



Our ever-changing Moon and the Lunar Gateway

Our Moon hasn't changed in billions of years. The Lunar Gateway, a new NASA project, will allow astronauts to orbit the Moon in a space station, similar to the International Space Station (ISS).

The activity: observe the moons craters and find out how schools can soon speak to astronauts 384,000km away.



Time: an hour for an

observing session of the Moon



Kit List: Access to an

astronomical telescope. Your local astronomy club should be able to assist. Binoculars are also suitable.



Instructions:

On 7 March 2025 the Moon will be eight days old so it will be a perfect phase to view the craters (a phase is how we see changes of the moon). It will be visible looking South from 17.30. The planets Mars and Jupiter will be very close to the Moon.

The craters are an incredible sight. Sketch what you see and name the craters and other features afterwards. Mark where the astronaut Neil Armstrong landed.

A few pupils at UK schools have spoken to astronauts on the ISS. Watch the video of the ten schools that took part when Tim Peake was on the ISS: [rsgb.org/gb1ss-schools](https://www.rsgb.org/gb1ss-schools)

What would you ask an astronaut?

Find out about the Artemis mission to visit the Moon. The Gateway will be a small space station supporting lunar surface missions at: [nasa.gov/mission/gateway](https://www.nasa.gov/mission/gateway). It is hoped that one day astronauts will travel to Mars.



Think and talk about

Many schools have been able to speak to astronauts using amateur radio. How long did a voice signal take to reach Earth from the ISS, 400km up in space? How long will a voice signal take from the Moon?



At home

Find out more about how the Moon was formed and what caused the craters. Follow its phases during British Science Week.



Next steps:

Would you like to learn more about amateur radio, which was used to contact the astronauts on the ISS? This web page tells you how you can gain your Foundation licence and get your own amateur radio call sign: [rsgb.org/foundation](https://www.rsgb.org/foundation)

