



Man's mission to the Moon

Discover the story behind one of mankind's greatest achievements.

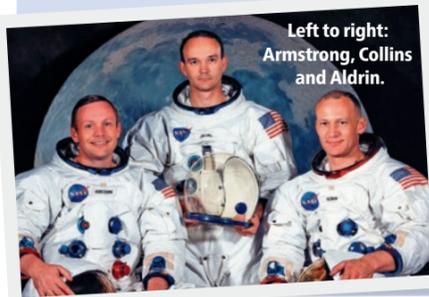
On 16 July 1969, millions of people around the world turned on their televisions to witness one of the most momentous events of the 20th century. They watched in awe as three men blasted off in a rocket bound for the Moon. Four days later, on 20 July, Neil Armstrong became the first man to walk on the lunar surface, famously declaring, "That's one small step for man, one giant leap for mankind."

The race to space

At the time, the US and the Soviet Union (a huge state led by what is now Russia) both wanted to be the first to send a human to the Moon. After the Soviet Union successfully landed the first probe (a spacecraft that collects scientific data) on the lunar surface in 1959, John F. Kennedy, who became US president in 1961, was determined to go one better. In 1962, he announced that the US would send a man to the Moon, describing the challenge in a speech as "one which we intend to win". The race was on.

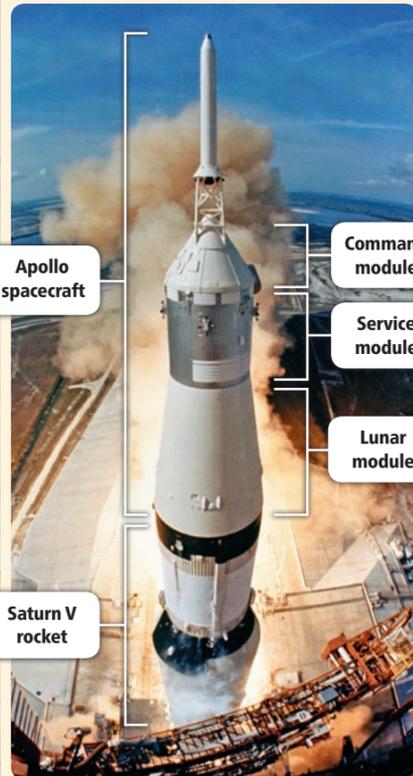
The crew

The mission was called Apollo 11 and the crew were commander Neil Armstrong, command module pilot Michael Collins, and lunar module pilot Edwin "Buzz" Aldrin. Armstrong and Aldrin landed the lunar module on the Moon while Collins remained in orbit around it, in the command module.



Left to right: Armstrong, Collins and Aldrin.

The Saturn V rocket

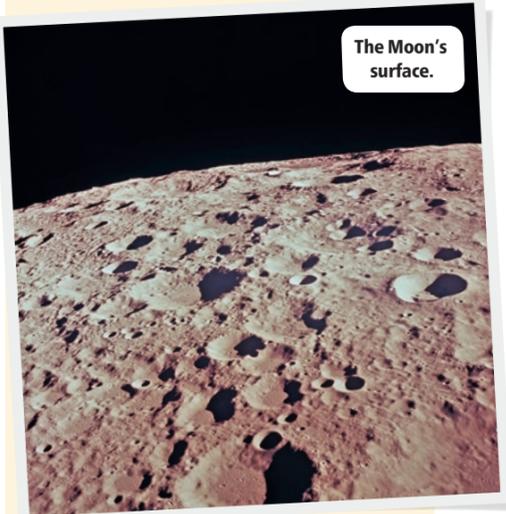


The Saturn V rocket was 111 metres tall, about the same height as a 36-storey building, and weighed 2,800 tonnes – the weight of around 400 elephants. Its five rocket engines could hold enough fuel to send a car around the world 800 times. On top of the rocket was the Apollo spacecraft, made up of a lunar module – named the Eagle – a service module and a command module.

FREAKY FOOTPRINTS
There's no wind on the Moon. This means that the astronauts' footprints are still there.

WATCH IT!
To see the historic moment for yourself, go to tinyurl.com/TWJ-moonlanding

What's it like on the Moon?



The Moon's surface.

Only 12 astronauts have ever walked on the Moon. Here's an idea of what they experienced.

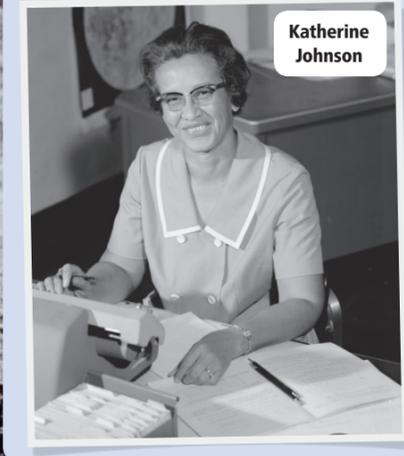
- **Gravity** The gravity on the Moon is about one sixth that of Earth. With far less gravity keeping their feet on the ground, astronauts had to bounce or bunny hop on the surface.
- **Smell** According to astronauts, Moon dust smells a lot like gunpowder.
- **Darkness** On Earth, the sky looks blue during the day because of the way the Sun's rays bounce off the planet's atmosphere (a collection of gases that envelop a planet and protect it). Since the Moon has no atmosphere, it always looks dark. Aldrin described walking on the Moon as desolate, which means lonely and sad.
- **Temperature** When Armstrong walked on the Moon, he said the temperature reached about 93°C. This is because the surface heats up when the Sun's rays hit it.
- **Sound** There is no sound in space because sound needs to travel through something that contains molecules, like water or air. The astronauts only heard each others' voices and mission control.



The official badge of the Apollo 11 mission.

The woman behind the mission

Armstrong might have been the first man on the Moon, but there was one woman, known as the human computer, who played a key role in getting him up there. Nasa mathematician, Katherine Johnson, was responsible for calculating a safe flight plan for the Apollo 11 crew.



Katherine Johnson

Journey to the Moon

Blast-off!

Around one million people gathered at Cape Kennedy in Florida on 16 July 1969 to watch the exact moment that the Saturn V rocket blasted off into space. Exactly 12 minutes after blast-off, the rocket entered Earth's orbit.



Amazing journey

It took 102 hours and 45 minutes for Apollo to reach its destination. On its way to the Moon, the spacecraft completely separated from the rocket. Its command and service modules stayed in orbit around the Moon, while the lunar module landed on its surface.



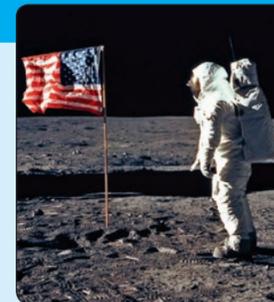
Landing on the Moon

During the descent, Armstrong had to take control of the lunar module to avoid landing on rocky ground (it was being controlled automatically). With only 30 seconds of fuel left, the module safely landed on the Moon's surface. Around 600 million people watched Armstrong take his first steps on the Moon.



Research

Aldrin and Armstrong spent two and a half hours on the Moon, collecting samples and taking photographs. Before they left the Moon, the astronauts planted the US flag on its surface.



Returning home

After the mission, the team had to stay in isolation for 21 days to ensure they hadn't brought back any bugs. Later, a huge parade in New York City welcomed them home and they became national heroes.

