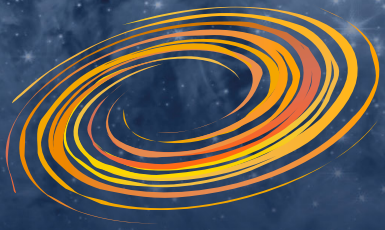


NATIONAL

SPACE ACADEMY

SPACE TO LEARN

Space Careers:

A guide for parents and carers

SPACE CAREERS.UK

UK SPACE AGENCY

Introduction

Did you know that there are hundreds of exciting career opportunities in the UK's fast growing Space Sector, spanning everything from space medicine and law to engineering, management, and marketing? **And that your child could be a part of this incredible industry?** The work may be 'out of this world', but the opportunities are closer than you might think. This brochure will help you to discover the variety of roles available, the potential routes into them, and how to help your child navigate the possibilities.

Fact Box

Space underpins 18% of the UK economy.

With financial transactions, transportation networks and weather monitoring all reliant on satellites, one day without space services would cost the economy ~£1billion!

The UK Space Sector

Historically, only large aerospace corporations and governments could afford to carry out space activities, but technological advances in the last few decades have dramatically lowered costs to accessing space. This means that nowadays many commercial companies and research organisations are supporting an ever-diversifying range of space-related activities. With over 1,800 organisations providing more than 55,000 jobs, **the UK Space Sector is (as of 2025) valued at over £16.7 billion annually** and growing each year.

Why choose a job in the Space Sector?

Space is an exciting field where people from all backgrounds work on cutting-edge technology, **contribute to solving global challenges and inspire people across the planet.** Space technologies are integral to our daily lives through applications such as navigation and communication systems. As we develop our understanding of climate change and energy use, **space will play an important role in our solutions.**

The sector offers fascinating and meaningful work and is highly internationally collaborative, as nations work together to harness the power of space for the benefit of people everywhere.

The UK has emerged as a major hub for international space investment and national funding is spread across the country to further develop the technologies and skills required. However, the Space Sector is facing a skills gap, as the availability of qualified talent lags behind the rapid growth of the sector, **meaning there is a high demand for people to join the workforce.**

What jobs are available?

The possibilities in the Space Sector are endless - too many to cover in this booklet, but we encourage you to use the suggested resources to discover more. On the commercial side, a space company is a company like any other, so business and administrative skills are needed alongside technical expertise. In universities and research organisations, researchers work across disciplines from science and engineering to economics and ethics to deepen our understanding of the world and universe around us, create new technologies and help to inform how space should be used safely, fairly, and responsibly. Additionally, it is the work of policy makers and others in government to set national strategies, laws and regulations, as well as the environment for space businesses to thrive.

Fact Box

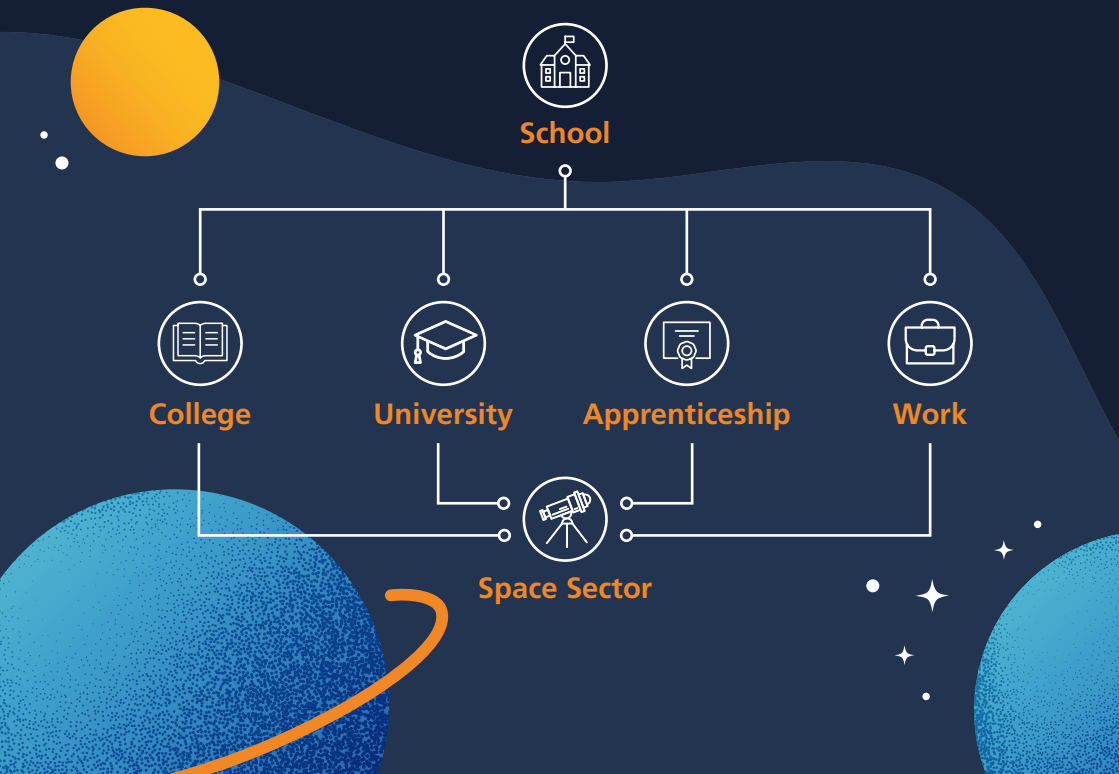
Salaries in the Space Sector are above the national average and could increase as demand for people increases. [average pay Junior: £31k, Mid-level £48k, Senior £66k, ref Space Skills Alliance 2021]

How do you get into the Space Sector?

There is not one set route into the Space Sector. The most important thing for children is to follow the subjects they are interested in as, due to the wide variety of jobs, any subject can lead to working in the Space Sector.

After school, a common choice is continuing to study at a college, university or through an apprenticeship, all of which are possible routes. Some children also leave school or further education to start working, and it is never too late to move into the sector later in a career.

The most common route into the sector is through university, but apprenticeships are growing in popularity for both employers and learners. Space companies hire apprentices in areas ranging from finance and procurement to human resources, engineering and marketing. Opportunities will depend upon location, but space companies are spread across the country, so it is worth exploring what is nearby.



How can I support my child's learning?

To expand your child's understanding of space a variety of activities are available, including **books and documentaries, museums and science centres, and online games.** A range of competitions and activities can be done in school, and resources from the National Space Academy and ESERO-UK (European Space Education Resource Office, UK) are available for use at home.

Helpful resources

Visit www.spacecareers.uk for more information on:

- Next steps such as choosing subjects, apprenticeships, degrees, and finding work experience.
- The variety of job opportunities across the Space Sector.
- Stories of people working in the sector to discover the variety of routes people have taken and what different jobs are like day-to-day.

Other resources include:

- www.spacecareers.uk – 'UK Space 101' web page.
- Careers resources from the National Space Academy.
- The European Space Agency: www.esa.int/Education
- https://spaceindividuals.com
- Other resources listed on the back page.

Further tips

You could also encourage your child to:

- Attend space sector events and science festivals.
- Follow job boards such as www.spacecareers.uk
- Join relevant associations and professional networks like LinkedIn.
- Stay informed about news and industry trends.

Career Profiles

Here you can find some examples of possible space related careers – but remember, these are just a few of the thousands of options out there!

There are three main routes into engineering:

1. An engineering apprenticeship, such as the Space Engineering Technician (Level 4) or Space Systems Engineering (Degree Apprenticeship).
2. A degree in engineering or physics, which typically requires A-Levels in maths and physics.
3. Or an HNC, HND or foundation degree in an engineering subject, followed by either prior option.

Engineers

Engineers use maths and science with creativity and innovation to design and build the hardware and software for space activities. This includes satellites, rockets, equipment for scientific research, and the systems used on the ground to communicate with and control spacecraft.

Rockets and spacecraft are designed to be lightweight to reach space, but strong enough to survive the launch. Once in space, they must generate power, change position, and survive high levels of radiation and extreme temperature differences – **from 120°C in sunlight to -100°C in the shade!** The unique nature of each space mission means a diverse team of engineers are needed, each with their own specific skill set, to turn idea into reality.

Children who enjoy maths and physics, problem solving, and who are good with computers and working in a team may be a space engineer in the making.

Fact File

Rosalind Franklin Rover

Rosalind Franklin is a cutting-edge rover designed and constructed by engineers at Airbus in Stevenage to search for signs of life on Mars. It is designed to drive around the Martian surface autonomously and drill down to collect samples 2m deep (deeper than any have been collected before), before analysing them in a state-of-the-art onboard laboratory.

Photos: ©ESA

Project Managers

Project Managers plan, track and support the work of a team to achieve a goal or complete a project successfully. This role can be done within many Space Sector companies, for a space mission, for educational programmes or in many more areas. Project managers need to be organised, good at building and managing relationships with their teams and stakeholders, and able to deal with difficult situations should they arise. It often helps to have a good understanding of the product or programme being created. **Project managers usually do an apprenticeship or degree in management, or transition into it from a STEM background.**

Space Scientists

Scientists are curious about the world around them and work to understand its past, present and future. **There is a huge range of exciting science-based roles across the Space Sector, some which look out to space, others that look back on Earth.**

A scientist's work can be quite individual, but they are contributing to a global field of study and thus often attend conferences and collaborate with other scientists all over the world. Scientific researchers usually work in universities or research institutes, though can also work in industry. **The route to becoming a scientist is via a degree in a relevant subject, normally followed by a PhD.**

Planetary and Earth Science

Planetary scientists study celestial bodies such as planets, moons and meteorites to understand what they are made of, how they were formed, and how they are changing. They study many features of a planet, including its gravity, magnetic fields, and the geologic processes that have changed it over periods of time that range from days to millions or even billions of years.

Fact Box

Did you know?

More than half of the measurements required to track climate change, can only be done from space!

Space Finance and Accountancy

Financial roles are needed across the Space Sector, whether this is the managing of project budgets, assessing financial risk, forecasting and modelling spends, or making decisions on investments. Companies will also need finance employees to handle payroll, expenses and other day-to-day financial matters.

People in these roles need strong analysis, communication and numerical skills. Routes into these roles often involve a degree in a relevant subject, or qualifications such as becoming a Chartered Accountant. Children who enjoy maths, problem solving and working with technology may excel in these roles.

Space Medicine

Space medical professionals are scientists and doctors who study viruses, medicines and the effect that being in space has on the human body. They work to understand how humans can live in the harsh environment of space (both physiologically and psychologically), how medicines function in microgravity, and how protein crystals grown in space could be used to treat diseases on Earth.

Fact Box

Did you know?

British startups are developing advanced systems to manufacture purer and more effective materials in space for use in pharmaceuticals and electronics and are even 3D printing organs in space for transplants on Earth.

Space Policy, Regulation and Law

Space supports an increasing variety of public services, such as national security, science, and communication. This means it is important to have a political decision-making process at local, national and international levels for how and why we use space. This is where policy makers, regulators and lawyers come in.

They work within, for, or advise the government to create laws that govern how space is used, negotiate UK involvement in international missions, and agree on long-term space programmes to keep space safe and sustainable for the future.

For space law roles, a qualification in law is required. Policy roles usually require a degree or apprenticeship but in no specific subject - people go into these roles from all sorts of humanities and STEM backgrounds.

Fact Box

Space Sustainability

Amid the growing congestion of objects in orbit yet increasing reliance on space systems, the UK is pioneering international efforts to develop standards and systems for using space sustainably. The government is supporting the sector to develop complex robotic and AI systems to capture space debris or refuel and repair satellites in orbit, as well as creating the necessary rules and regulations around these operations, suitable materials for space, and systems to track objects in orbit as small as a few millimetres in size.

Fact Box

Did you know?

Data analysts study a massive amount of data from Earth observation satellites, such as imagery and measurements of our planet, to track changes to the environment, support the response to natural disasters and defence intelligence, and monitor crop growth to support food security efforts. Cybersecurity experts are also crucial in ensuring the data sent from satellites is not intercepted by malicious actors.

Media, Marketing and Communications

The Space Sector needs creative people who can share its stories with the public, investors, and policymakers. Media, marketing and communications specialists can work in the government or research organisations to inspire the public and share how space benefits society, or in industry to promote innovative products and services.

Their work can include managing social media, writing news and web content, organising events, or working with the media. Apprenticeships and degrees in related fields are available and suit those who enjoy storytelling and making complex ideas clear and exciting.

Useful links

Association for Science & Discovery Centre

Find a science centre to visit near you:
- www.sciencecentres.org.uk/centres

ESA Kids

Games and activities for kids from the European Space Agency:
- www.esa.int/kids/en/home

ESERO-UK

Space-related learning resources and challenges:
- www.stem.org.uk/esero

National Space Academy

Careers information and conference for children:
- www.nationalspaceacademy.org/careers

The Schools' Observatory

A broad range of space information and activities for children:
- www.schoolsobservatory.org
- www.schoolsobservatory.org/things/to-do

Scan here for a full list of resources

Space News Websites

General space:
- www.spacenews.com
- www.spaceflightnow.com
- www.space.com

Science focused:
- www.livescience.com/space
- www.universetoday.com
- www.phys.org/space-news

SpaceCareers.uk

- www.spacecareers.uk

An overview of the sector:
- www.spacecareers.uk/uk-space-101

Information on space jobs:
- www.spacecareers.uk/articles/advice_and_information

Competitions:
- www.spacecareers.uk/articles/66ff5583-70cc-4242-8ca7-fb5a3691328b

Activities for children:
- www.spacecareers.uk/articles/8c16c8de-1807-4e89-a8c1-4c7e12eb36a6

UK Space Agency

A collection of educational resources from the UK Space Agency:
- www.gov.uk/government/publications/space-related-educational-resources