

KS4 Science

Space Travel

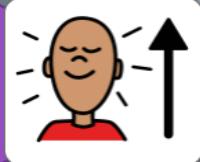
Teamwork



Self Management



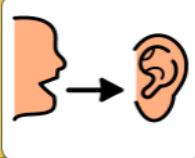
Self Belief



Problem Solving



Communicate





Describe what you need to stay alive in space



Make a timeline of space travel.



Research Valentina Tereshkova and find out why she is important.

Teamwork



Self Management



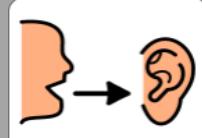
Self Belief



Problem Solving



Communicate



Keyword

word

water



woman



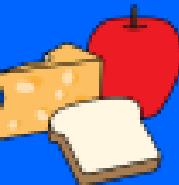
air



man



food



space



warm



moon



medicine



object

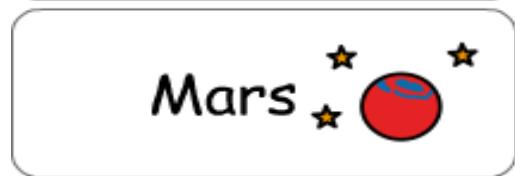


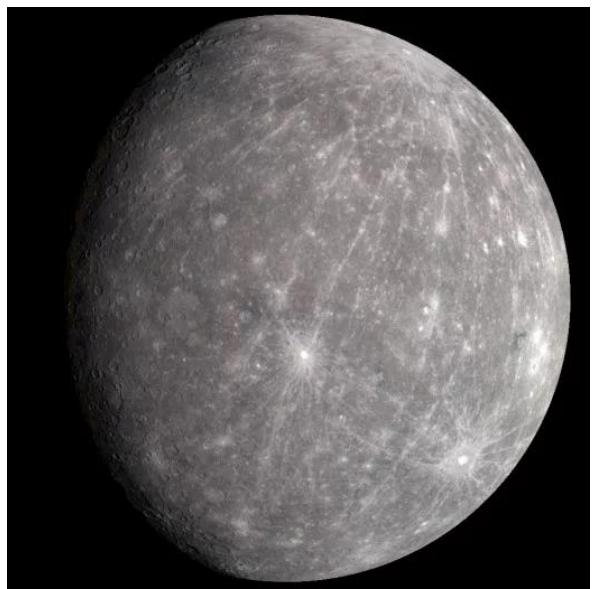


Can you remember the order?



My
Very
Easy
Method
Just
Sums
Up
Names





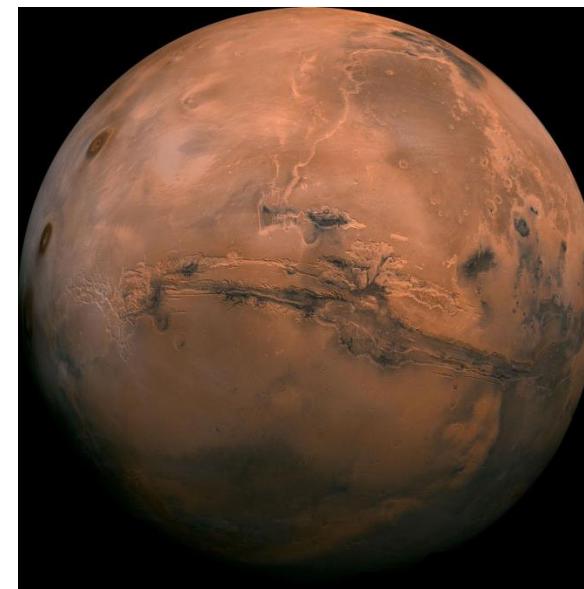
Mercury



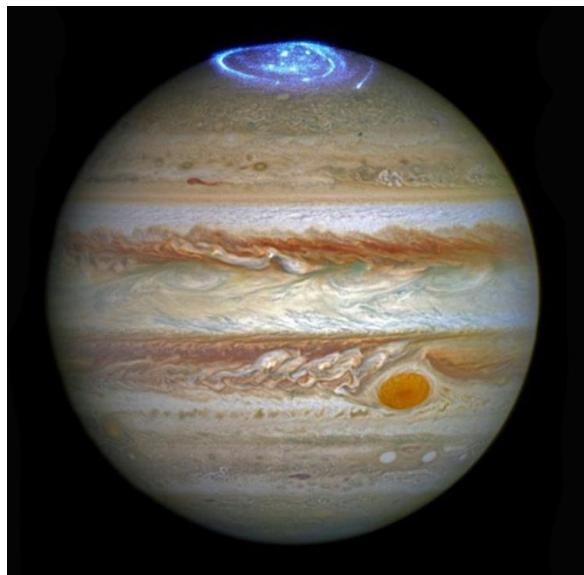
Venus



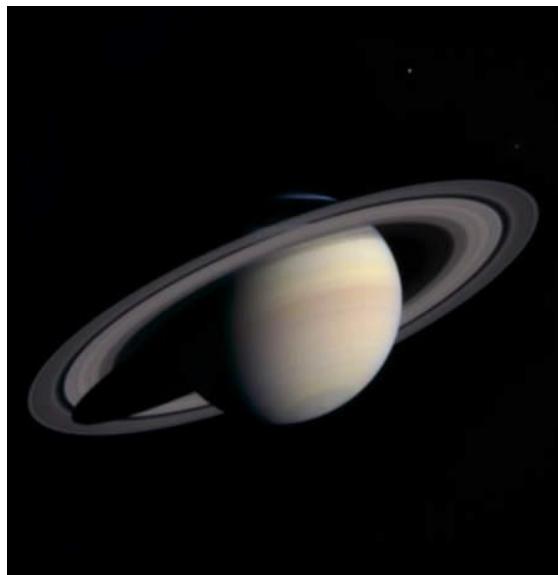
Earth



Mars



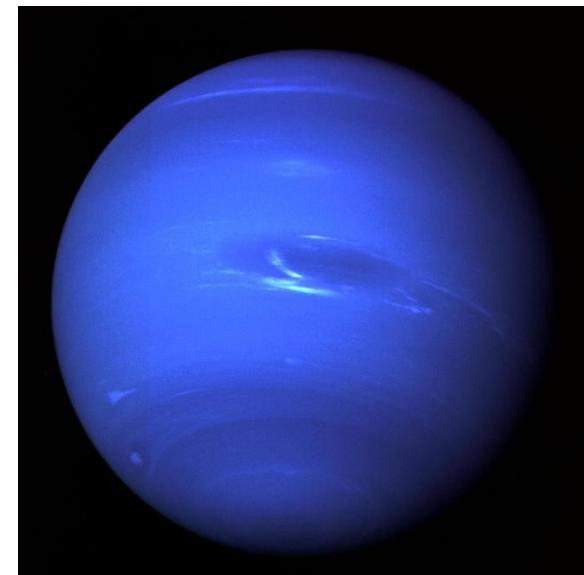
Jupiter



Saturn



Uranus



Neptune



Describe what you need to stay alive in space



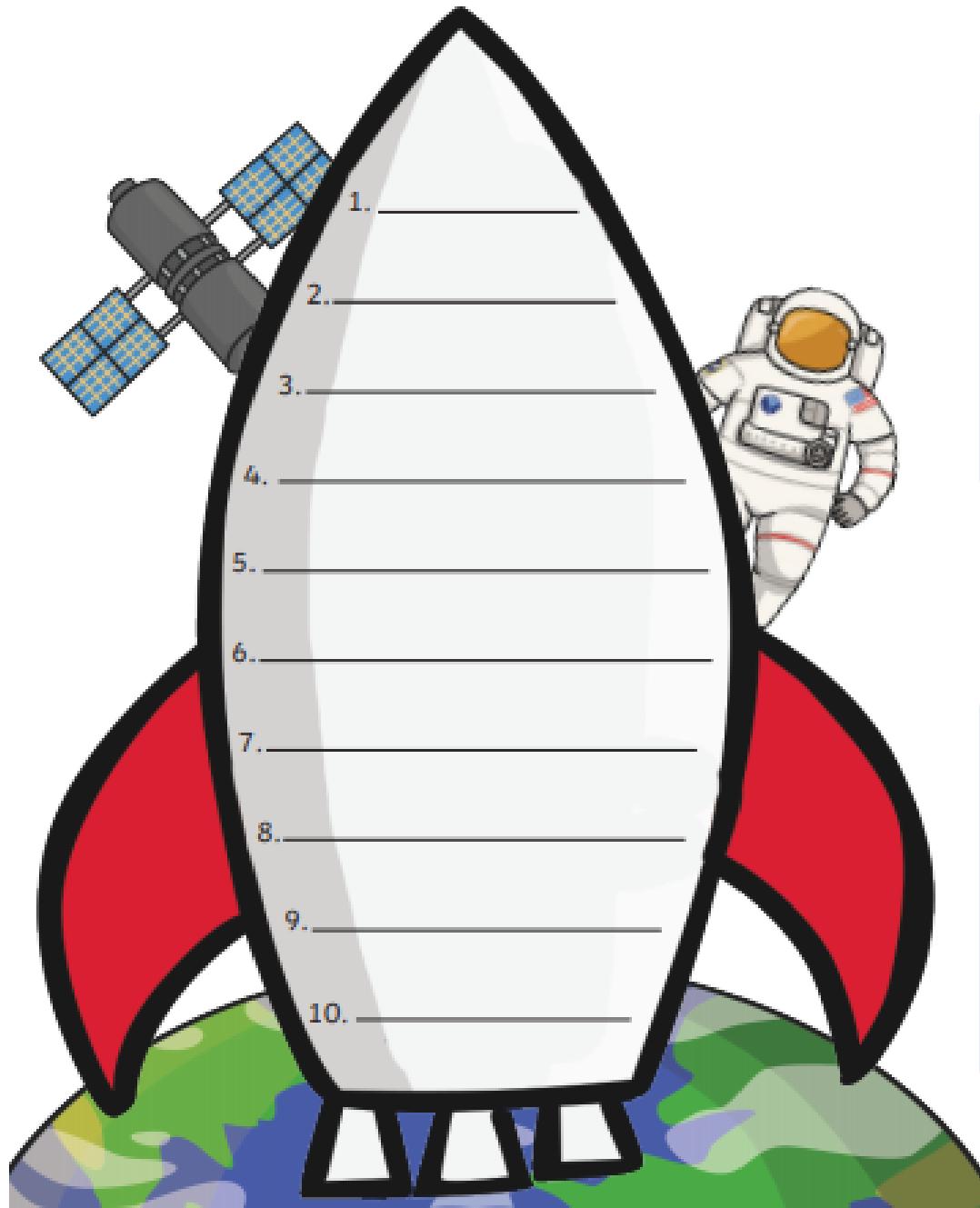
Question

What do we need to stay alive?



Question

What is not found in space?



5 must be things we
need to stay alive and
healthy.

5 can be things you
would like to take.

5 must be things we need to stay alive and healthy.

1.

water



2.

air



3.

food



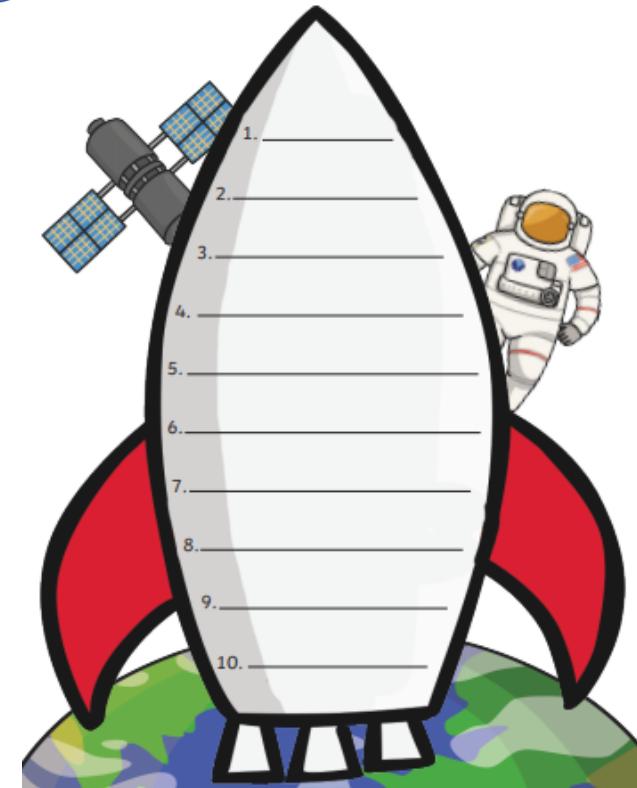
4.

warm



5.

medicine



5 can be things you would like to take.

1.

2.

3.

4.

5.



Make a timeline of space travel.

Watch the video carefully.

<https://www.youtube.com/watch?v=FxpC-8f--xo>

10th June 1963

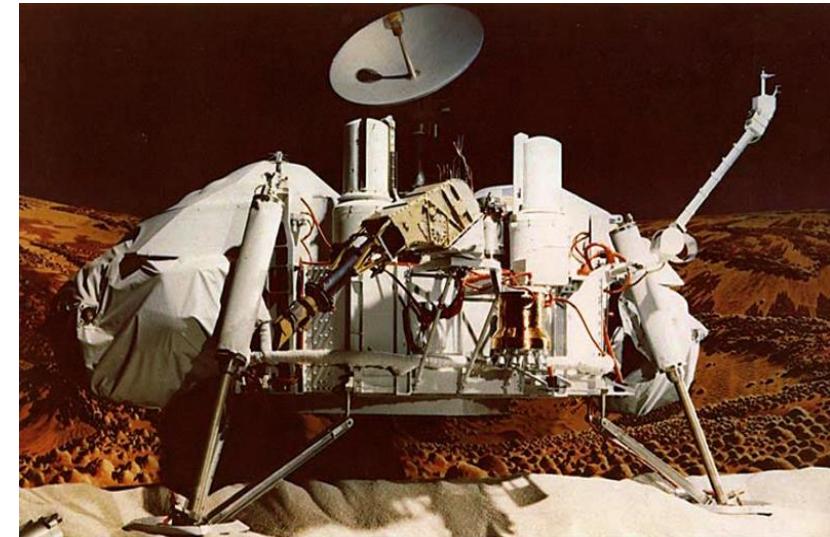
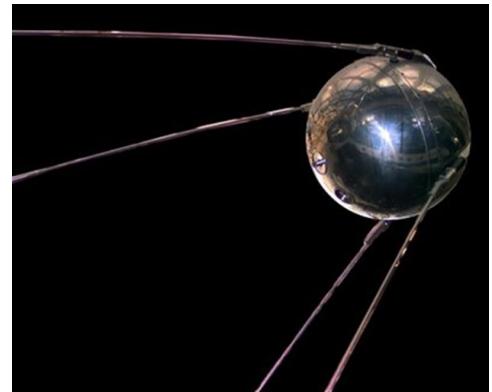
20th July 1976

12th April 1961

20th July 1969

4th October 1957

3rd November 1957



First woman in Space - Valentina Tereshkova

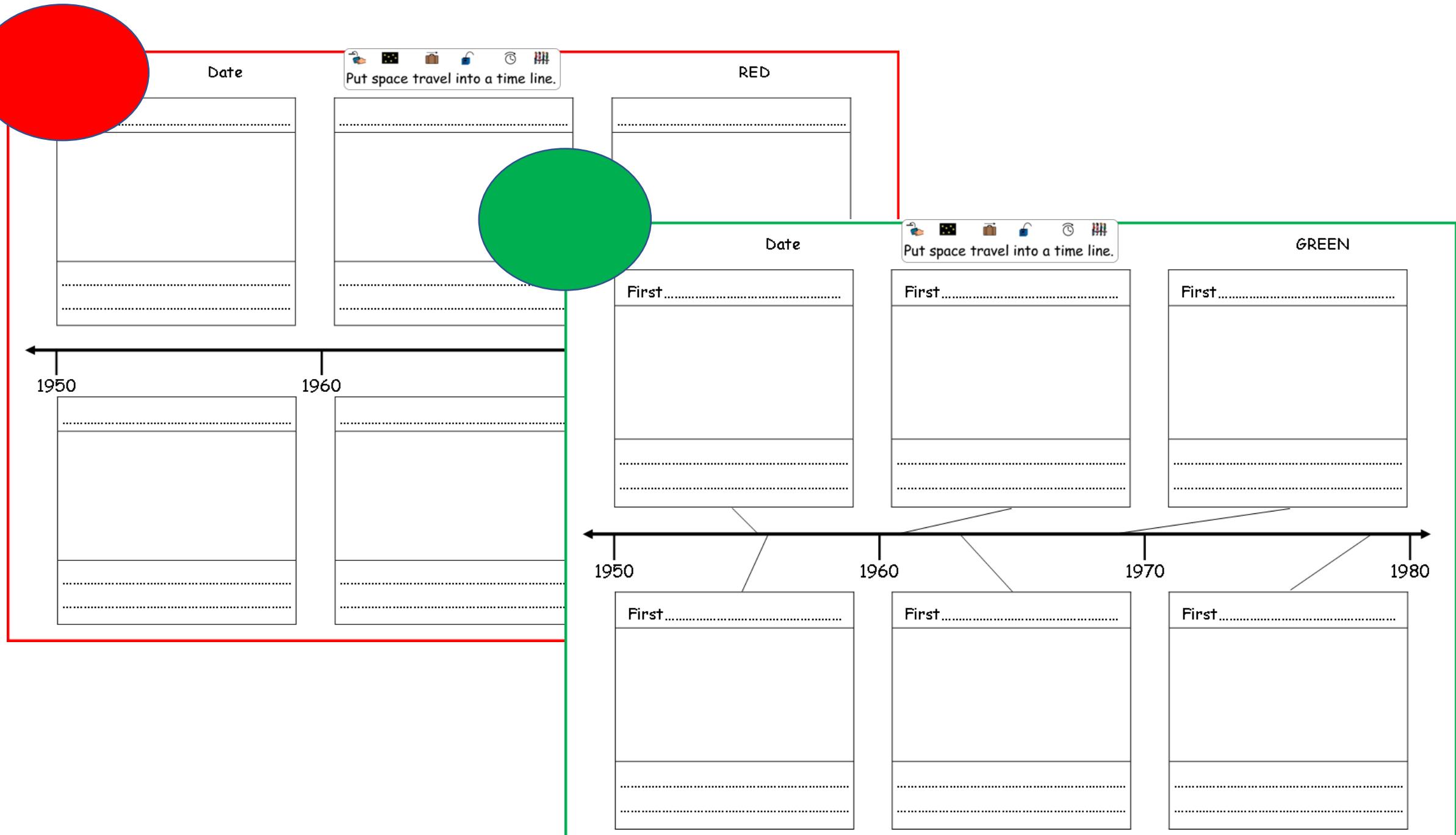
First person to step on the moon - Neil Armstrong

First man in Space - Yuri Gagarin

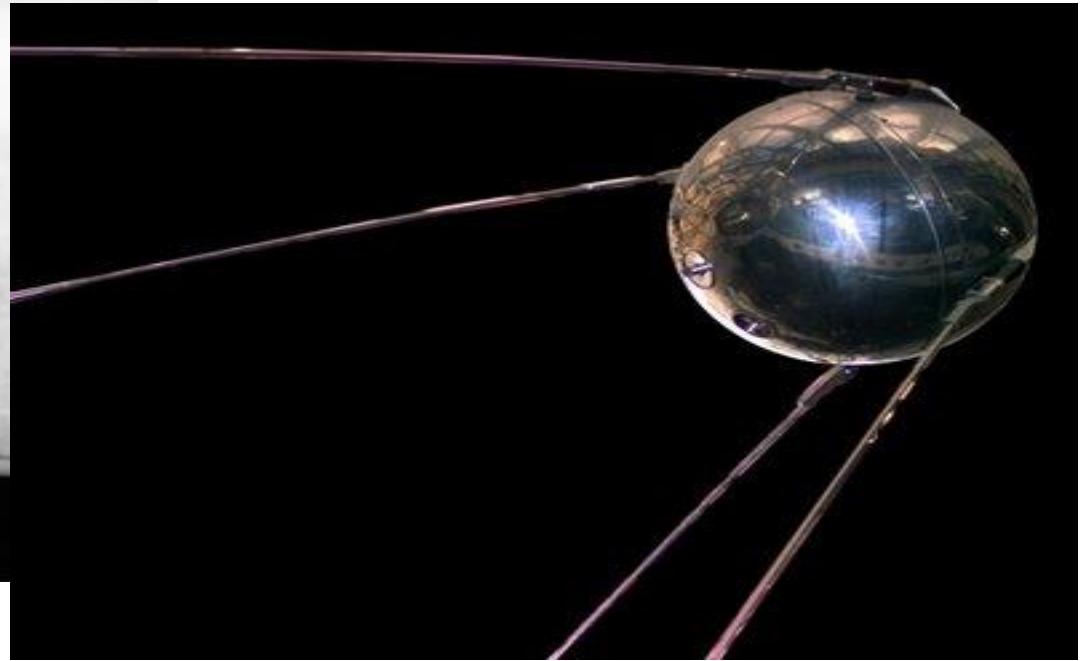
First living thing in Space - Laika

First object in Space - Sputnik 1

First object to land on Mars - Viking 1

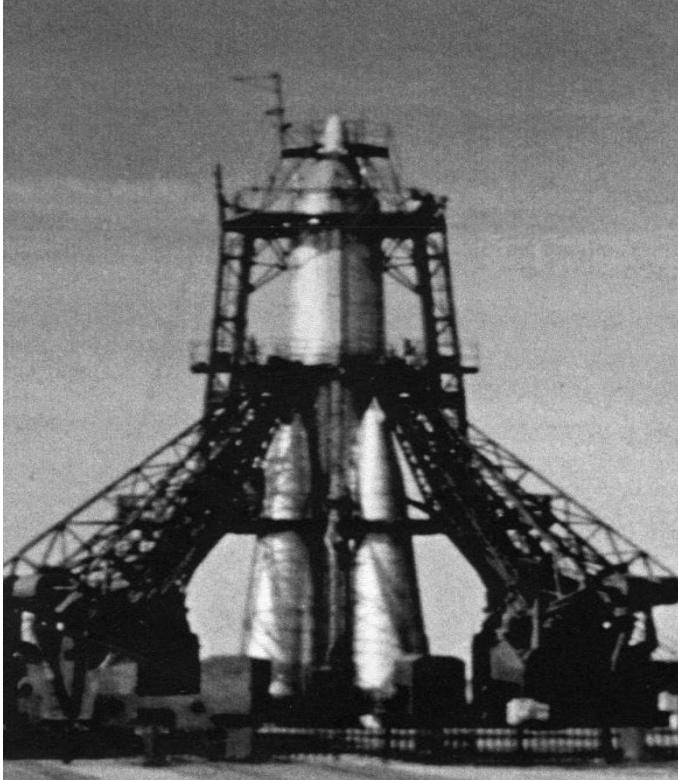


4th October 1957



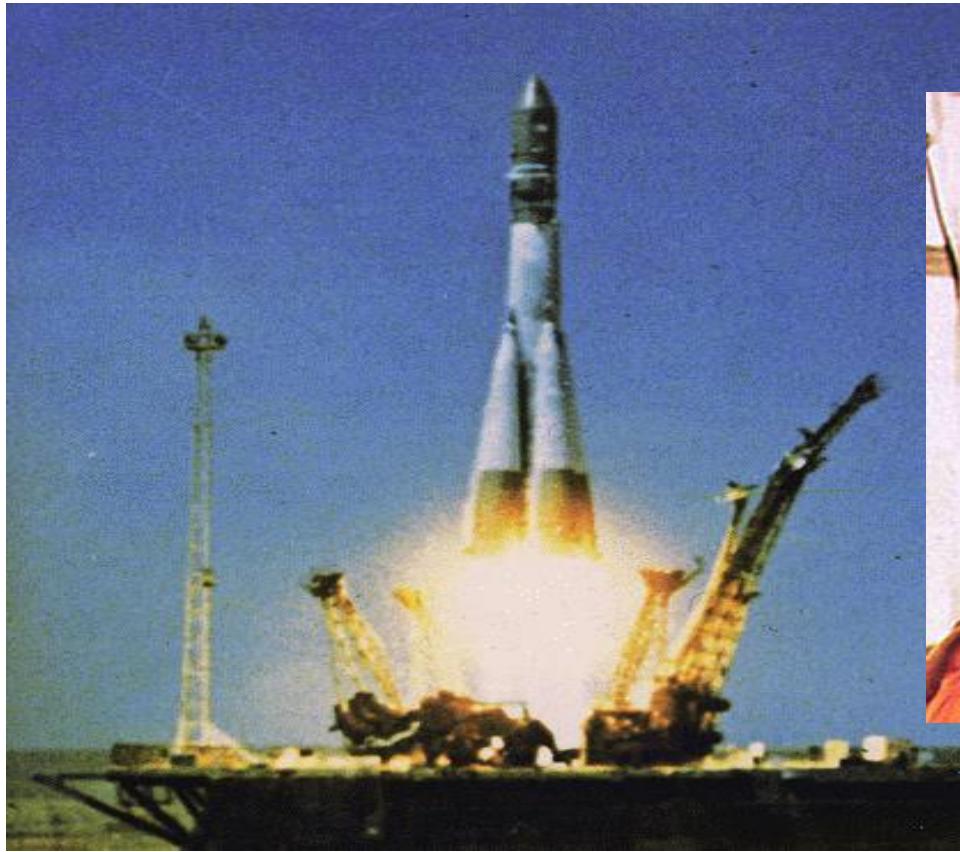
Sputnik 1 - First Object in Space

3rd November 1957



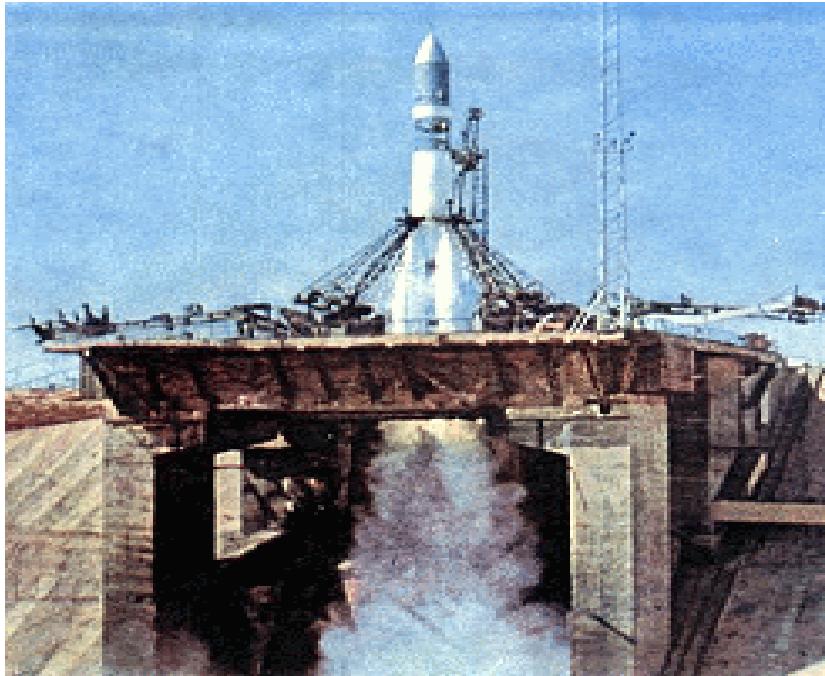
Laika - First Living thing in Space

12th April 1961



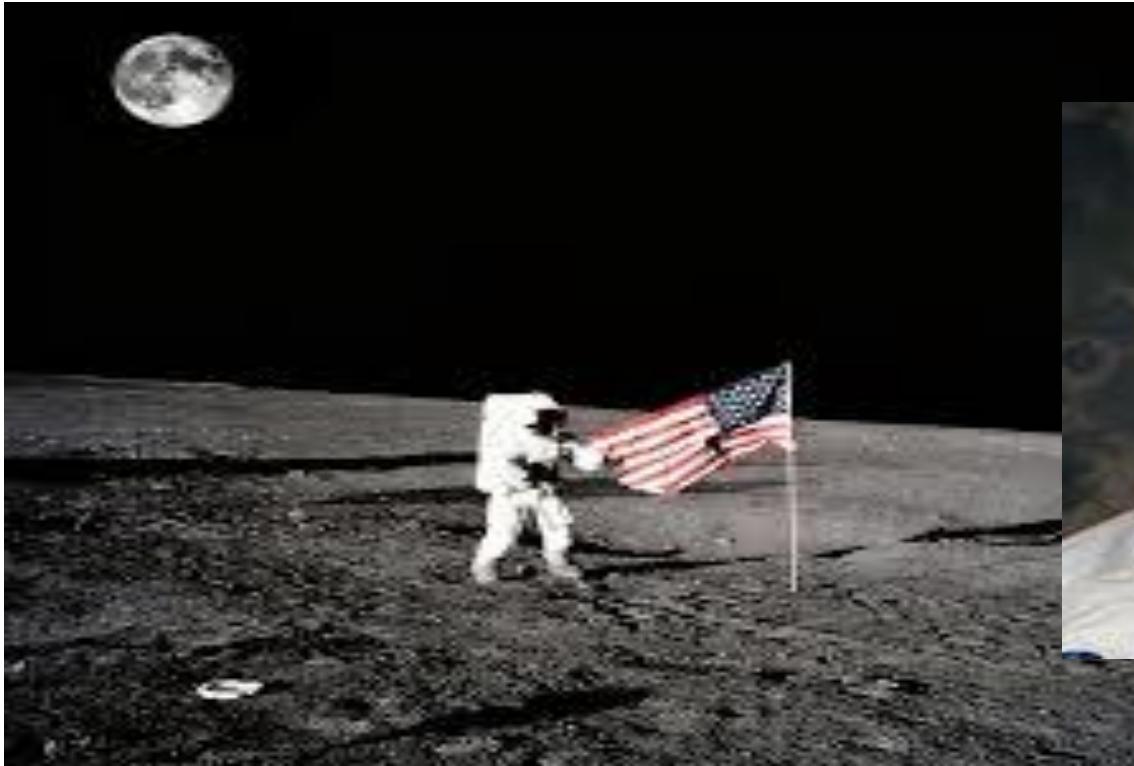
Yuri Gagarin - First Man in Space

10th June 1963



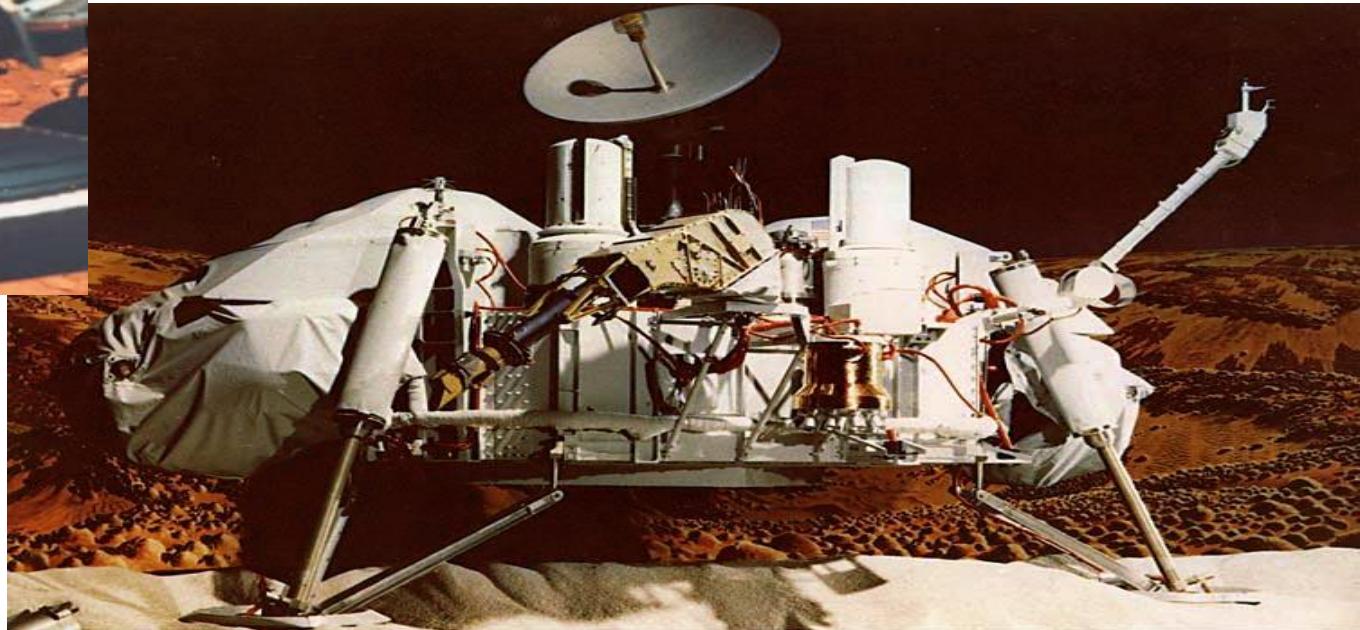
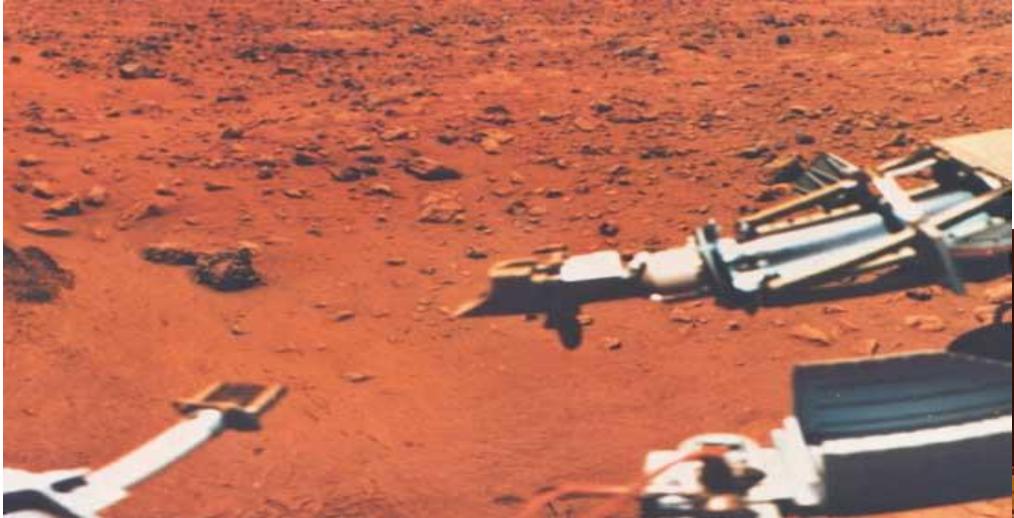
Valentina Tereshkova - First woman in Space

20th July 1969



Neil Armstrong (Apollo 11) - First person to step on the moon.

20th July 1976



Viking 1 - First object to land on Mars



Research Valentina Tereshkova and find out why she is important.

Read the information and answer
the questions.

Early Life

Valentina Tereshkova was born on 6th March 1937 in a town called Maslennikovo, which is northeast of Moscow in Russia.

Her parents worked on a farm until her father was killed during the Second World War.

Valentina left school at the age of sixteen and began work in textile factory, although she continued her education through a correspondence course.



A correspondence course is a course carried out through letters and posting assignments and written work.



Inspiration



Valentina became very interested in parachute jumping and joined the Yaroslavl Air Sports Club.

In 1961, Valentina was so inspired by seeing fellow Russian Yuri Gagarin become the first man in space, that she volunteered for the Soviet Space Program.

Despite having no pilot experience, she was allowed to join the program due to having successfully completed 126 parachute jumps.

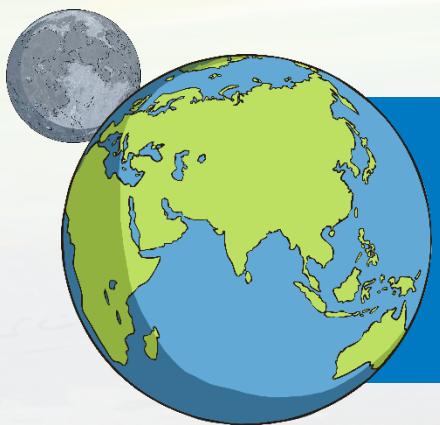
In those days, cosmonauts had to parachute from their capsule when they were returning to Earth, before the capsule hit the ground.



Vostok 6

Valentina, alongside four other women, had 18 months of training for the mission.

At the age of 26, Valentina was the only woman who went into space from that particular program. She would pilot the Vostok 6 spacecraft.



On 16th June 1963, Valentina launched the Vostok 6. She spent almost three days in space and logged 70 hours orbiting the Earth 48 times, which is the same as 1,200,000 miles.



Almost Disaster



A huge disaster was avoided. Valentina noticed that the spacecraft was beginning to move away from the Earth. There was a fault with the automatic navigation software on the spacecraft.

The Soviet scientists had to quickly develop a new landing algorithm, meaning Valentina landed safely with just a bruise on her face.

After the Mission

After completing just the twelfth human spaceflight in history, Valentina parachuted down, safely landing near the Kazakhstan–Mongolian–China border.

Nearby villagers helped her and invited her for dinner. She accepted but was later reprimanded for going against the rules and not having medical checks straight away!



Interesting Fact

After the medical checks were carried out, it was discovered that women had the same resistance as men to the physical and mental stresses from the effects of space, and that in fact, women could endure G-forces (gravitational forces) better than men.



Lifelong Involvement in Space

Although Valentina never went to space again, she became active in the space community. She became a spokesperson for the Soviet Union and has travelled around the world giving talks about Soviet politics, female equality and culture.

Valentina worked as an aerospace engineer within the space program.

She received the title Hero of the Soviet Union, was given the Order of Lenin medal and the Gold Star Medal. Valentina even had her face on stamps after the mission.

In 2017, London's Science Museum displayed a temporary museum called Valentina Tereshkova: First Woman in Space.



Quotes by Valentina Tereshkova



“If women can be railroad workers in Russia,
why can't they fly in space?”

“Once you have been in space, you
appreciate how small and fragile the Earth is.”

Questions

1. What did Valentina do before she became a cosmonaut? Tick one.

- worked in a shop
- engineer
- worked in a factory
- doctor

2. What did Valentina's training involve? Tick two.

- weightless tests in zero-gravity
- watching television
- long periods of time alone
- writing a book about space

3. Draw lines to show different things that Valentina did at different stages in her life.

young adult

cosmonaut

during her training

She had to keep things secret from her family.

She joined a skydiving club.

She corrected a problem to stop her ship from crashing.

4. Number the events below to show the order in which they happened in Valentina's life. The first one has been done for you.

- Valentina passed the space programme.
- 1 Valentina was born on 6th March 1937.
- Valentina left school at just 16.
- Valentina wants to go to Mars.
- Valentina became the first woman to go to space.

5. Find and copy **one** phrase that describes the competition between the USSR and the United States.

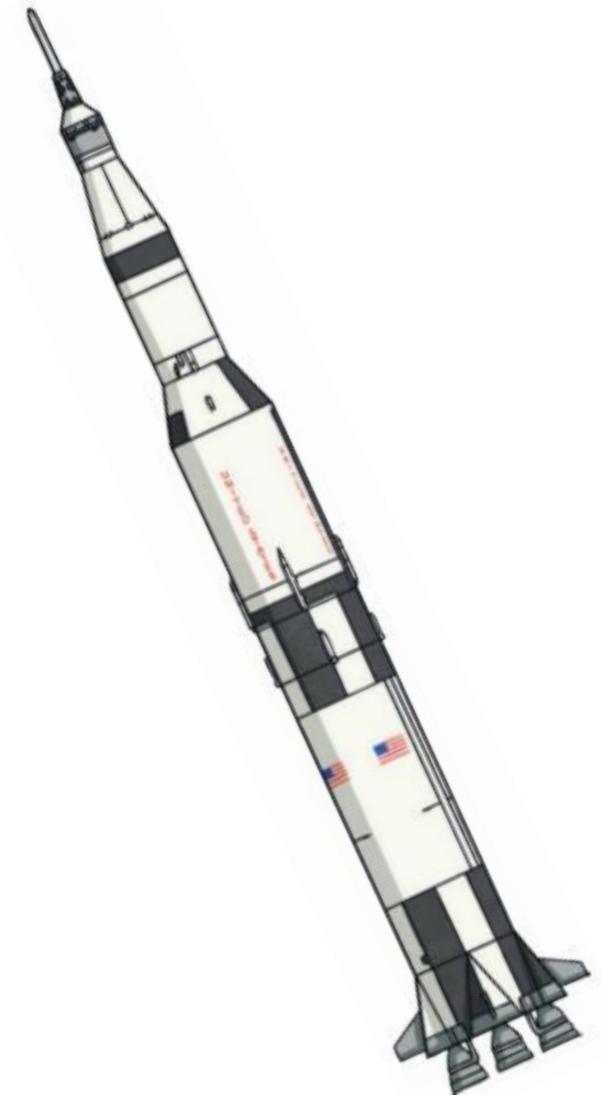
6. Fill in the missing word in this sentence.

On her first flight, Valentina set a new _____ and took _____ that helped scientists.

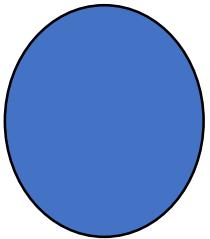
7. Why was Valentina chosen to be in the space programme? Give **two** reasons for your answer.

Next Week...

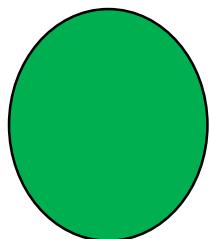
Toilet roll tube
String
Balloon or 2 (thin one)
Sticky Tape



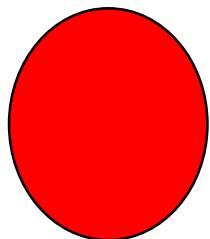
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