



My Learning My Future

Where can studying Science take you?

Highlighting the relevance of Science to future careers and opportunities



My Learning
My Future

THE CAREERS &
ENTERPRISE
COMPANY

Why Science matters

Have you ever considered where studying Science can take you?

Today, we'll be exploring some of the career opportunities that are available to you, as well as the various pathways you can take to get there.

What pathways can you take with this subject?

What do you think these roles involve (daily task, etc.)?

What careers can you think of that use Science?

Why is Science an important subject?

Why Science is for me
- STEM Learning

What skills do you think you might need for these roles?



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Explore a career as a...

Here are some
example roles and
careers linked to

Science



Paramedic

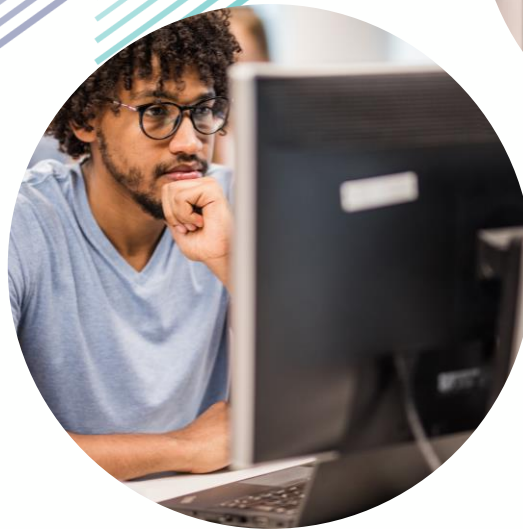
BBC Bitesize case study

NHS case study



Pharmacist

BBC Bitesize case study



Critical Care Technologist

BBC Bitesize case study

BBC Bitesize case study

BBC Bitesize case study



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Explore a career as a...

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example roles and
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Science



Research Scientist
BBC Bitesize case study
STEM case study



Mental Health Nurse
BBC Bitesize case study
NHS case study



Ecologist
BBC Bitesize case study
STEM case study

Discover more about the role

Explore careers using [National Careers Service](#) and find out about what jobs involve and how they are right for you

Includes:

- Average salary
- Typical hours
- Work patterns
- Pathways/How to become
- Essential Skills
- Daily tasks
- Career path and progression
- Current opportunities

Research Ideas:

[Paramedic](#)
[Pharmacist](#)
[Critical Care Technologist](#)
[Research Scientist](#)
[Mental Health Nurse](#)
[Ecologist](#)

National Careers Service

We provide information, advice and guidance to help you make decisions on learning, training and work.

This service is available to people who live in England.

Skills assessment

Learn more about your skills and match them to potential new careers.

[Assess your skills](#)

Explore careers

Choose from over 800 career profiles to discover what each job involves.

[Search job profiles](#)

Find a course

Look for online learning opportunities and training courses local to you.

[Look for courses](#)

Careers advice

Making career choices

Whether starting your career, changing job or if you have been affected by COVID-19, understand and make the right choice for you.

Getting a job

Be successful in the recruitment process with tips on great CVs, interviews and graduate scheme applications.

Progressing your career

Move up in your career by developing new skills. Find opportunities like volunteering and online learning.

About us

The National Careers Service can help you with your career, learning and training choices. [Find out more](#) about the different ways we can support you.

Speak to a careers adviser

Wherever you are in your decision-making, you can call us on [0800 100 900](#) or [use webchat](#).

Follow us

[Twitter](#)
[Facebook](#)
[LinkedIn](#)
[YouTube](#)

Why not teach Science?

Start in the classroom, where you go from there is up to you. Bring your passion for your subject, keep learning, and pass your knowledge onto others

- No two days are the same – and neither are the pupils
- Once qualified you can teach throughout your life
- You could teach abroad
- Progress your career into leadership and management
- Bring your outside interests into the classroom and your subject

Why is STEM important?

- It boosts essential skills such as problem solving and curiosity
- It helps you see and understand the wider world around you
- It helps young people become future entrepreneurs

Explore teaching

[Vjendra's Story](#)

[Every Lesson
Shapes a Life](#)

The right skills to teach?

[Love to keep
learning?](#)

[Work well
in a team?](#)

What makes a great
teacher?



GCSE

While there are different routes you can take to be a teacher there are a few essential things that you will need:

- A minimum GCSE Grade 4 or above in English and maths (plus science if you want to teach primary)
- A degree or equivalent qualification

A level

A levels are 2 years of study

T Level

T Levels are nationally recognised, technical qualifications for 16–19-year-olds. Designed by leading employers, one T Level is equivalent in size to 3 A levels

Vocational/Technical Qualification

These include BTEC, Applied General Qualifications (AGQ) and Vocational Technical Qualifications (VTQ) – all at Level 3

Apprenticeship

Apprenticeships are jobs which combine practical work and study. Intermediate is Level 2, Advanced is Level 3

Degree

Complete a degree course

It is possible to get QTS as part of an undergraduate degree, for example:

- Bachelor of Arts (BA) with QTS
- Bachelor of Education (BEd) with QTS
- Bachelor of Science (BSc) with QTS

Level 4/5 qualifications

Complete a L4/5 course and top up to a degree – L4/5 includes Certificate of HE, Diploma of HE, Higher Technical Qualification (HTQ), HNC, HND and Foundation degrees

Top up to a degree (Level 6) in a year of full-time study

Higher apprenticeships

Higher level apprenticeship (foundation degree / Level 5)

Degree apprenticeships

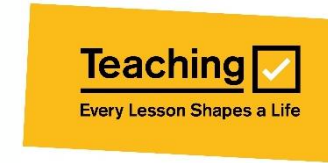
Degree apprenticeship (Level 6-7). There is a Level 6 Teaching apprenticeship programme

Initial Teacher Training (ITT) with qualified teacher status (QTS)

Teacher



Why not teach activity?



- Pick a topic in Science you think you would like to try and teach
- Agree your choice of topic with your teacher and the length of session (and with which group)
(It may be the perfect opportunity to try this with a younger class lower down the school, or as a transition activity for Y6)
- Plan a short activity to cover the topic in a way you feel will be engaging and memorable for your peers as part of a lesson starter, main activity or plenary

Consider:

- What are you trying to achieve (teach)? Be clear what information you intend to impart
- How will you make it fun? How will you make it 'stick'? How long will this take?
- What type of activity will you plan for? (written/practical)
- How will you know others have learned it?
- How will you make sure everyone is stretched and challenged?
- What will the end-product be?

Once you have checked it with your teacher, try the lesson with a small group (as agreed by your teacher)
Try and get feedback during and after the session from those in the lessons and from the teacher

After, consider:

- What you enjoyed about the experience
- Whether this is something, with training, you would enjoy
- How you felt when others learned from you



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Non-obvious jobs using Science: Ever thought about..?

➤ [How to become a zero waste shop owner: Lydia's story - BBC Bitesize](#)

➤ [How to become a StreetDoctorIntern: Khadija's story](#)

➤ [How to become an Executive Assistant: Emily's story](#)

➤ [Careers ideas and information - Science](#)

➤ [Arboricultural Officer | Explore careers | National Careers Service](#)

➤ [Data Analyst/Statistician | Explore careers | National Careers Service](#)

➤ [Garment Technologist | Explore careers | National Careers Service](#)



<https://www.bbc.co.uk/bitesize/articles/zhst2sg>



<https://nationalcareers.service.gov.uk/explore-careers>



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MYPATH Job of the week (Science)



Geoscientist



Toxicologist



Dentist



MYPATH Science: Why bother?



Biology:

Cell Biology

Organisation

Infection and Response

Bioenergetics

Homeostasis

Inheritance, Variation
& Evolution

Ecology

Photosynthesis



Chemistry:

Atomic Structure

Bonding Structure and the
Properties of Matter

Quantitative Chemistry

Chemistry of the Atmosphere

Energy Changes

Organic Chemistry

Chemical Analysis

Chemical Changes

The Periodic Table

Resources



Physics:

Energy

Electricity

Particle Model

Atomic Structure

Forces

Waves

Magnetism and
Electromagnetism

Please be aware MYPATH may add new videos
so keep checking [here](#) for additions



Science careers in a changing world: How can I future-proof my career pathway?

The world will be changing drastically in the next few years to cope with the impacts of climate change and nature loss, and the need to lower greenhouse gas emissions and unsustainable practices. How might this steer your choice of career path using your Science skills?

Sustainability
means meeting our own needs without compromising the ability of future generations to meet their own needs.
(UN definition)





Science careers in a changing world



Careers in Agriculture



Climate Scientist



Conservation Programme Manager





A spotlight on Technicians using Science

6 |



Discover here how the technical jobs related to Science keep industries moving and the real difference technicians make in our lives.

R072
Munitions
Explosives
Technician

R016
Radiography
Technician

R017
Brewing
Technician

R021
Cardiology
Technician

R033
Dental
Technician

R042
Environmental
Technician





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A spotlight on Technicians using Science

6 |



Discover here how the technical jobs related to Science keep industries moving and the real difference technicians make in our lives.

R045
Aquaculture
Technician

R096
Veterinary
Nurse

R083
Simulation
Technician

R048
Food Science
Technician

R098
Water
Process
Technician

R093
University
Technician



GATSBY



Technicians
We make the
difference

[Visit the Gallery here](#)

[Find further resources here](#)



A spotlight on Technicians using Science

6 |



Discover here how the technical jobs related to Science keep industries moving and the real difference technicians make in our lives.

R010
Archaeological
Technician

R023
Research
Laboratory
Technician

R082
Science
Manufacturing
Technician

R025
Composites
Technician

R028
Countryside
Ranger

R066
Metrology
Technician



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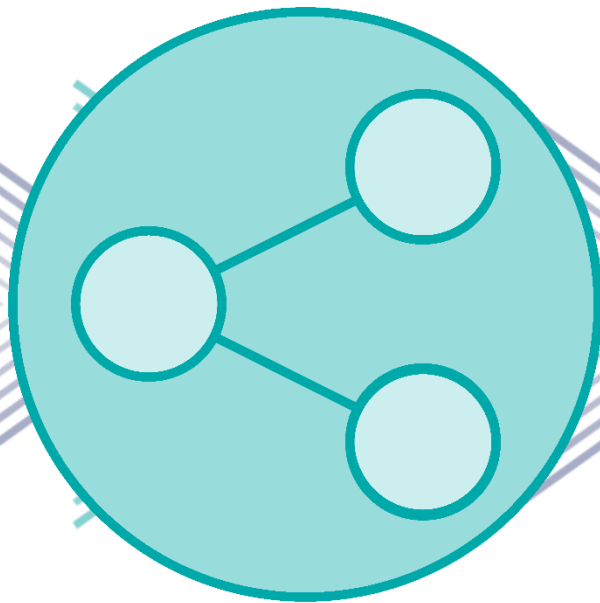


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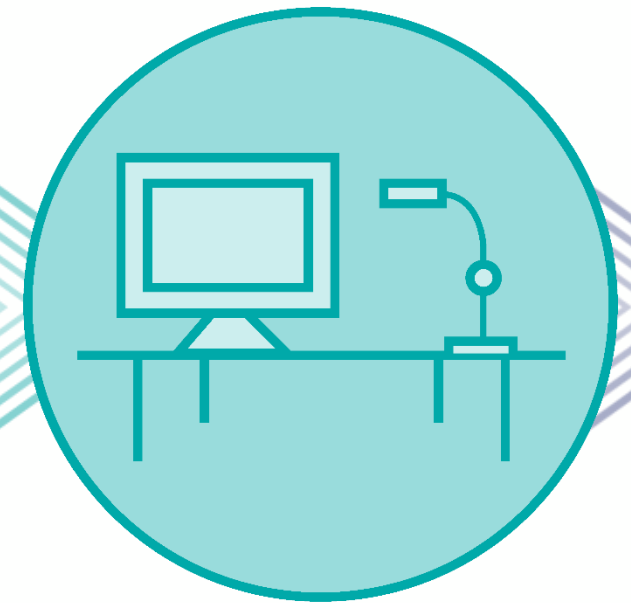
7 | Science Pathways



Combine Study
and Work



Study



Work



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7 | Combine Study and Work

Apprenticeships

- Nuclear Scientist
- Laboratory Scientist
- Vet Technician
- Therapeutic Radiographer
- Forensic Practitioner
- Pharmacy Technician
- Environmental Health Practitioner
- Dental Technician
- Conservation Officer

T Levels

[T Levels | National Careers Service Education and Childcare](#)

[T Levels | Health](#)

[T Levels | Healthcare Science](#)

[T Levels | Science](#)

[T Levels | Agriculture, Land Management and Production](#)

[T Levels | Animal Care and Management](#)

VTQs

[Vocational Technical Qualifications \(VTQs\) | National Careers Service](#)

- Applied Science
- Health and Social Care



[Find more >](#)



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7 | Study Pathways

HTQs (Higher Technical Qualifications)

Higher technical qualifications (HTQs) | National Careers Service

You might find courses in:

- Dental Hygiene
- Sport and Exercise Science
- Agriculture
- Animal Studies/ Management
- Environmental Conservation Management
- Applied Science (Forensic Science)
- Applied Biosciences
- Biomedical Science

A levels

A levels | National Careers Service

You might find courses in:

- Science (Biology, Chemistry, Physics)
- Applied General Science
- Statistics
- Environmental Science

Higher education

Higher education | National Careers Service

You can explore undergraduate courses in Science

You might find courses in:

- Molecular Science
- Animal Science
- Sensory Science
- Research Science
- Science, Engineering and Production





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7 | Work Pathways

Supported internships with an education, health and care plan

[Supported internships](#) | [National Careers Service](#)

[Watch Saul's story](#)

you might read about:

- [Access to Work Funding](#) (if you have a disability or health condition)
- [Preparing for Adulthood](#)
- [Talking Futures](#) (A parents' toolkit for career conversations)

School leaver schemes

[School leaver schemes](#) | [National Careers Service](#)

You might read about:

- [How to fill in an application form](#)
- [How to write a CV](#)
- [Interview help](#)
- [Progressing your career](#) (Careers Advice from NCS)





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7 | University League Tables

See at a glance the university ranking for various Sciences

[Rankings](https://www.completeuniversityguide.co.uk/rankings) [Rankings \(the completeuniversityguide.co.uk\)](https://www.completeuniversityguide.co.uk/rankings)

[Biological Sciences](#)

[Biomedical Sciences](#)

Filter by:

- Overall score
- Entry standards
- Student satisfaction
- Research quality
- Research intensity
- Graduate prospects





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Discover Uni

Have you ever
considered if higher
education is right
for you?

1. Go to <https://discoveruni.gov.uk/>

2. Search for a course or subject

(You should get a page of search results, you can filter these by university or college, whether you want to study full or part time or perhaps you want to see that courses are near you)

Once you have had a look at a few different courses and subjects now it is time to compare some side by side

3. Check out this video which shows you how to use our comparison tool <https://youtu.be/dBFzCQgTp8I> - Pick 5 courses and add these as a saved course and then you can compare

4. Once you have your chosen five side by side, try to answer the following questions:

- a. What kinds of qualifications do students on the course have when they start the course?
- b. How many have a placement year?
- c. How many courses let you study abroad?
- d. Which has the highest student satisfaction rating? How do you know this?
- e. What kinds of job do graduates from this course go on to?
- f. Which course has the highest salary after three years? (higher/lower than national average)
- g. Choose your favourite course and explain why you chose this course over the others?



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Is the data I am looking at for a course or a subject?

- a. What year, or years, does the data relate to?
- b. How many students or graduates is this data based on?
- c. Does the data represent all the students on the course or subject area?
- d. Does the data include people like me?
- e. What factors might impact the data?



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In 10 years time...

Job in 10 years time (related to Science):

What GCSEs helped you get this job:

What KS5 Pathways choice did you make and what did you study:

Apprenticeship T level A Level other L3 equivalent

Post 18 pathways choices did you make: explain:

Study & Work Study Work

Essential skills used in the job:

Progression route:



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My local options...

Subject chosen (related to Science):

Local college options:

Local apprenticeships options:

Other options:

The pros and cons of these options for me:

Pros:

Cons:

Consider how these will apply and explain:

Cost _____

Travel _____

Convenience _____

Aspirations _____

Personal circumstances _____

Other _____

Final choice – justify:

Next steps:



3 |



Prepare a 3 - 5 minute talk to share with a small group on any role that interests you related to Science



What's the role



Where do you need to go to carry out the role



Where has the interest come from



What's the chances of getting this role



What do you need to do to become one



Who do you look up to in this role



Where can you go to study and what level of study



What might a typical day look like



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My career path....





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8 |



Essential Skills

Here are three
key skills needed
for a career that
uses

Science



	Video	Skills Builder Resource KS3	Skills Builder Resource KS4	Skills Builder Resource Post 16
The ability to use tactics and strategies to overcome setbacks and achieve goals	Watch here	Short Lesson Staying Positive Step 6-8	Short Lesson Staying Positive Step 8-10	Short Lesson Staying Positive Step 10-12
The ability to set clear, tangible goals and devise a robust route to achieving them	Watch here	Short Lesson Aiming High Step 6-8	Short Lesson Aiming High Step 8-10	Short Lesson Aiming High Step 10-12
The ability to find a solution to a situation or challenge	Watch here	Short Lesson Problem Solving Step 6-8	Short Lesson Problem Solving Step 8-10	Short Lesson Problem Solving Step 10-12



8 |



	Staying Positive	I can do this
Step 6	I keep trying when something goes wrong and encourage others to keep trying too	
Step 7	I look for opportunities in difficult situations	
Step 8	I look for opportunities in difficult situations, and share these with others	
Step 9	I look for opportunities in difficult situations, and adapt plans to use the opportunities	
Step 10	I look for opportunities in difficult situations, and create new plans to use the opportunities	
Step 11	I identify risks and gains in opportunities	
Step 12	I identify risks and gains in opportunities, and make plans to manage them	

My Strength (s)

My area (s) of Development



8 |



Aiming High

Tick which
apply

	Aiming High	Tick which apply
Step 6	I set goals informed by an understanding of what is needed	
Step 7	I set goals, ordering the prioritising tasks to achieve them	
Step 8	I set goals and secure the right resources to achieve them	
Step 9	I set goals and plan to involve others in the best way	
Step 10	I create plans that are informed by my skill set and that of others	
Step 11	I create plans that include clear targets to make progress tangible	
Step 12	I create plans that are informed by external views, including constructive criticism	



My Strength (s)

My area (s) of Development



8 |



	Problem Solving	Tick which apply
Step 6	I explore complex problems by identifying when there are no simple technical solutions	
Step 7	I explore complex problems by building my understanding through research	
Step 8	I explore complex problems by analysing the causes and effects	
Step 9	I create solutions for complex problems by generating a range of options	
Step 10	I create solutions for complex problems by evaluating the positive and negative effects of a range of options	
Step 11	I analyse complex problems by logical reasoning	
Step 12	I analyse complex problems by creating and testing hypotheses	


My Strength (s)

My area (s) of Development



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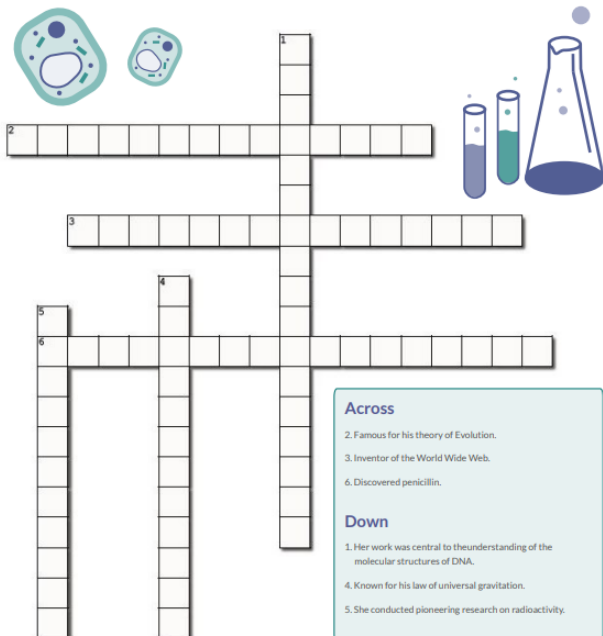
Homework

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Where can studying Science take you?

Name: _____ Tutor group: _____



Across

- Famous for his theory of Evolution.
- Inventor of the World Wide Web.
- Discovered penicillin.

Down

- Her work was central to the understanding of the molecular structures of DNA.
- Known for his law of universal gravitation.
- She conducted pioneering research on radioactivity.

Can you research each of the jobs below and write down information about what that job would involve. Use the [National Careers Service](#) website to help.

Research and Development Manager

Forensic Scientist

Ecologist

Chemical Engineer

Creation of homework task accredited to Wolverley CE Secondary School, Worcestershire Careers hub.

Explore careers

Find out what a job involves and if it's right for you.

Use the National
Careers Service
Explore careers tool
to research for this
homework

[Explore here](#)



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