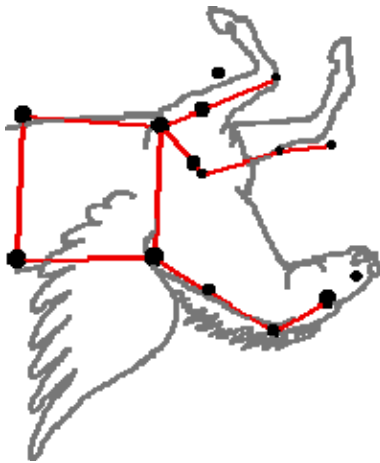


The evenings are now drawing in, providing glorious views of the night sky. After the 26th October, when the clocks go back, we will lose summer's extra hour of evening light, which gives us more time to appreciate the night sky. Get those thermal undies out and prepare yourself for a feast of stars and planets!

Constellation of the month – Pegasus

According to Greek legend, when the head of Medusa was cut off by the hero Perseus, a magnificent winged horse called Pegasus sprang from the blood that was spilled. This famous mythical beast has appeared in hundreds of paintings, poems and stories and has even been found on coins dating back to 4 BC. It is also a star pattern or 'constellation' and is one of the most distinctive shapes in the November skies.

The constellation Pegasus— look for the bright square of the horse's body.



Finding Pegasus

The brightest part of Pegasus is composed of four bright stars that form a large square known as the Square of Pegasus. These can be seen high in the sky throughout the autumn and are supposed to represent the body of the flying horse.

Look high up into the south-western sky and you should see the four bright stars that form the square body. You can also see the head and front legs (but strangely not the hind legs or wings) of the famous horse in its upside-down position in the sky.

Stars in Pegasus

51 Pegasi, a star in this constellation, is the first star similar to the Sun which is known to have a planet. Analysis of a different planet orbiting a star in Pegasus has shown evidence of water vapour in its atmosphere. This might mean that life is possible there! Another star called IK Pegasi is the nearest possible supernova (an exploding star).

Where did the constellations come from?

We know the constellations are helpful for remembering the stars, but who invented them? Originally, it is thought that farmers invented the constellations. Why? Farmers know that for most crops you plant in the spring and harvest in the autumn. But in some regions of the world, there is not much difference between the seasons. As different constellations are visible at different times of the year, farmers could use them to tell what month it was. So when the farmers saw certain constellations, they would know it was time to begin planting or harvesting. Giving the shape of the constellation a story helped the farmers remember it.



Moon Calendar

The planets in October

Jupiter is still king of the night this month, it will appear low in the south west until midnight.

Neptune shines faintly in Capricornus just to the left of Jupiter. You will need a telescope to see it.

Uranus is on the borders of Aquarius and Pisces and visible with binoculars.

Venus is shining brightly as the morning star, rising in the east at 4.40am at the start of October.

Mars rises in the north east around midnight.

Mercury rises around 5.30am to the lower left of Venus.

Theme of the month: galaxies

What are they?

A galaxy is a huge region of space. In it are stars, planets, dust, gas, nebulae (clouds of gas and dust), and empty space. Many astronomers believe galaxies also have a black hole at the centre.

How many galaxies are there?

Astronomers think there are more than 100 billion galaxies in the visible universe.

Are all galaxies the same?

No, in fact there are three kinds of galaxies - spiral, elliptical, and irregular. **Spiral** galaxies look like a pinwheel, are flat, and are centered around a group of stars.

Spiral galaxies make up about 75 percent of the brightest galaxies. The Milky Way, our galaxy, is a spiral galaxy. **Elliptical** galaxies can be circle or oval-shaped,

and can be round or flat. They are brightest at the center, and dimmer at the outer edges. Elliptical

galaxies make up about 20 percent of the brightest galaxies. **Irregular**

shaped galaxies can come in many shapes. Their unusual shape may be caused by galaxies colliding to form a new galaxy, or by stars forming within the galaxy.



Two galaxies colliding (NASA image)

Explore further at:

Explore - details of our planetarium and back issues of this handout are at:
www.at-bristol.org.uk/explore/planetarium.htm

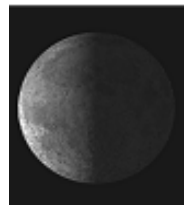
NASA - activities and information on space and other science topics. Lots of fun activities for children and a great resource for images of space are on the website:
www.nasa.gov

Stellarium - is a free planetarium program for your computer, showing a realistic 3D sky, just as you would see if looking with your eyes or a telescope.
www.stellarium.org

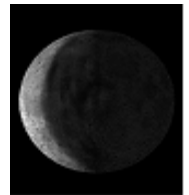
4 October
Full Moon



11 October
Last quarter
(half Moon)



15 October
Crescent
Moon



18 October
New Moon



22 October
Crescent
Moon



26 October
First quarter
(also known
as half Moon)

