Stargazing Guide: September 2020

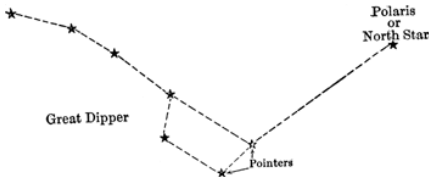
WINCHESTER SCIENCE CENTRE AND PLANETARIUM

What to look out for…

Constellations (star pictures) and interesting stars:

1 The Plough

This well known pattern is the best place to start as it is so easy to find. You will find it high up in the northwest. The last two stars point to **Polaris**, the North Star

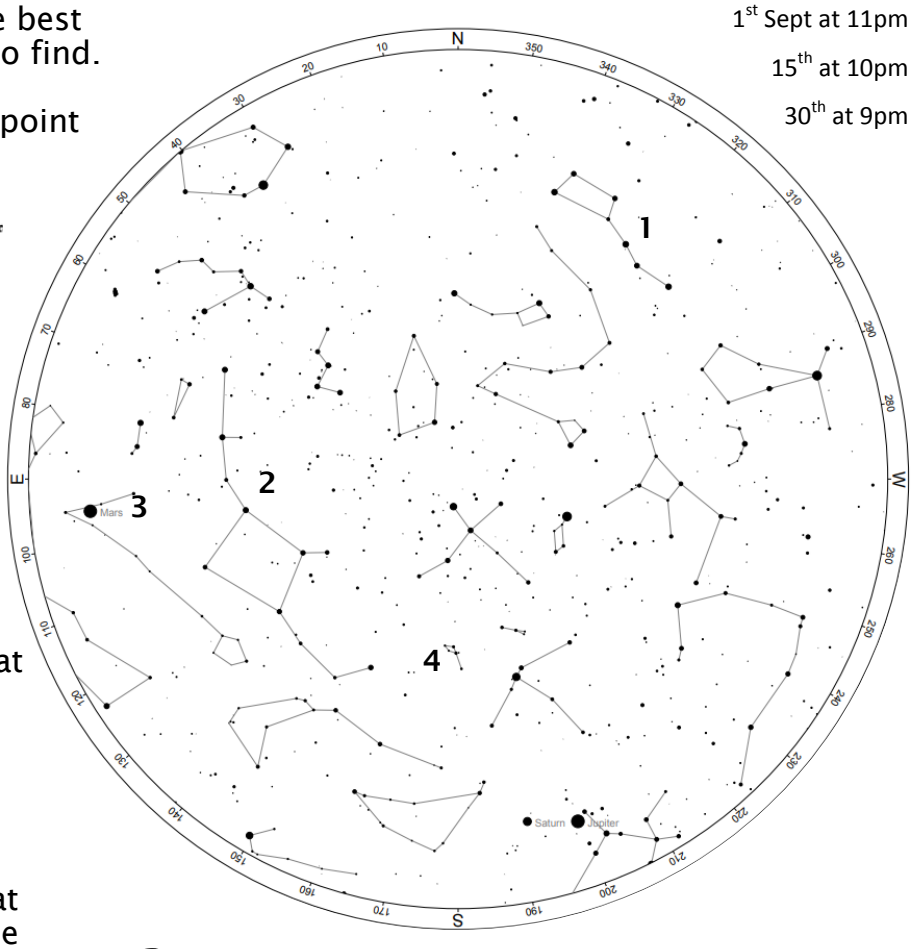


Map shows:

1st Sept at 11pm

15th at 10pm

30th at 9pm



2 Pegasus (say "Peg-uh-sis") the Winged Horse.

This is a large constellation, easily found by the big square of four bright stars that form the horse's body.

The space within the 'Great Square of Pegasus' has very few stars. Can you spot any?

In a city you might see none at all, but in the dark countryside you might see four. On a really dark, clear night it's possible to see even more!

3 Pisces (say "Pie-sees") the Fish.

Here is a challenge for you! Look out for one of the fishes' heads just under Pegasus, shown by a ring of stars.

4 Delphinus (say "Dell-fin-us") the Dolphin.

It's easy to see how this tiny constellation got its name! You'll need quite a dark night but it's very pretty to see. Try finding it by using the huge triangle of bright stars to guide you (for more about this 'Summer Triangle', see the July stargazing guide).

<u>How to use this chart</u>:

Imagine the chart flat & upside-down above your head. The circle around the outside shows the horizon all around you. Turn the chart to have North (N), South (S), East or West at the front depending on which direction you are looking.

Stargazing Guide: September 2020

WINCHESTER SCIENCE CENTRE AND PLANETARIUM

The Moon

You will see the different phases of the Moon at different times of day as they will be placed differently with respect to the Sun, but you will always see the same features as the same part of the moon is always facing the Earth

A good time to look is at First Quarter, when the Moon is visible in the early evening and lit from the side, casting long shadows which highlight its features.

Planets

Jupiter and Saturn, both rise before the sun sets and getting earlier each day throughout the month so by the end of the month will be towards the South as the sun sets with Jupiter rising first throughout the month. They will set well before the sun rises each day. Look for the bright dots between Sagittarius and Capricornus.

Mars appears between 8pm and 10pm, starting later then rising earlier throughout the month. You can find it positioned easterly before tracking across the south of the sky. It stays in a relatively similar position all month near to Pisces.

Venus remains ahead of the Sun throughout the month rising a few hours before sunrise. It starts the month next to Gemini, and throughout the month appears slowly moving towards Leo as it rises later each day

Mercury spends the month trailing the Sun slowly getting further behind as the month progresses. It may be possible, but difficult to spot as will be close to the sun, and also the horizon.

Tip of the Month

When trying to see faint objects try looking slightly to one side, rather than directly. This is called **Averted Vision**.

Inside the back of your eye (on the **retina**) there are light receptors which detect the light entering your eye and send signals through to your brain. There are two different types of light receptor: **rods** and cones. Rods only detect light/dark, but don't need a lot of light to work. **Cones** see different colours, but need quite bright light to do this.

In the very centre of your eye (the macula) you have mostly cones. This means the centre of your vision is not very good for seeing in the dark! Try looking out of the corner of your eye so you catch the starlight on the edge of your retina. It's amazing how much more you can see.

This reliance on rods explains why it's difficult to see the colour of stars. You can sometimes see the colour of very bright stars, else binoculars or long-exposure photography can help.

Download this star guide and those for other months from:
http://www.winchestersciencecentre.org/starguides

Winchester Science Centre & Planetarium, Telegraph Way, Winchester SO21 1HZ.
Tel: 01962 863791, email info@winchestersciencecentre.org. Registered Charity No. 294582