



Imagine that your sleepover with friends is set inside a spacecraft - wouldn't that be truly amazing. Sleeping whilst you are surrounded by stars and many fascinating planets do you need during your journey in space?

Food, water, oxygen and exercise:
Each day you would need plenty of food (3kg) and water (6 pints) to keep you fit and active as well as an oxygen tank allow you to breathe in your spacecraft or space suit. Finally, you need to remember to keep exercising - this stops your muscles and bones wasting away.

Light & Electricity
Parts of the spacecraft may be dark and dull, so brightening places up with lighting would be important - plus, air-conditioning, instruments and the engines all need power.

Shelter & First aid
Body protection is a major need in space as the space-suit and spacecraft will protect you from the deadly vacuum of space. In case any of the astronauts get hurt, a first aid kit would be very handy.

Toilet
Where does all the waste go?
• Solid waste goes into a cylindrical container which is then dried out
• Liquid waste is ejected out of the spacecraft into space

Entertainment
Don't let boredom get in the way of the spectacular space journey so bring along games consoles, DVDs, laptops, books and even some zero-gravity games (like magnets and spinning-tops!).

Survival guide to space

New at NASA

Have you heard about the changes in NASA lately? The US President, Barack Obama, has appointed a former US Marine and astronaut Charles F. Bolden to be the head of NASA. Charles was born on 19 August, 1946 in Columbia, South Carolina. As a US Marine, he was a second lieutenant after graduating from the United States Naval Academy in 1968. In May 1980, he was selected by NASA and became an astronaut in 1981.

Obama chose him because of his experience as an astronaut. In four missions, he spent over 20 days in space and has orbited the Earth nearly 500 times. Later, he left NASA and re-joined the US Marine Corps. On 19 July 2009 he was appointed as the first African American to head NASA on a permanent basis. He will be the man responsible for America's space program for the next few years. Will this be the man who will send humans to Mars one day?



PRESENT

PAST

FUTURE



Richard Garriott (AKA Lord British)

Did you always want to be an astronaut?
Yes, I grew up in an astronaut community. My Dad was an astronaut and so were most of our neighbours.

What inspired you to become an astronaut?

My parents, neighbours and school teachers were the inspiration along with the legacy of Apollo. My greatest inspirations came from my teachers at school; especially my drama teachers and the teachers who let me take computer programming as my language option.

What brought you to the path you are on today?

Well, I guess you could say my work as a computer games designer was key... that and my interest in science and exploration.

If I want to become an astronaut, what advice would you give me?

Keep hold of your dreams. You need to stick with things. Opportunities regularly become available to all people; but whether you recognise it or pursue it is the difference. If one route doesn't work, bide your time and find another strategy.



Space Holidays

Ever wanted to be an astronaut? A lifelong ambition could soon be fulfilled. A rocket powered plane allowing tourists to experience space should start flying in two years. Sharing the characteristics of a jet aircraft, the six passenger 'space-taxi' will soon be flying 62 miles (100 km) above Earth. It will take off and land on runways. Virgin Galactic's development known as "SpaceShipTwo" will allow anyone to experience space. Better save your pocket money though, because the ticket price is £130,000, and tickets are selling fast!

Up until now the high cost of each spaceflight, around £20 million for each person, means that only around 500 people over a period of 50 years have been able to experience space. This could soon change as entrepreneurs such as Richard Garriott, a self funded space tourist who paid for himself to go into space, become active. He was the second person to raise the British flag in orbit, after Helen Sharman in 1991 and he aims to make it cheaper by investing in spaceplanes so that accessibility into space will be easier.

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www.maths.qmul.ac.uk



520 Days

It takes 520 days to get to Mars... but can the human mind cope with the journey? Sergei Krikalev (pictured left) actually logged a total of 803 days, 9 hours and 39 minutes in space on board the Mir and the International Space Station.

Apollo 11

On the 20th July 1969 American Astronauts Buzz Aldrin and Neil Armstrong landed on the moon in the Eagle space craft and went down in history as the first humans from Earth to walk on its surface. Only 10 other people (all American) have since visited the Moon and the last was in 1972! The Astronauts found it isn't as strong there as it is here on Earth. Only a small number of people have landed on the Moon but it has taken thousands and thousands of people and advances in science and engineering to allow it to happen.

"I'm told the cheer of the year went up in Mission Control!" James A. Lovell, the commander told us.
Back in the 1970s our five British-born astronauts were still very young. Richard Garriott was one of them and at the time he was only 9 years old. In his interview we asked him what had inspired him to become an astronaut and he said: "My Dad was an astronaut and so were most of our neighbours. They were the inspiration, thanks to the work of over one thousand almost were lost in space forever, but point where the lives of three astronauts landed to be aborted. There came a mission explosion forced the lunar April 11 1970 at 13:13 CST, but a mid-mission by NASA intended to land on the moon. The mission was launched on all. Apollo 13 was the third manned mission by NASA it turned out to be lucky after superstitious people out there, whereas in Mission Control!" James A. Lovell.



Apollo 13

What is the future of space travel?

Past, present, future...
Your survival guide to space
New at NASA
Holidays in space

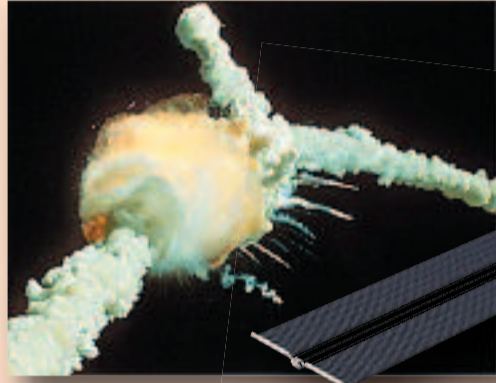


THE PRESENT



JAN 28, 1986

The space shuttle Challenger explodes shortly after takeoff. Tragically, all seven astronauts are killed



APRIL 12, 1981

The first space shuttle, Columbia, launches



MAY 14, 1973:

America launches its first space station, called Skylab

JULY 20, 1969

Astronauts Edwin "Buzz" Aldrin and Neil Armstrong become the first men to walk on the moon

MAY 5, 1961

Alan Shepard becomes the first American in space



APRIL 12, 1961

Russian cosmonaut Yuri Gagarin becomes the first human in space



NOV 3, 1957

Sputnik II launch: Dog called Laika first animal in space. Unfortunately, she died on her mission



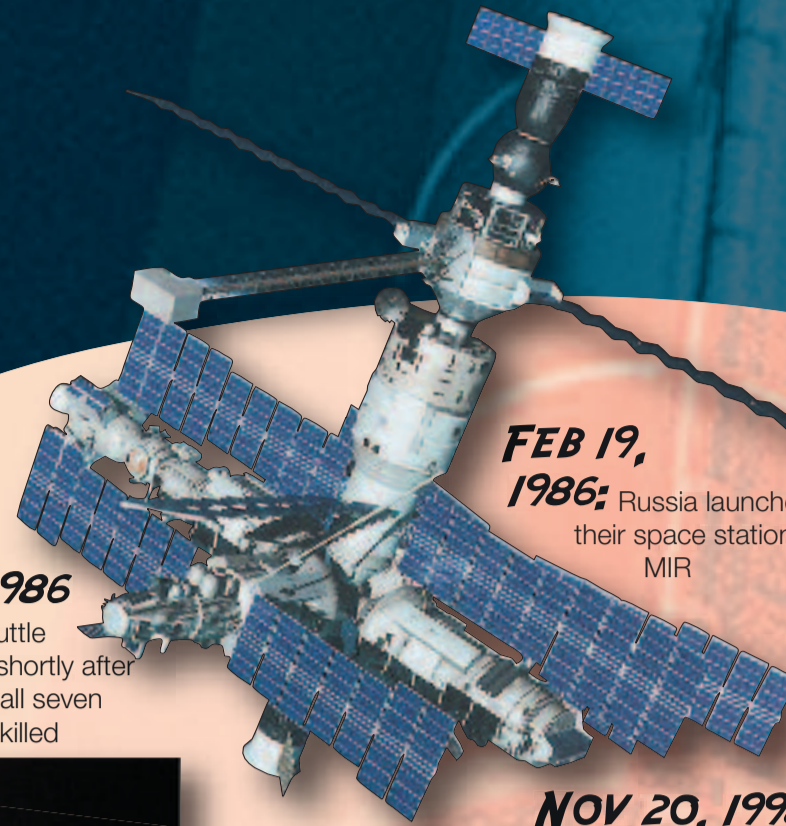
OCT 4, 1957:

Sputnik I launch: Soviet Union put first man-made satellite in space



DEC 17, 1903:

The Wright Brothers make the first manned flight



FEB 19, 1986:

Russia launches their space station called MIR



MAY 18, 1991:

Britain's first astronaut, 27-year-old Helen Sharman from Sheffield, has blasted into orbit.

NOV 20, 1998:

The first piece of the International Space Station is launched



FEB 1, 2003:

Seven astronauts, died when the space shuttle Columbia explodes when it comes back down to Earth



SEPT 30, 2004:

SpaceShipOne becomes the first private spacecraft to reach outer space



OCT 12, 2008:

Richard Garriott - First British Private Space Participant



MAY 21 2009:

British astronaut-trainee Tim Peake joins ESA HE'S THE ONE IN THE MIDDLE OF THE PIC, SECOND FROM LEFT

2010

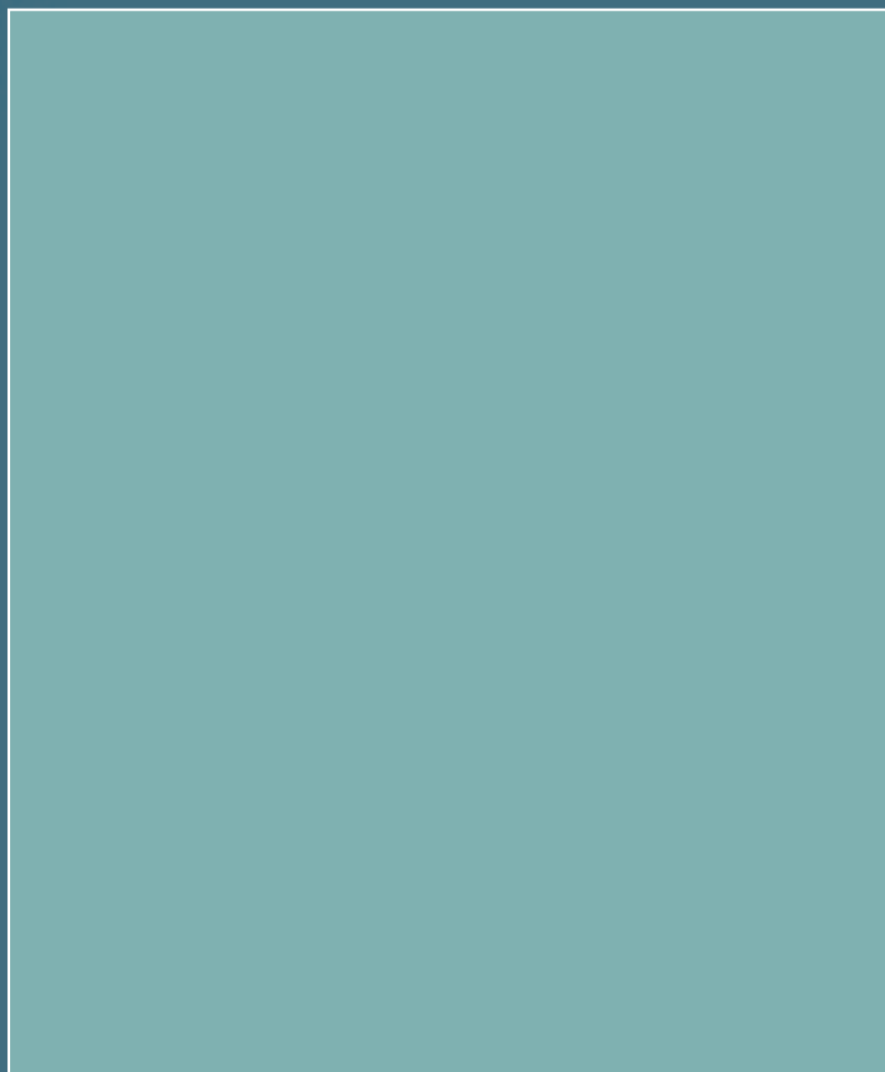
British-born astronauts Piers Sellers and Neil Patrick scheduled for missions of the Space Shuttle



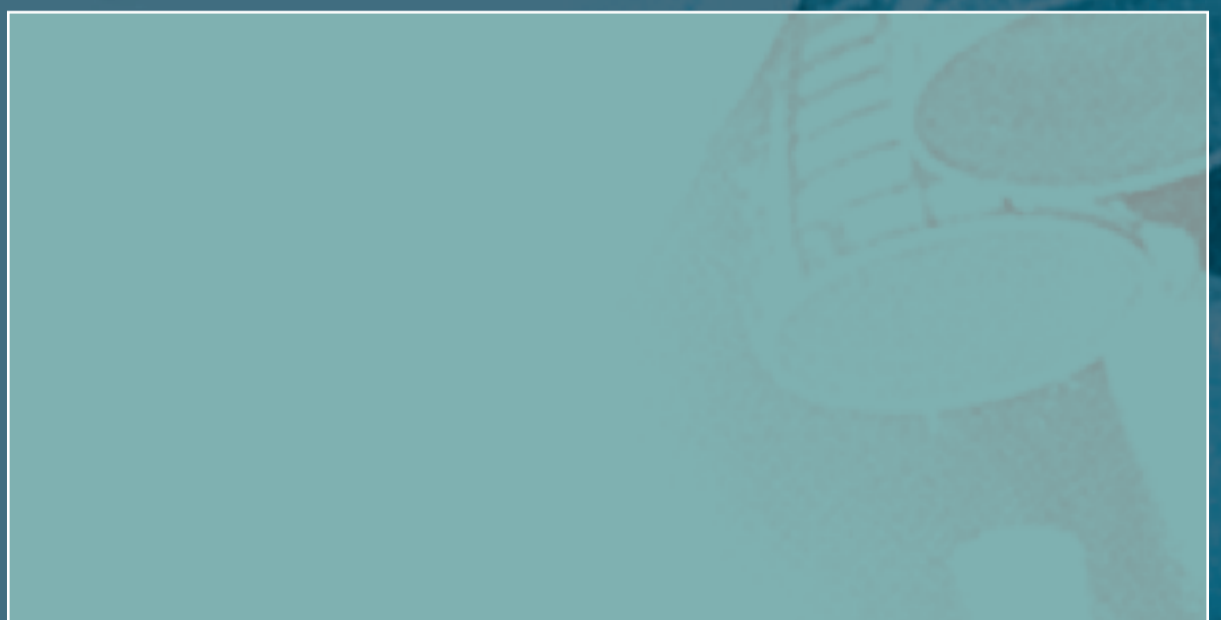
We've left some of the poster blank for you to fill in current or future space stories. There a couple of suggested topics for you to research but the others are left up to you!



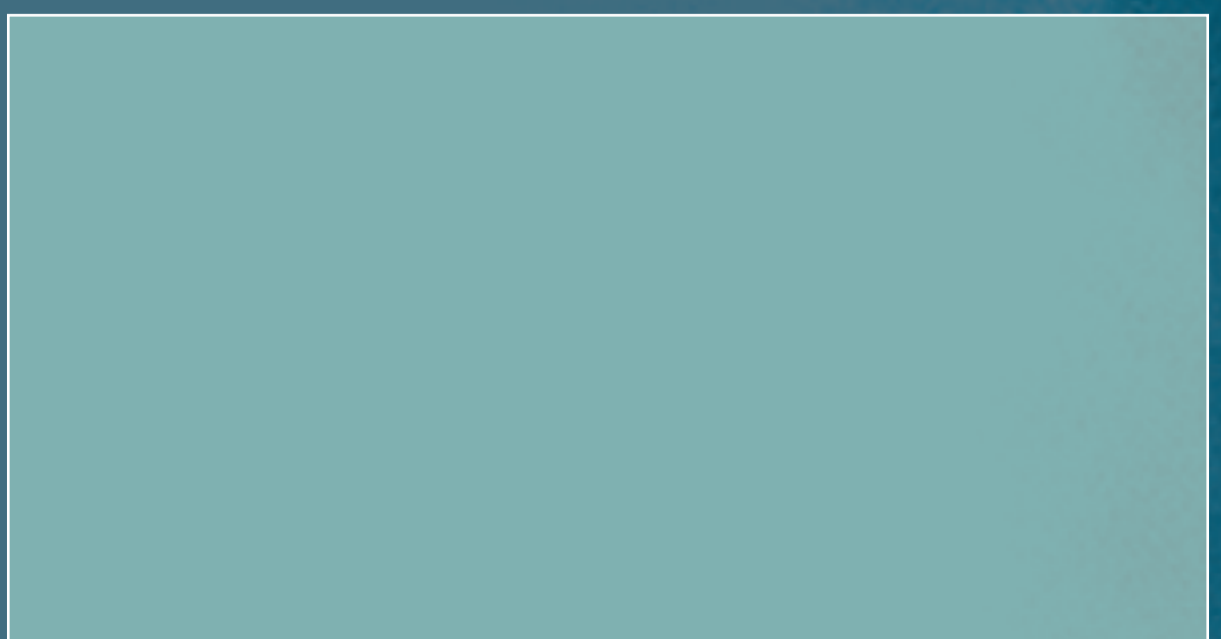
Who's in space right now?
When is the next Space Shuttle launch?



THE FUTURE?



What's happening at the International Space Station?
What is their mission?



THE PAST