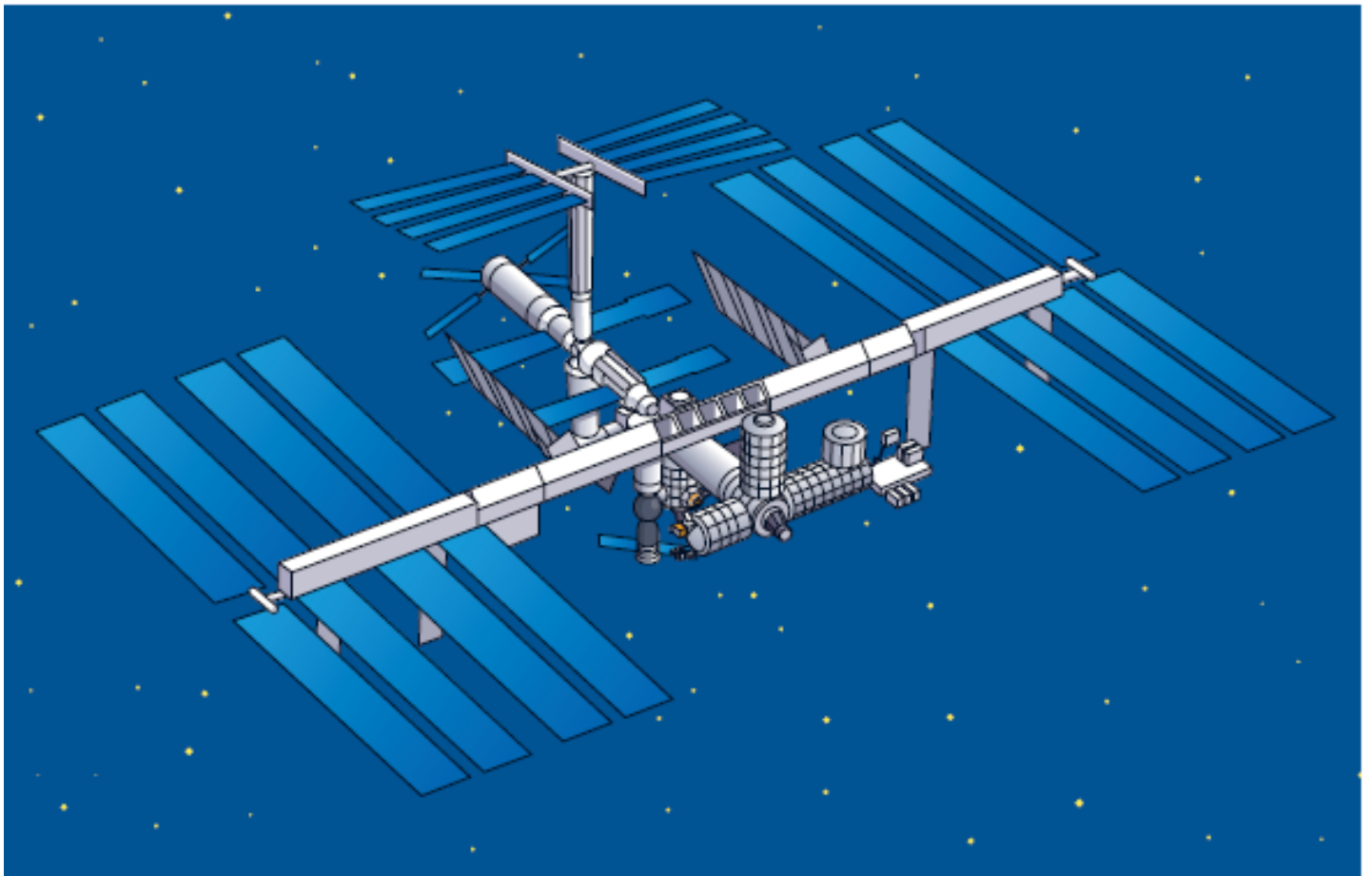


# The International Space Station

The International Space Station is a floating laboratory where astronauts can live for months at a time. It is full of equipment for doing science experiments. The experiments that astronauts do on the Station teach us many things we need to know before humans can travel further out in space, and a lot of the new knowledge will be useful on Earth, too.



The Station is the biggest object humans have ever built in space. It travels around the Earth at a speed of 28 000 kilometres an hour, about 400 kilometres above our heads. It is not so far away, actually. On a clear night, it is possible to see it from the Earth. It looks almost like a wandering star as it passes in the sky above you.

The International Space Station will be as long as a football field once it is completed and thus far too big to be sent up in a single rocket. Instead, the Space Station is being built in parts on Earth. Each part is launched on a rocket, and put together by **robotic** arms and astronauts up in the sky.

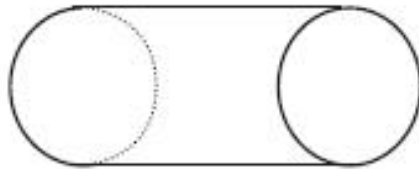


It is a little like working with building blocks. But these are very big and complicated building blocks. All the pieces of the Space Station are made to fit exactly. Computers help to guide them into place so they join up gently without crashing into each other.

Even though everything up there is weightless, it is still very hard work. Astronauts have to push and pull in all sorts of awkward positions. And there is no solid ground for them to push against.

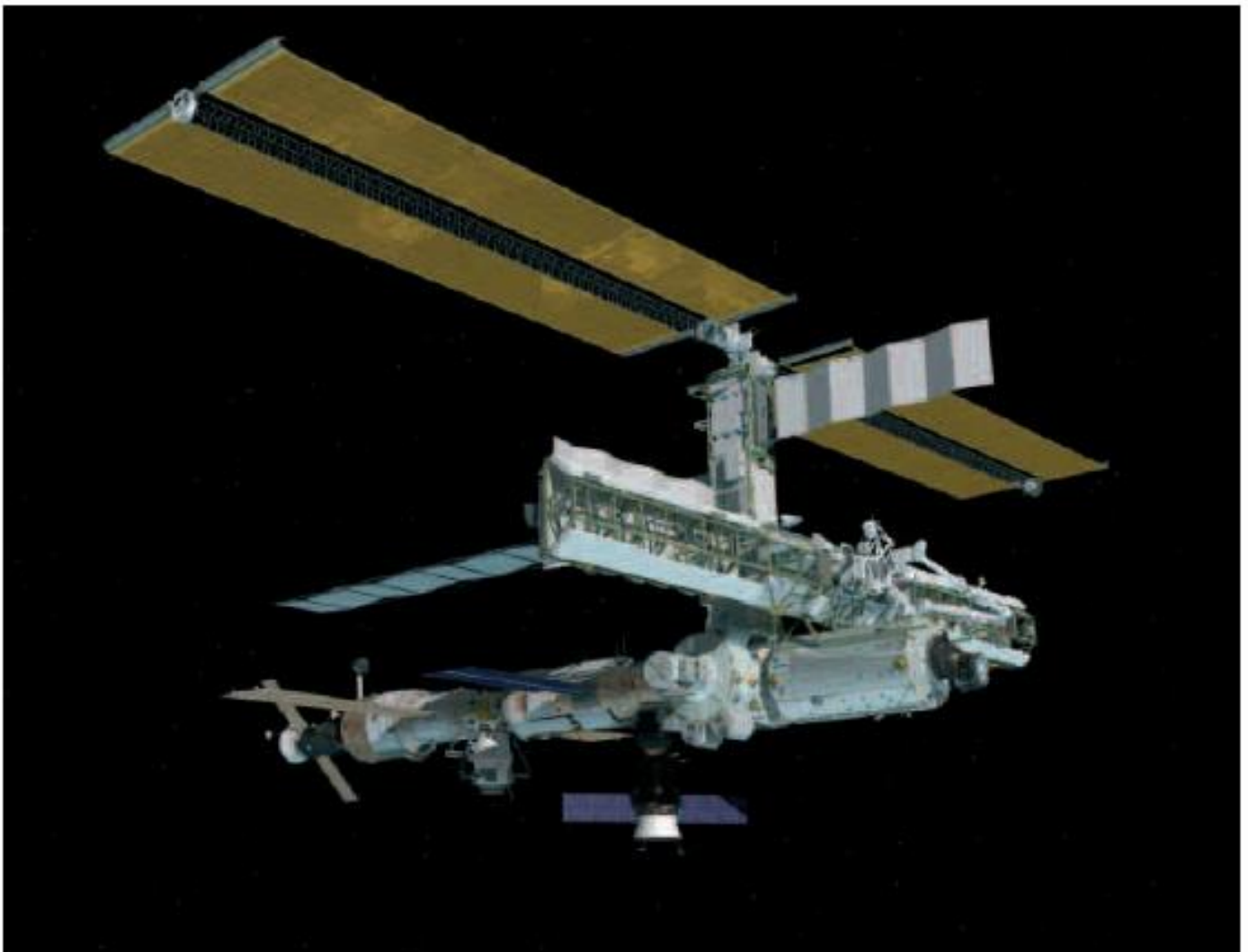
One of the Space Station modules is called 'Columbus'. It has been built in Europe and is a laboratory where the astronauts can perform scientific experiments. From the outside it almost looks like a big can.

We call this shape a cylinder.



Looking into the Columbus laboratory.

Look at a picture of the International Space Station and describe the shapes of the different parts. Find out what we call these shapes.

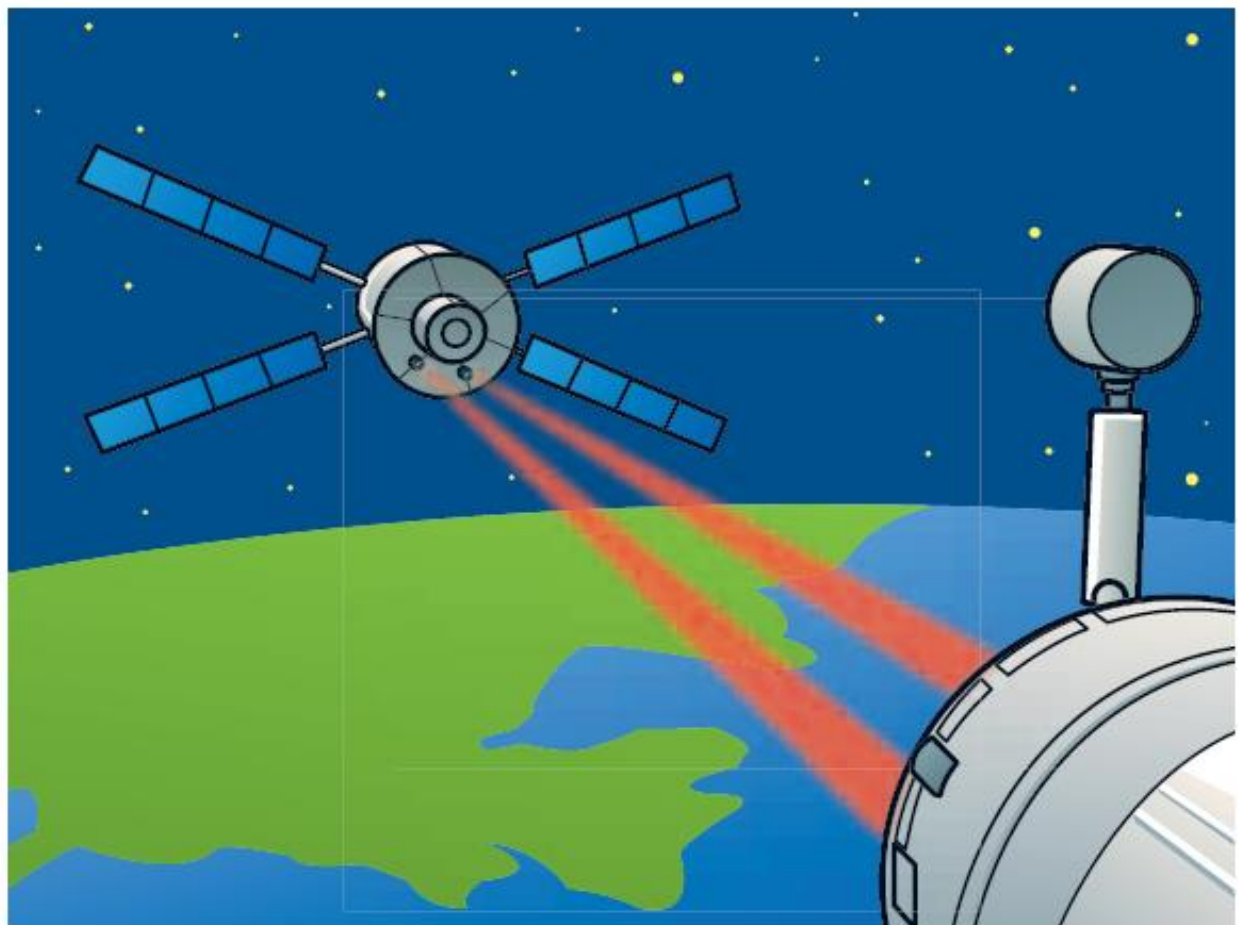


The International Space Station.



Like everyone else, the astronauts on board the Space Station need to eat and drink. They need to breathe, too – but unlike everyone else, they cannot just open a window if they feel like having some fresh air!

The astronauts also need materials for their scientific experiments, and sometimes they need spare parts to fix worn-out or broken parts of the Space Station.



All these supplies are sent up from Earth in rockets or in an **automatic** “space truck” called the **Automated Transfer Vehicle (ATV)**. It has automatic systems, which makes it possible to dock to the Space Station without astronauts on board steering it.

When the astronauts have unloaded the space truck (the supplies usually include gifts from their families), they fill it with the Station's rubbish. Then it undocks and heads back towards the Earth. It burns up high above the Pacific Ocean. Nothing is left to cause pollution.



An artist's impression of the "space truck" ATV docked to the Space Station. Astronauts are unloading the new supplies.