OBSERVING THE MOON

Credit: binocularsblog.com

An introduction for beginners

What you will need

When to look

Where to look

What to look for

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ONE FACE...

As the Moon orbits the Earth, it keeps one face towards our planet. This is due to tidal locking.

This means that we see the same face, and therefor features, all the time* and this allows us to easily plan an observing session.

*Actually, due to a slight wobble of the Moon, called libration, we can see a little further over the edges at certain points. Around 59% of the Moon's surface is visible over time.

https://www.youtube.com/watch?v=6jUpX7J7ySo

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PHASES AND LIBRATION

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DO I NEED A TELESCOPE?

Not really!

Telescopes are great for looking at fine detail on the Moon, but they are expensive and their position needs to be adjusted regularly to follow the path of the Moon across the night sky.

The best way for a beginner to get a closer look at the Moon is with a pair of binoculars.

You will want to steady the binoculars, preferably on a tripod.

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WHICH BINOCULARS?

Any binoculars will be an improvement on the naked eye, and you may wish to start out with a really cheap pair until you have familiarised yourself with the process. Just try and make sure they have a tripod adapter.

If you want to move on to a more appropriate style, you should go for a pair with an objective lens with a diameter of 50mm. The usual power of this type of binocular is 7 times magnification, therefore they are labelled as 7 x 50s.

Remember:

Just as with telescopes, a large magnification can lead to a shaky image, especially if the binoculars are not on a tripod. Also, larger binoculars may be too heavy for younger children to hold.

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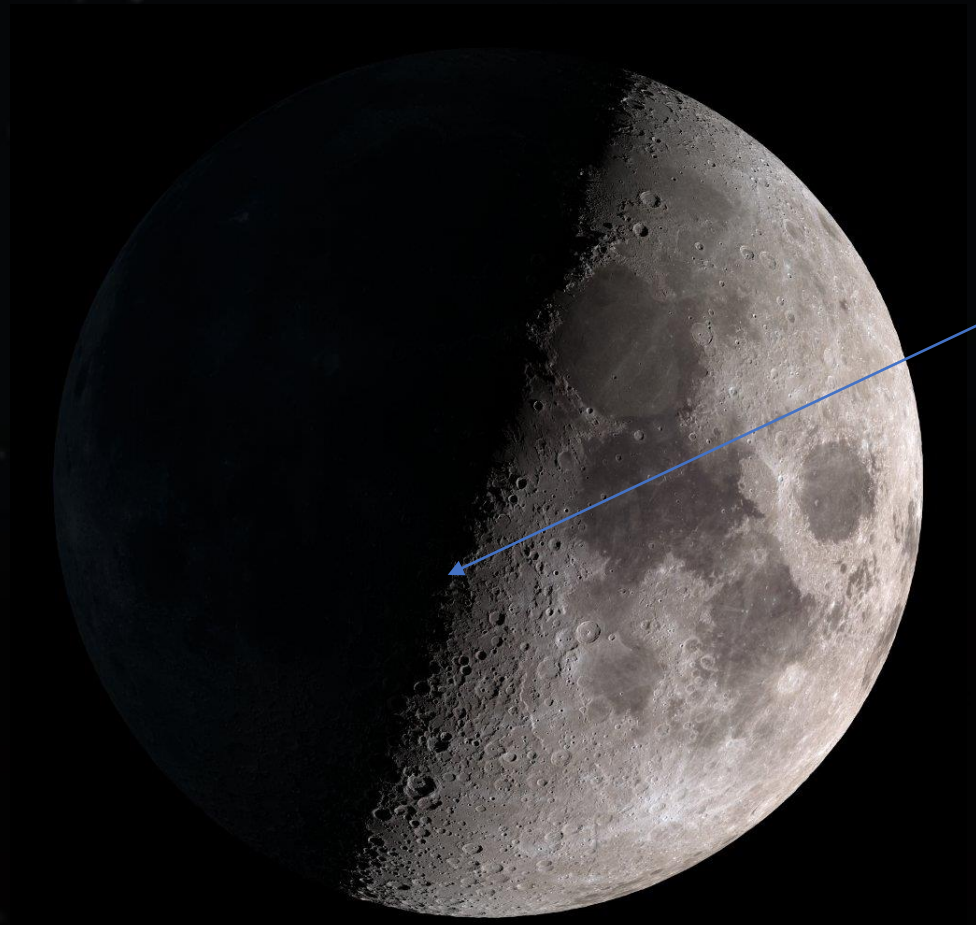
WHEN TO VIEW



Just after first quarter (when just after half the Moon's face is visible)

Best to look along the terminator (dark-light border)

Shadows mean more features can be seen

At full Moon, the surface is almost completely illuminated with no shadows – no detail can be seen at all!

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WHEN IS FIRST QUARTER?

The following website will tell you when the Moon will be in its first quarter in the UK. Remember, you want to try and observe a few days after this for best results

https://www.timeanddate.com/moon/phases/uk/london

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SOME LUNAR FEATURES

Mare Tranquilitatis (“Sea of Tranquillity”)

Apollo 11 landing site

Mare Crisium (“Sea of Crises”)

The largest impact craters show a central peak. Long shadows give you an idea of the height of the rims

Rough terrain in the south with many impact craters

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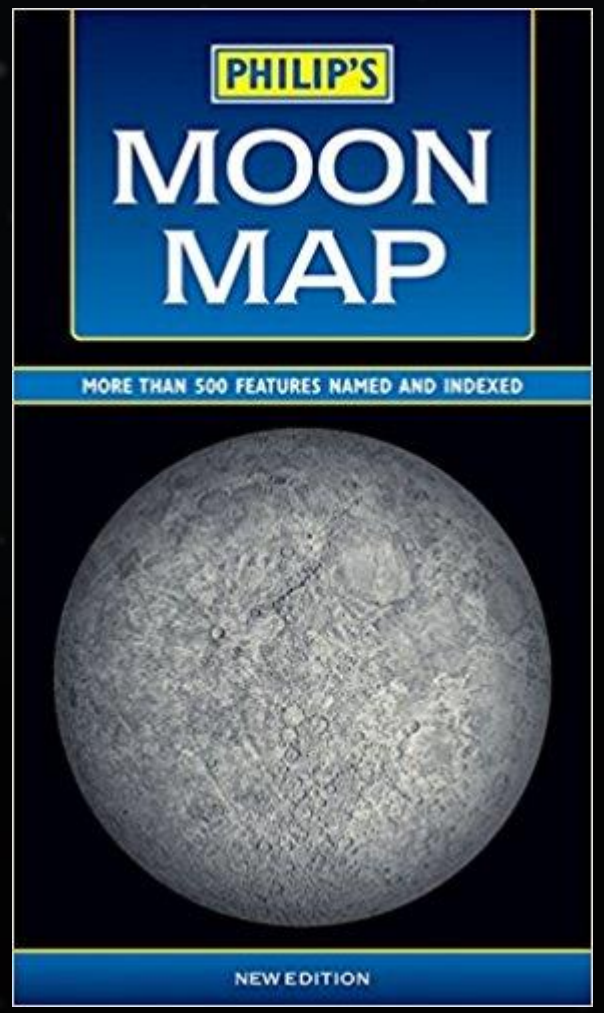
PLANNING



Use the Moon map in the loan box to seek out interesting features to try and find an identify.

Don't forget that only about half the Moon will be visible, so don't try to find something that will be in the dark portion.

Students could draw the features they see, and then compare them to the Moon map for accuracy.

If you are planning and do not have the Moon map from the loan box yet, you may wish to use Google Moon to help you in your planning (see how to use Google Moon in the Borrow The Moon Resources).

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