

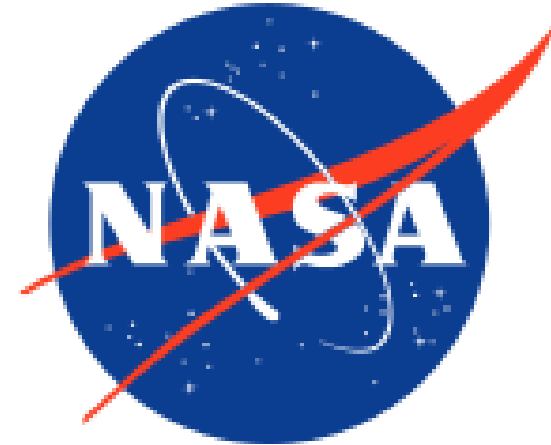
NASA (National Aeronautics and Space Administration)

- ▶ NASA was started on October 1, 1958, as a part of the United States government
- ▶ NASA is in charge of U.S. science and technology that has to do with airplanes or space

What Does NASA Do?

NASA does a lot of different things:

- ▶ NASA makes satellites
- ▶ NASA sends probes into space
- ▶ NASA scientists study things in the solar system and even farther away

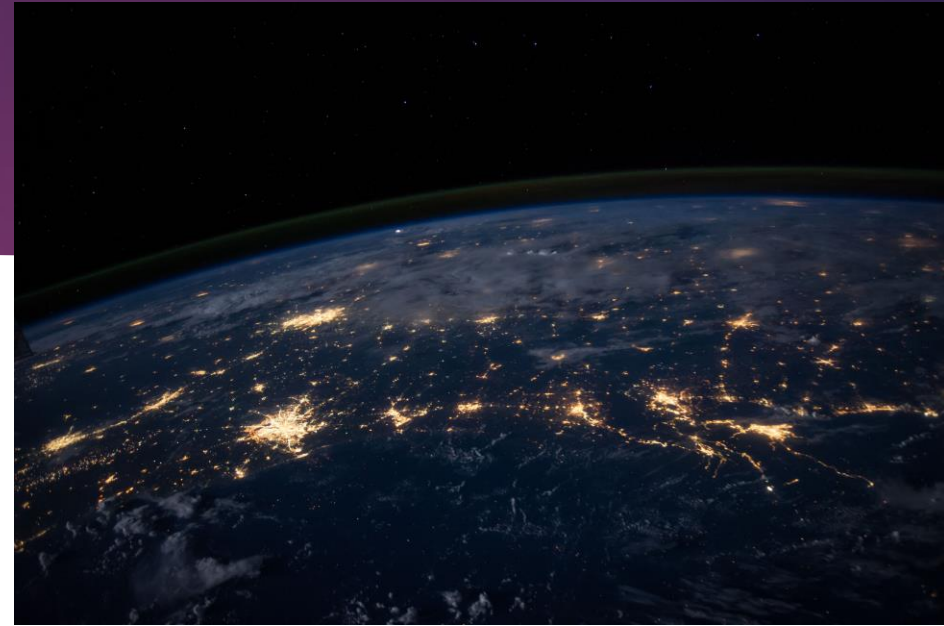




NASA headquarters



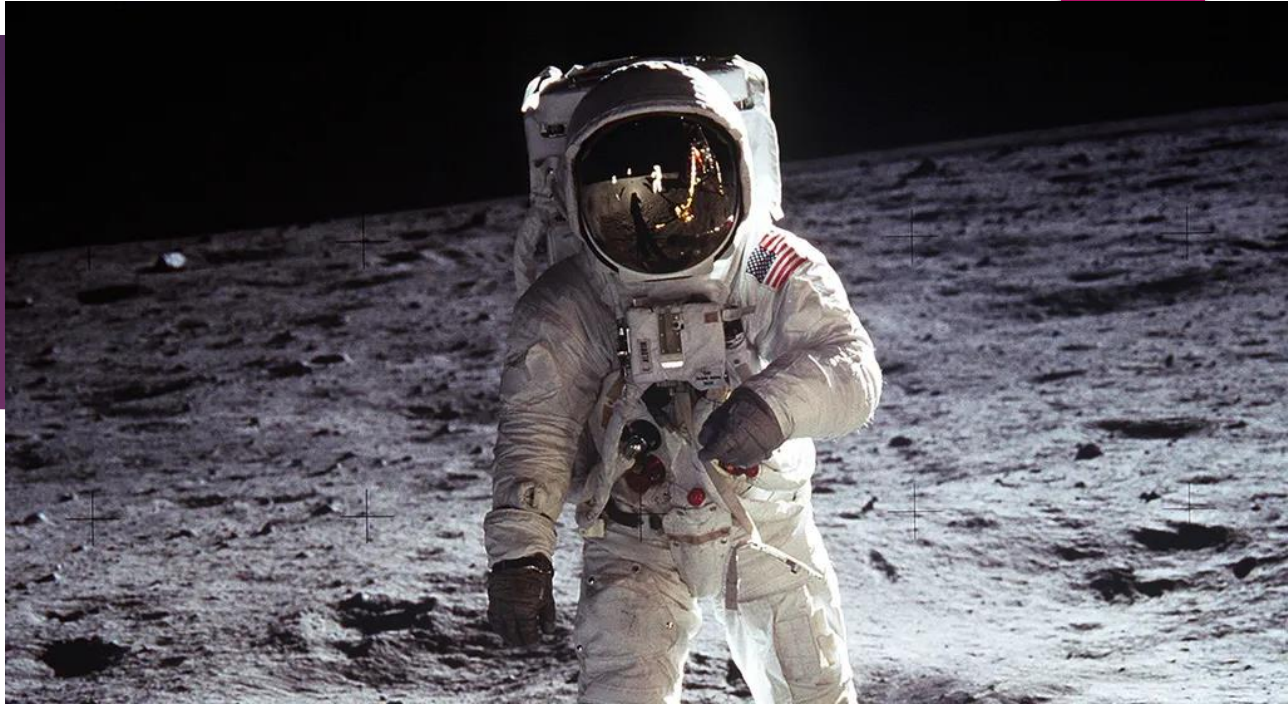
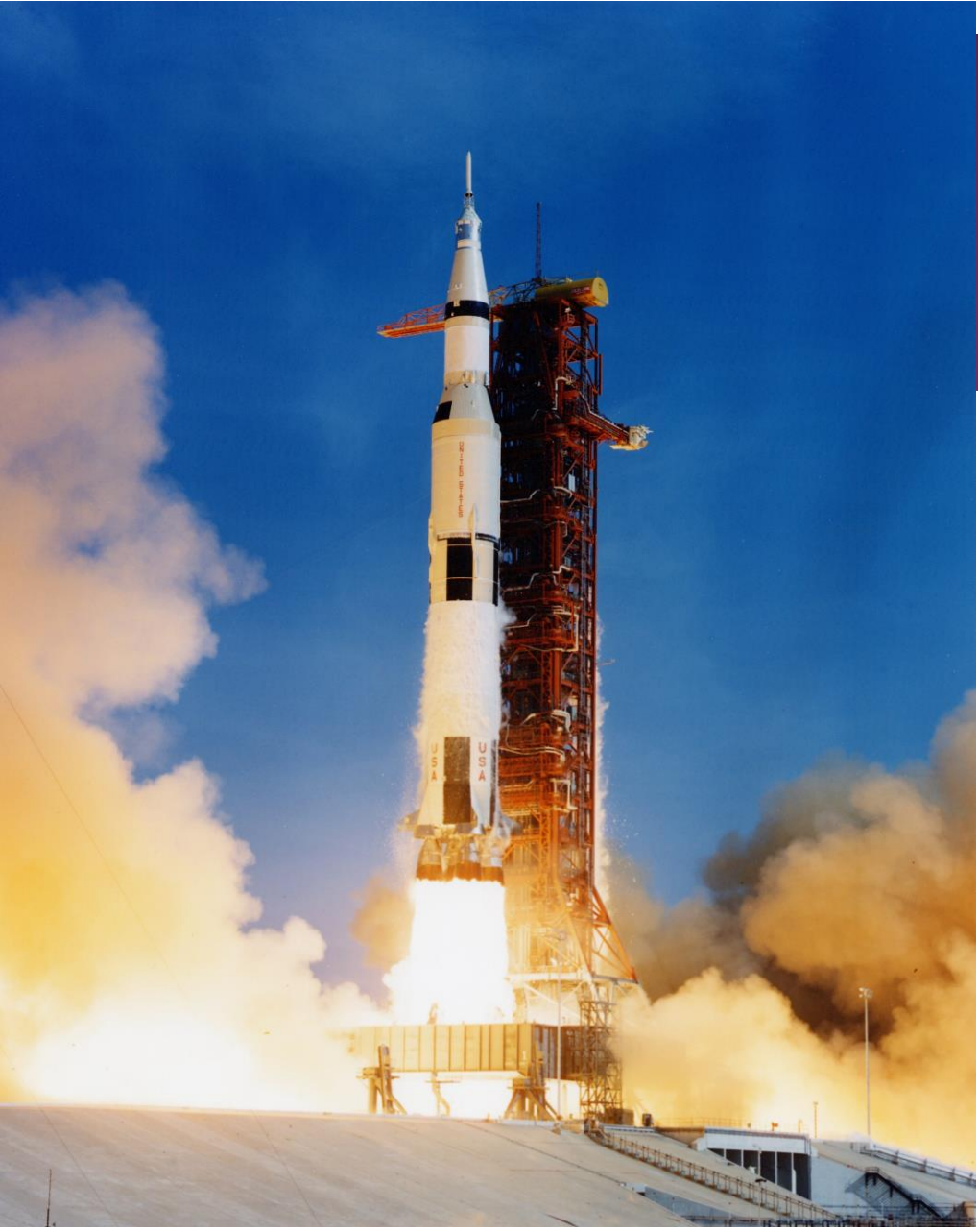
NASA tested two SR-71 aircraft. They are still the world's fastest and highest-flying aircraft.



View from international space station (ISS)
<https://www.n2yo.com/space-station/>-live feed from ISS

Moon landing

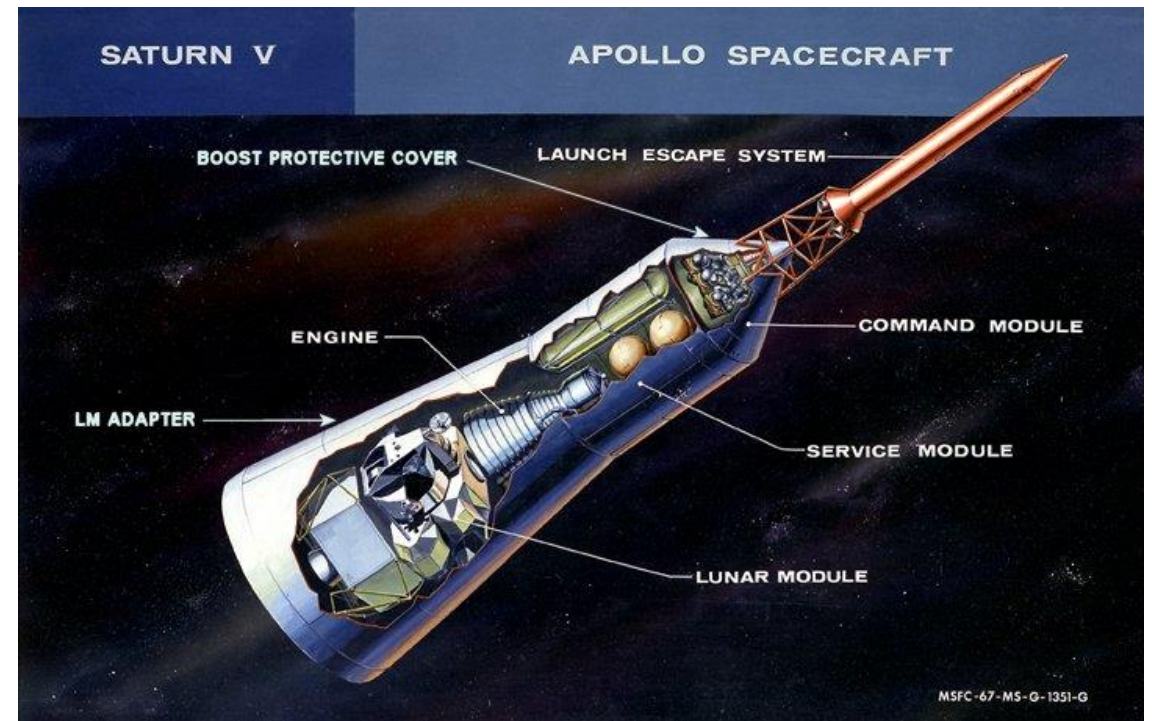
- ▶ The United States' Apollo 11 was the first manned mission to land on the Moon, on 20 July 1969
- ▶ Apollo 11 was the spaceflight that first landed humans on the Moon
- ▶ Armstrong became the first person to step onto the lunar surface
- ▶ He collected 47.5 pounds (21.5 kg) of lunar material and brought it back to Earth
- ▶ Armstrong's first step onto the lunar surface was broadcasted on live TV to a worldwide audience



Apollo 11

SPACECRAFT

- ▶ Apollo 11 was the name for the the first spaceflight that first landed humans on the moon
- ▶ The Apollo spacecraft was made from modules.
- ▶ Three main modules : command module (CM), service module (SM) and the lunar module (LM).



Modules

Command module

The only module which returned to the Earth.

It was a cabin made for three people.

It is 3.23 meters tall and its base is 3.91 meters wide.

It has a lot of spacecraft systems since it was acting as a separate unit which needed to bring the crew back to the Earth.

Service module

Its purpose was to supply the command and the lunar module with oxygen and electricity and as a propulsion engine.

It is 7.49 meters long and 3.91 meters in diameter.

It weighed 24.520 kilograms, only the propulsion system weighed 21.410 kilograms.

Lunar module

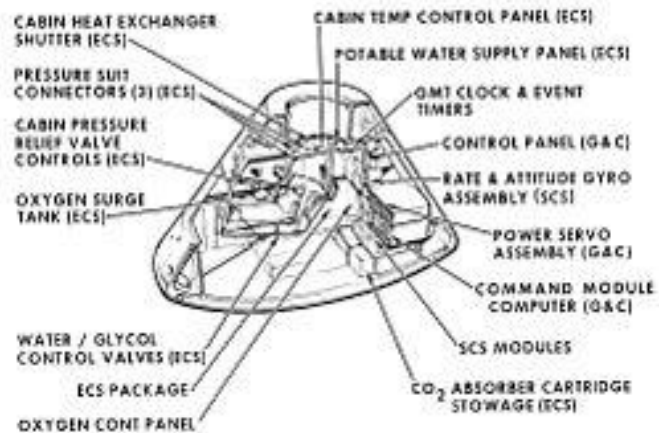
It's pronounced „lem”.

Lunar module was the lander that landed on the Moon surface.

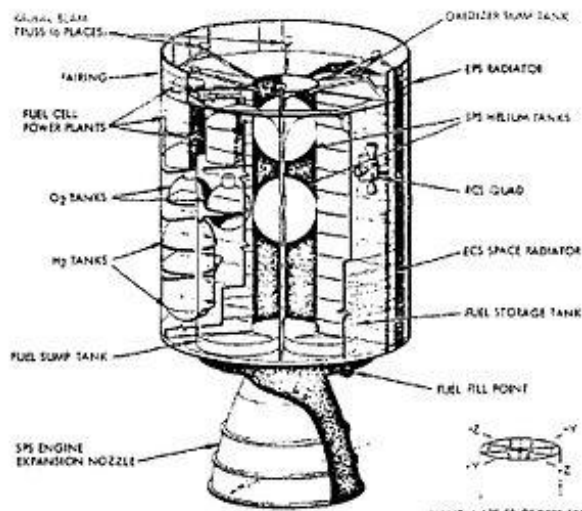
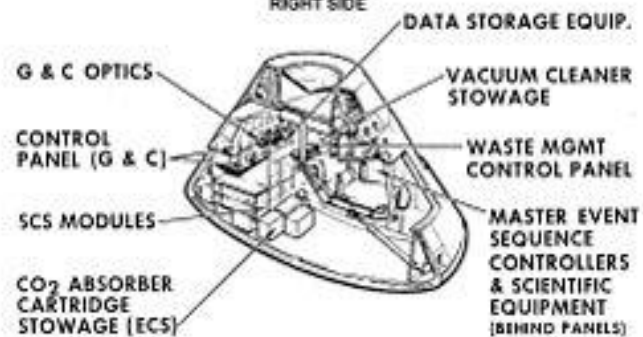
Neil Armstrong and Buzz Aldrin were the ones who landed on the Moon, while Michael Collins was alone in the CM.

APOLLO COMMAND MODULE INTERIOR

LEFT SIDE



RIGHT SIDE



SERVICE MODULE ITEMS

1 AND 4 ARE 50-DEGREE SECTORS
2 AND 3 ARE 70-DEGREE SECTORS
3 AND 4 ARE 50-DEGREE SECTORS



Crew and personnel

- ▶ The initial crew was Neil Armstrong as the commander, Jim Lovell as the CPM or command module pilot and Buzz Aldrin as the LMP as the lunar module pilot.
- ▶ Michael Collins was supposed to be on the Apollo 8 crew but because of his injury (a bony grow between his fifth and sixth vertebrae) which demanded a surgery, Jim Lovell swapped with him.
- ▶ Michael Collins was the only crew member who didn't land on the Moon since he was piloting the CM in the lunar orbit.



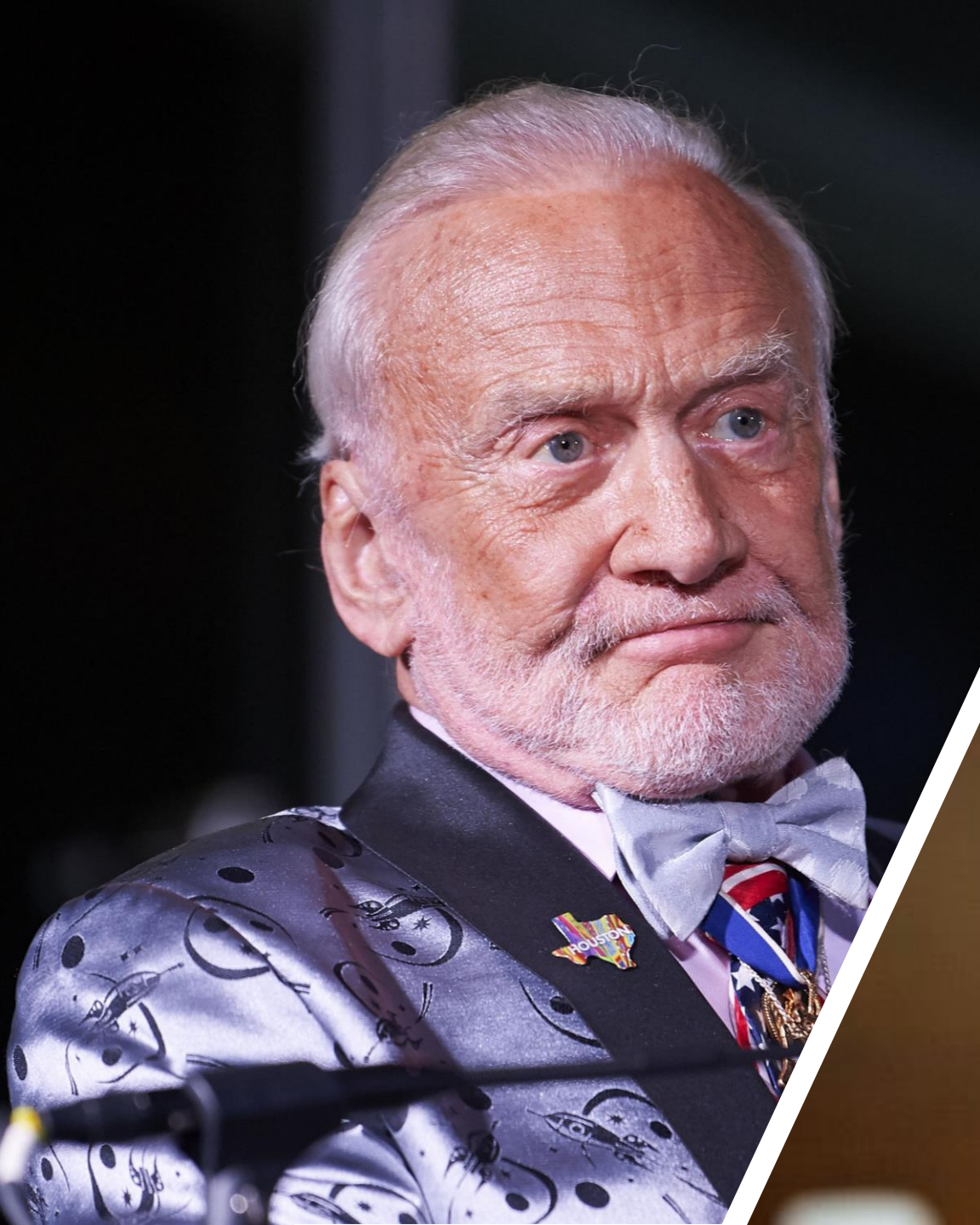
PRIME CREW OF FIFTH MANNED APOLLO MISSION

NEIL A. ARMSTRONG

MICHAEL COLLINS

EDWIN E. ALDRIN, JR.





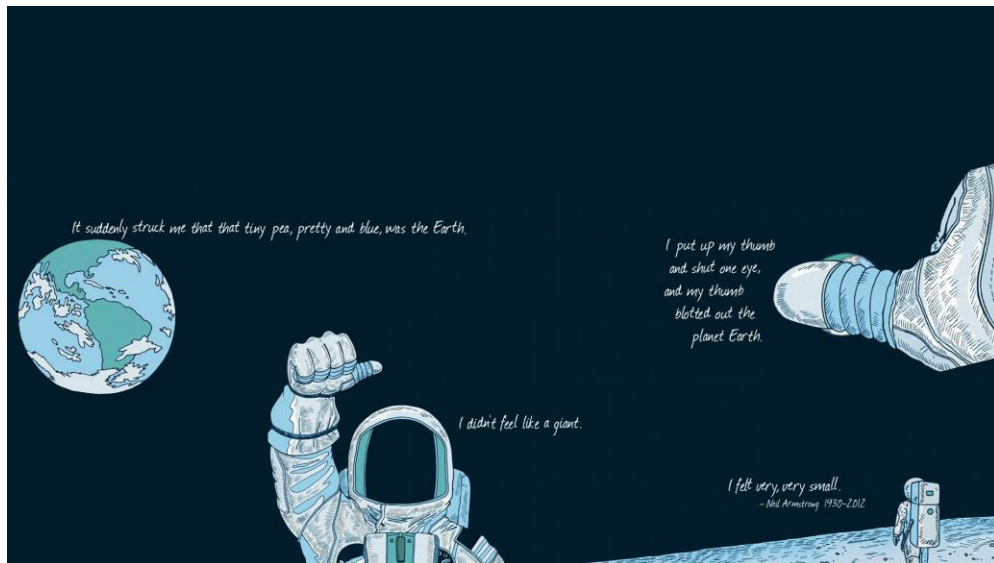
„One small step for man but giant leap for mankind”

- ➔ July 20, 1969, at 10:56 p.m., the American astronaut Neil Armstrong put his left foot on the lunar surface and famously declared, “That's one small step for man, one giant leap for mankind.”



Meaning

- ▶ one small step for man, one **giant leap** for mankind
- ▶ A phrase typically said in reference to a breakthrough or advancement of some kind.



Fun facts

- ➔ The footprints made by Armstrong and Buzz Aldrin are still on the Moon.
- ➔ Six hundred million people watched the first moon walk on TV
- ➔ Buzz Aldrin Was the First Man to pee on the Moon, Armstrong was the first to set foot on it but, like, whatever Neil, Buzz was the first one to take a leak.
- ➔ Aldrin's first words when he stepped onto the surface of the moon were, "Beautiful view. Magnificent desolation."



Apolo 11

- ▶ Apollo 11 was the spaceflight that first landed humans on the Moon
- ▶ Neil Armstrong was commander
- ▶ Michael Collins was command module pilot
- ▶ Buzz Aldrin was lunar module pilot
- ▶ Only Neil Armstrong and Buzz Aldrin set foot on the Moon
- ▶ One module was left orbiting around the Moon and was piloted by the third astronaut named Michael Collins, although Collins did not experience the glory of stepping on the Moon's surface firsthand, the mission would not have been possible without him

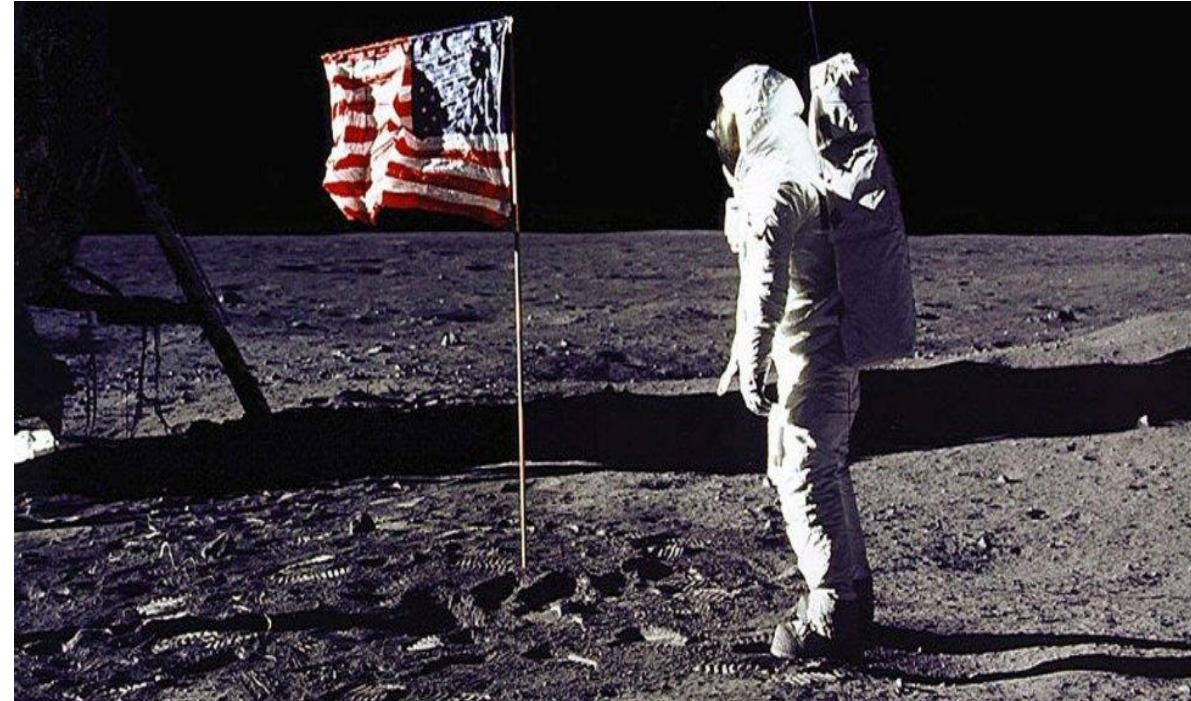
Apolo 11 crew members



Neil Armstrong

- ▶ an American astronaut and aeronautical engineer and the first person to walk on the Moon
- ▶ *“That’s one small step for man, one giant leap for mankind.”* Those were the first words Neil Armstrong famously said when he set foot on the moon in 1969
- ▶ *“Mystery creates wonder and wonder is the basis of man’s desire to understand.”*
- ▶ <https://www.thirteen.org/blog-post/apollo-11-moon-landing-5-fun-facts/>

Neil Armstrong



Neil Armstrong fun facts

- ▶ He knew how to fly before he got a driver's license
- ▶ He was more concerned about landing on the Moon than he was walking on it
- ▶ Neil was carrying a bag worth \$1.8 million
- ▶ Neil Armstrong and his fellow Apollo 11 astronauts had to spend three weeks in quarantine
- ▶ He became a university professor
- ▶ Neil Armstrong fought in the Korean War as a fighter pilot and during that time, he flew 78 combat missions

Richard Nixon

- Richard Milhous Nixon was an American politician who served as the 37th president of the United States from 1969 until his resignation in 1974.
- Nixon spoke with Neil Armstrong and Buzz Aldrin during their moonwalk. He called the conversation “the most historic phone call ever made from the White house”
- President Nixon was anxious the mission could fail.
- His staff had prepared a statement to be read in the event worst happend.

RICHARD NIXON



RICHARD NIXON VISITING APOLLO 11
CREW IN QUARANTINE, 1969.

Forgotten moon camera

After Neil Armstrong, the first man on the moon, passed away in 2012, his widow contacted the **National Air and Space Museum**. Carol Armstrong had discovered a white cloth bag in one of Neil's closets, and it was filled with items that looked like they had been used in space. Among the contents was a forgotten camera that had been used to capture images of the first moon landing.

Forgotten moon camera

