

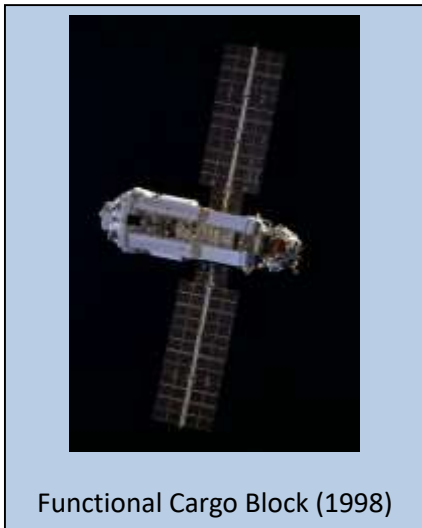
The International Space Station

The International Space Station (ISS) is the biggest object ever flown in space. It travels around the Earth at an average speed of twenty-seven thousand and seven-hundred kilometres per hour, completing sixteen orbits per day. At night it can easily be seen from Earth, as it flies three hundred and twenty kilometres above us.



Why do scientists need a space station?

Europe's biggest ISS project is the Columbus science laboratory, where astronauts can carry out scientific experiments in weightless conditions. Many different types of experiments can take place both inside and outside this space laboratory. Although space-like conditions can be emulated in the Vomit Comet, the weightlessness doesn't last long enough to get the kind of results that the scientists are looking for.



Who built the space station?

Sixteen countries, including the USA, Russia, Japan, Canada and many other European Space Agency (ESA) member states worked together to build the Station. It has a modular design which means it is built in parts. The first part Zarya - also known as the Functional Cargo Block (FGB) - was sent into orbit in 1998 after Russia and America worked together to build it.

What are the parts of the ISS?

The largest part of the ISS is a central truss (long central support) to which sixteen huge solar panels are attached. The modules where the astronauts live and work are attached to the centre of the truss. This is split up into different areas so that different nations can work on their own experiments. The most notable module is the Cupola module which has seven windows that allow the astronauts to look down to Earth.

How do supplies get to the space station?

You are probably wondering, if there is no running water and nowhere to grow food then how do scientists survive in space? The answer - The ESA also makes the Automated Transfer Vehicle (ATV), a series of un-crewed spacecraft designed to take supplies to the ISS. The cargo craft delivers food, fuel, equipment and other supplies. The Soyuz spacecraft is used to transport new astronauts to the ISS and bring back astronauts who have finished their term of service.

Final Thoughts...

Do you think you would be able to be an astronaut? Just remember, they can't have a warm, relaxing shower or bath; there is a lack of tasty, fresh food and, worst of all, they can't hug their family for at least six months!