



# THE MOON OUR GATEWAY TO THE UNIVERSE

**4K**

1 x 50 min.

4K, 5.1 and Stereo

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Factual Studios

## The Moon has always been a focus of curiosity and yet, our neighbour in space still holds many mysteries.

**B**ut we are on the verge of a new age of exploration. Several countries and space agencies, and also private companies and initiatives, are planning to send probes and even unmanned vehicles to safely land and move around on Earth's natural satellite.

The *Holy Grail* is to find a cheap and efficient way to travel to the Moon on a regular basis, and in the long-term to build a permanent human base, not least for a future exploration of other places in the solar system, like the *Red Planet* Mars.

China is going to send a lunar lander to bring back material from the Moon for the first time in more than 40 years.

NASA will send its new interplanetary spaceship *Orion* into the Moon's orbit, in preparation of the return of humans to our neighbour. Eventually, at some point in the 2020s, astronauts shall walk across the Moon's surface again.

And the European Space Agency ESA is thinking about a *Moon Village*—a permanent human outpost on our celestial neighbour.

'The Moon—Our Gateway to the Universe' explores the most recent and the most spectacular scientific breakthroughs that are shedding new light on the Moon's most enduring mysteries.

- there is water on the Moon, in the form of ice in permanently shaded craters
- the Moon has natural mineral resources that can be used to build a permanent base and, consequently, a space mission launch centre
- the Moon has a solid iron core, surrounded by liquid iron and sulphur
- this liquid interior is constantly moving, thereby creating moonquakes; and even more vibrations are created by the sun heating up the Moon's surface
- there might be active volcanoes on the Moon
- in some places, our natural satellite has local magnetic fields that could shield a Moon station from the deadly solar winds
- but there are also large lava caves and tunnels on the Moon that could harbour a human habitat
- a German space engineer has built a device that can extract oxygen from *ilmenite*, a mineral that's found on the Moon as well, to produce breathing air for astronauts

Yet, we still have to learn a lot about the Moon, because it might be our stepping stone to the planets; and one day even our gateway to the stars.



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