

Systems to explore the Moon and Mars.

Humans are fascinated by what exists beyond Earth – be it the Moon or our nearest planet – Mars.

The possibility of exploring Space has inspired engineers, inventors & scientists to develop and construct better & better spacecraft since the 1960s!

Pictures from the Moon!



Surface of the Moon
with Earth in the
background!



Astronaut on the Moon



Earth in the background



Saturn rising behind Moon.

Key words for space:

Space – the area beyond the Earth’s atmosphere.

Spacecraft – a vehicle that moves through space.

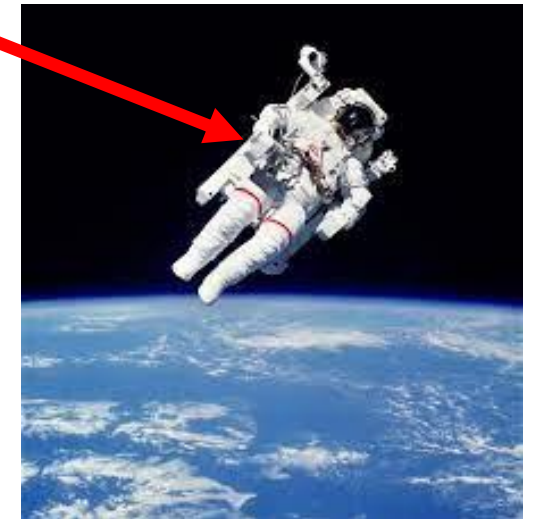
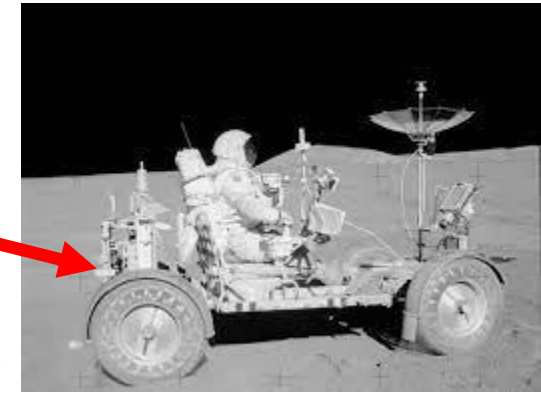
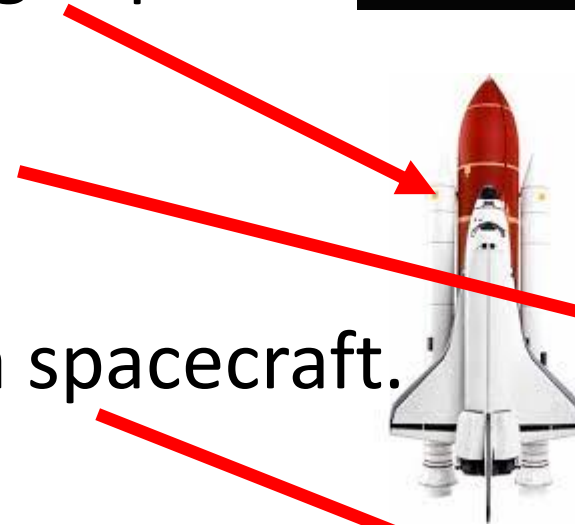
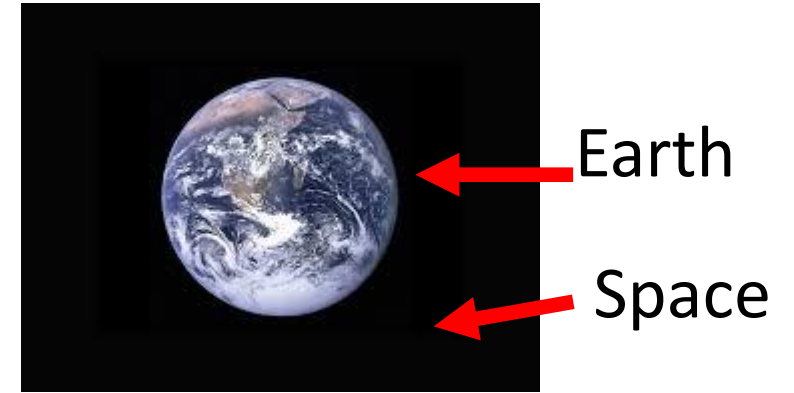
Rover – vehicle that moves on planets

Astronaut – person trained to travel in a spacecraft.

Robot – machine does jobs like a person.

Unmanned – without people

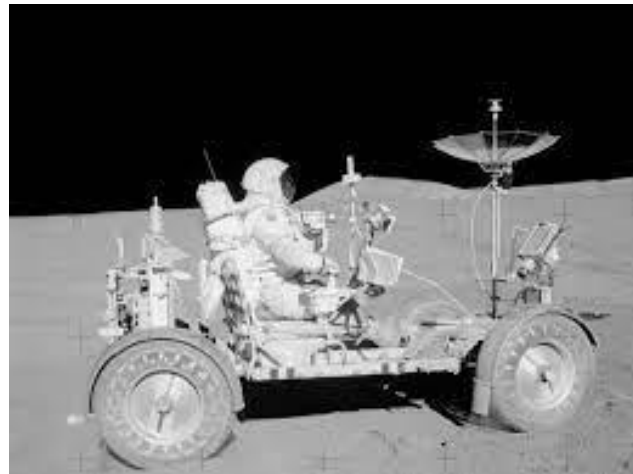
Solar panel – converts sun’s energy to electricity.



Rovers on the Moon & Mars.

Rovers are special vehicles with fancy wheels and axles used to explore the Moon and Mars & these have already been used on both.

Moon rovers:



Unmanned Mars rovers



Timeline: History of Rovers in Space:

1966	1969	1970	1971	April 1972
Unmanned 1 st Spacecraft (USA) lands on the Moon.	1 st Spacecraft carrying Neil Armstrong lands on Moon.	Lunokhod 1, Russian remote controlled robotic rover lands on Moon.	Apollo 15 USA Astronauts used rovers to explore Moon's surface.	Apollo 16 USA astronauts used rovers to explore surface of Moon.
Dec. 1972	1973	1997	2004	2012
Apollo 17 USA astronauts used rovers to explore surface of Moon.	Lunokhod 2, Russian remote controlled robotic rover lands on Moon.	Mars Pathfinder USA 1 st Rover explores surface of Mars	Spirit & Opportunity on Mars. Spirit worked till 2010. Opportunity still working.	Curiosity laboratory lands on Mars & still operating there.