

NATIONAL

SPACE ACADEMY



FIND YOUR SPACE

Why work in the UK space sector?

Why work in the UK space sector?

Space is one of the fastest growing sectors of the UK economy, supporting jobs for some 117,000 people. With the motivation, and the right skills and qualifications, you could join them.

Careers in space cover everything from building spacecraft and designing satellites, to co-ordinating disaster relief and forecasting future climate. You could also help develop new technology, search for life on distant worlds or work with astronauts.

The space industry employs engineers and scientists, accountants, lawyers and communicators. There are jobs in the public and private sectors, in universities, major multinational companies and small enterprises.

UK teams are building some of the world's largest – and smallest – satellites. They are constructing the first European Mars rover and are working on missions to the Moon, Mercury and Jupiter.



Most careers in space require innovation, creativity, teamwork and problem solving. Many jobs cover multiple disciplines and, as space is an international endeavour, they often involve working with partners around the world.

There are plenty of opportunities available for apprentices and graduates.

Studying science, engineering, IT and maths – as well as related subjects, such as geography – will put you in a strong position for a wide range of space careers.



Which subjects do you enjoy the most?
Can you link each subject to space careers?



PHYSICS



CHEMISTRY



BIOLOGY



ART



HISTORY



GEOGRAPHY



LANGUAGES



P.E.



DESIGN &
TECHNOLOGY



INFORMATION
TECHNOLOGY

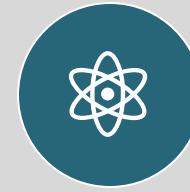


MATHS



ENGLISH

Jobs in the space sector include many disciplines of science.



PHYSICS



CHEMISTRY



BIOLOGY

- Can you match the following disciplines to the most appropriate branch of science?
- Some may relate to more than one, try completing the Venn diagram to show this.



GEOLOGY



ASTRONOMY



ZOOLOGY



MEDICINE



ASTRO-
PHYSICS



PLANETARY
SCIENCE



COSMOLOGY



METEOR-
OLOGY



BIO-
CHEMISTRY



MICRO-
BIOLOGY



BOTANY



ECOLOGY



ASTRO-
BIOLOGY



ASTRO-
CHEMISTRY



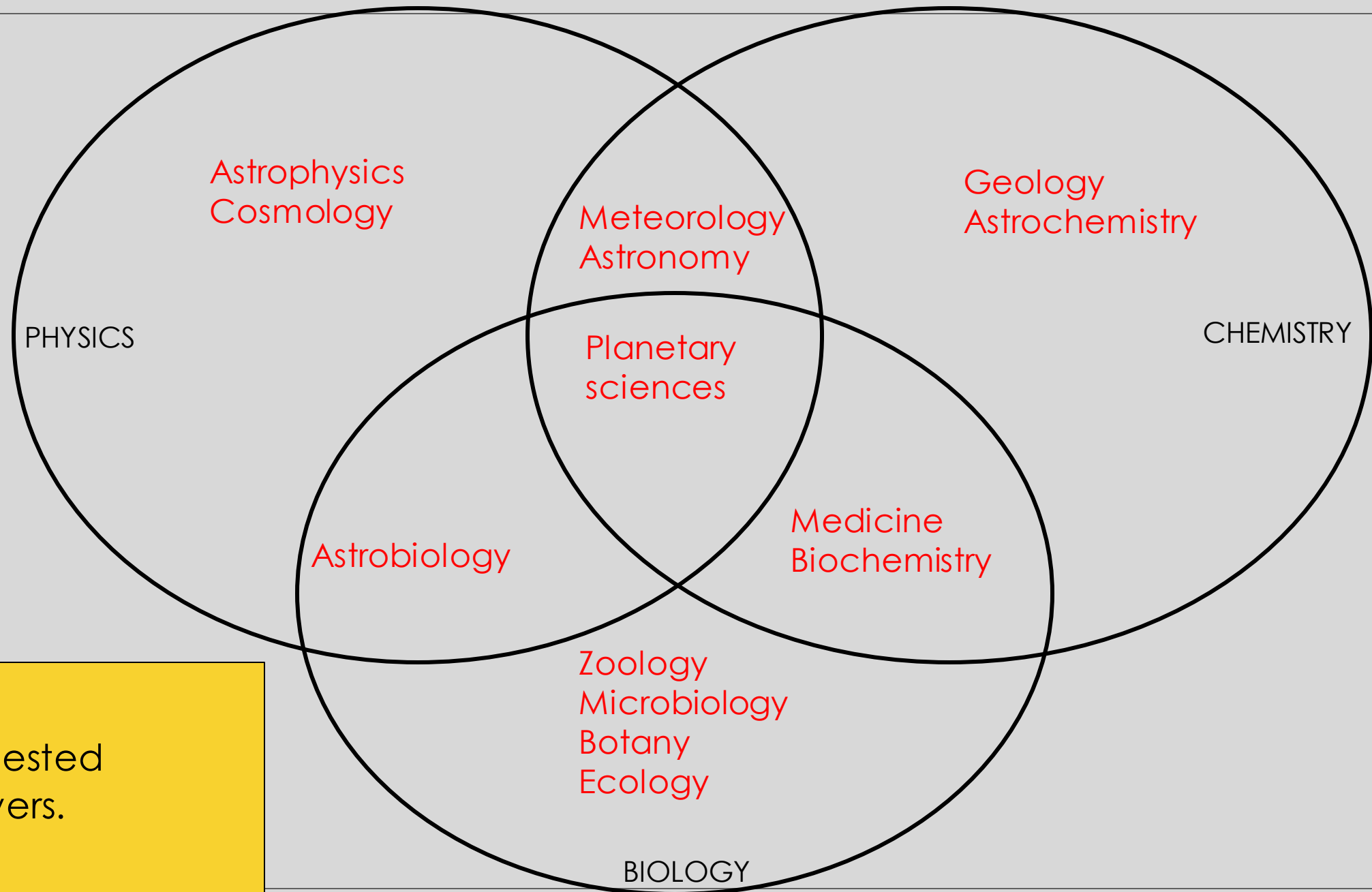
A Venn diagram consisting of three overlapping circles on a light gray background. The circles are labeled 'PHYSICS' (top-left), 'CHEMISTRY' (top-right), and 'BIOLOGY' (bottom). The circles overlap in various combinations, creating several distinct regions for classification.

PHYSICS

CHEMISTRY

BIOLOGY

- Can you put the science disciplines into the correct category?
- Some may be in more than one.



- Suggested answers.

Which careers are you interested in?

- Answer the following questions and take a note of the letters associated with your answer.
- Which ever letters you get the most of will tell you which space careers videos you might be interested in watching.

Which would you enjoy the most?



DESIGNING
SOMETHING

E,A



BUILDING
SOMETHING

E



FIXING
SOMETHING

E



PLANNING
SOMETHING

C,M,B

Which would you enjoy the most?



WRITING A GOOD
STORY.

C,R,F



READING A GOOD
STORY.

C,R,F



TELLING A GOOD
STORY.

C,A,M,F

Do you enjoy working with?



DATA

R,F,C



MACHINES

E,R,F



PEOPLE

M,L,B



MATERIALS

E,A

Which of these would you like to do?



PROBLEM
SOLVING

E,M,B,L



MEETING
PEOPLE

M,B,L



TRAVEL

L,B,M,F



CREATING

R,F,C

What would you like to do at 18?



GO TO
UNIVERSITY

<https://www.ucas.com/undergraduate/applying-to-university>



TRAVEL

<https://www.prospect.ac.uk/jobs-and-work-experience/gap-year>



START WORK

<https://www.studentjob.co.uk/ages/jobs-18-year-olds>



APPRENTICESHIP

<https://www.apprenticeships.gov.uk/apprentices>

What letters did you get the most?

E
B
A
L
R
F
M
C

- Ben – Design Engineer
- Amar – Space business manager
- Loz – Space themed artist
- Joanne – Space solicitor
- Colin – Space weather expert, researcher
- Sarah – Research fellow and lecturer (astronomer)
- David – Space education program manager
- Dhara – Space expert and communicator

Ben – Design Engineer



E

- The average salary for a **Design Engineer** in United Kingdom is **£30,100**.
- <https://nationalcareers.service.gov.uk/job-profiles/design-and-development-engineer>
- https://www.payscale.com/research/UK/Job=Design_Engineer/Salary
- <https://www.prospects.ac.uk/job-profiles/design-engineer>

You can get into this job through:

A university course, an apprenticeship or applying directly.

University

You'll normally need a foundation degree, higher national diploma or degree.

You could choose from subjects like:

- engineering product design
- industrial design
- computer-aided design engineering
- engineering design and manufacture
- materials science
- maths and physics

Mechanical, electrical and civil engineering qualifications may also be welcomed by employers.

Entry requirements

You'll usually need:

- 1 or 2 A levels, or equivalent, for a foundation degree or higher national diploma
- 2 to 3 A levels, or equivalent, for a degree

Amar – Space Business Manager



B

You can get into this job through:

A university course, an apprenticeship, working towards this role or a graduate training scheme.

University

Getting a degree in any subject can help you get into this type of job, although business or project management may give you an advantage.

You can take postgraduate qualifications in project management to increase your understanding, though they are not essential for getting into the role.

Entry requirements

You'll usually need:

- 2 to 3 A levels, or equivalent, for a degree

- The average salary for a **Business Manager** in United Kingdom is **£36,079**.
- <https://nationalcareers.service.gov.uk/job-profiles/business-project-manager>
- https://www.payscale.com/research/UK/Job=Business_Manager/Salary
- <https://www.prospects.ac.uk/job-profiles/business-development-manager>

Loz – Space Artist



A

- The average salary for a **Graphic Artist** in United Kingdom is **£19,897**.
- <https://nationalcareers.service.gov.uk/job-profiles/fine-artist>
- https://www.payscale.com/research/UK/Job=Graphic_Artist/Salary
- <https://www.prospects.ac.uk/job-profiles/fine-artist>

You can get into this job through:

A university course, a college course or self-teaching

University

You'll need a high level of skill and talent in your chosen art form. To develop these skills, you could train by doing a degree or postgraduate award in:

- art and design
- art history
- fine art
- visual arts
- graphic arts

Entry requirements

You'll usually need:

- a foundation diploma in art and design
- 2 to 3 A levels, or equivalent, for a degree
- a degree in a relevant subject for postgraduate study

Joanne – Space Lawyer



L

Lawyer is a general term referring to anyone who is qualified to give legal advice as a licensed legal practitioner. This includes solicitors and barristers.

- <https://www.payscale.com/research/UK/Job=Attorney>
- <https://www.prospects.ac.uk/job-profiles/solicitor>

You can get into this job through:

A university course, an apprenticeship, working towards this role and the traditional solicitor qualifying route until 2032

University

In order to qualify, you must:

- take an undergraduate degree or equivalent qualification, in any subject
- pass part 1 and 2 of the Solicitors Qualifying Exam (SQE)
- complete 2 years (or equivalent if part-time) qualifying work experience
- meet the character and suitability requirements of the Solicitors Regulation Authority (SRA)

Though your degree does not have to be in Law, you will need some legal knowledge to pass the SQE.

To study Law at some universities you'll need to pass the Law National Aptitude Test (LNAT).

Colin – Space Weather Expert



R

You can get into this job through a university course.

University

You usually need a first or 2:1 (upper second class) degree in a science subject to become a research scientist. Most research scientists continue to study for a postgraduate qualification like a PhD. You could study an integrated postgraduate master's course. These courses include independent research and are designed to lead directly to a PhD.

Entry requirements

You'll usually need:

- 2 to 3 A levels, or equivalent, for a degree
- a degree in a relevant subject for postgraduate study

- The average salary for a **Scientific Researcher** in United Kingdom is **£32,151**.
- <https://nationalcareers.service.gov.uk/job-profiles/research-scientist>
- https://www.payscale.com/research/UK/Job=Researcher%2C_Scientific/Salary
- <https://www.prospects.ac.uk/job-profiles/research-scientist-physical-sciences>

Sarah – Research Fellow and Lecturer (astronomer)



- The average salary for a **Research Fellow** in United Kingdom is **£34,373**.
- <https://nationalcareers.service.gov.uk/job-profiles/astronomer>
- https://www.payscale.com/research/UK/Job=Research_Fellow/Salary
- <https://www.prospects.ac.uk/job-profiles/astronomer>

You can get into this job through a university course.

University

You'll need a degree and postgraduate qualification to work as an astronomer. You'll usually need to have achieved a first or a 2:1 in your degree.

Relevant subjects include:

Maths, physics, astrophysics, geophysics, astronomy, space science.

You can also do a 4-year degree to get a postgraduate qualification like a master of physics. These courses include more independent research and can lead directly onto a PhD.

Entry requirements

You'll usually need:

- 5 GCSEs at grades 9 to 4 (A* to C), or equivalent, including English, maths and science
- 2 or 3 A levels, or equivalent, including maths and physics
- a degree in a relevant subject for postgraduate study

David – Space Education Manager



You can get into this job through:
A university course, working towards this role or a graduate training scheme.

University

Getting a degree in any subject can help you get into this type of job, although business or project management may give you an advantage.

You can take postgraduate qualifications in project management to increase your understanding, though they are not essential for getting into the role.

Entry requirements

You'll usually need:

- 2 to 3 A levels, or equivalent, for a degree

- The average salary for a **Program Manager (General)** in the United Kingdom is **£50,990**.
- https://www.payscale.com/research/UK/Job=Program_Manager
- <https://www.prospects.ac.uk/job-profiles/project-manager>

Dhara – Space Expert



C

You can get into this job through:
A university course or working towards this role.

University

Getting a degree in any subject can help you get into this type of job, although a course relevant to the subject you want to be an expert in may give you an advantage. You can take postgraduate qualifications in the subject to increase your understanding, though they are not essential for getting into the role.

Entry requirements

You'll usually need:

- 2 to 3 A levels, or equivalent, for a degree

- The average salary for a **Subject matter expert** in United Kingdom is **£35,000**.
- https://www.payscale.com/research/UK/Skill=Subject_Matter_Expert/Salary
- <https://www.prospects.ac.uk/job-profiles/science-writer>

Would you like more information?



[HTTPS://SPACECAREERS.UK/HOME](https://spacecareers.uk/home)

[HTTPS://WWW.GOV.UK/GOVERNMENT/PUBLICATIONS/THE-SIZE-AND-HEALTH-OF-THE-UK-SPACE-INDUSTRY-2021/](https://www.gov.uk/government/publications/the-size-and-health-of-the-uk-space-industry-2021/)

[HTTPS://WWW.UKSPACE.ORG/CAREERS/](https://www.ukspace.org/careers/)

<https://www.gov.uk/government/publications/space-related-educational-resources/uksa-careers-leaflet>

Frequently asked questions

Why should I work in the space sector?

The space sector is growing very quickly, there's a massive shortage of people studying these technical subjects, there's a lot of jobs out there and the jobs are well paid. I think it's a fun job, it's always different you know, no two days are the same. **Ben**

What sort of impact can I make with a job in the space sector?

Space is an entire field of endeavour. If you want a career that also will make a difference to Humanity's future in terms of the environment, in terms of connectivity, in terms of lifting people out of poverty, space will unlock a lot of answers to our problems. and you will be doing good things and you will be paid well and there will always be a job for you. **David**

Is being female a barrier to working in the space sector?

When I got to college and I decided to study Physics, I was one of three girls in our class and I noticed that there was an imbalance, but actually, I wasn't limited for many of the opportunities at that point...

As a female I would say that I definitely feel like as we're progressing into the future, actually it's an advantage to have or to be different. What we're looking for now is a more diverse range of people with a diverse range of skills and perhaps you, as someone who doesn't make up the majority of the group, can bring something that other people might not be able to. **Dhara**

- Quick fire questions - <https://www.youtube.com/playlist?list=PLrrRtiBgUv4nCvjAgpNF8OGwgnaL8Nrod>

Frequently asked questions

Do I have to decide what I want to do now to succeed?

It is a fantastic industry to be involved in. But where you end up might not be where you thought you were going to end up, so be open to the other opportunities, be open to everything that is out there and find something that that really excites you because when you do it becomes that much easier. **Colin**

Do I have to take triple science to get a space related job?

I went to a comprehensive school, we did dual award science because that was what the school did, I didn't do further maths because it wasn't offered and they were not barriers, they might have made things easier, but the fact that I didn't do them wasn't a problem, the fact that I didn't go to a selective School wasn't a problem.... it helped that the university recruits from a wide base of students. **Sarah**

What advice would I give to your 16 year old self?

Listen to your intuition and don't be scared to follow what the path that you want to go on. Just because it might not be what everyone else is doing doesn't mean it's wrong, just go for it don't second guess yourself.

Sometimes even at school in your best subjects or your worst subjects you might be doing bad in the grades, but it doesn't mean that you should give up on them if you're interested in the subject, it's just you haven't found your way of learning it yet. **Loz**

- Quick fire questions - <https://www.youtube.com/playlist?list=PLrrRtiBgUv4nCvjAgpNF8OGwgnaL8Nrod>