

A Future in Chemistry

At School:

Explore your options after
GCSE



About me

Branding and image area

Your job and company

What inspired you to choose your career.

What is the “impact” of what you do

Sub Header

What do you do

What do you enjoy most about it

How did you get into it

About you

Don't know what do you want to do? That's ok!

First step: get to know yourself

What do you enjoy?

What is important to you?

How involved with science do you want to be?

How much studying do you want to do when you leave school?

Have you ruled anything out...Why?



Where do you want to work?



Academic organisation?

Part of a shared-interest-community, teaching courses, self-directed research, publishing papers...



Industry?

Competitive salaries, working on company goals, deadline-driven, careers in different areas across the business



SME – startup?

Fast-paced, more responsibility, learn on the job, opportunities to rise fast and develop a range of skills



Now...

Write down:

What you enjoy

What is important to you

One or two jobs you have ruled out and why



ROYAL SOCIETY
OF CHEMISTRY

Where
chemistry could
lead you

Career quiz...

Fill in the questionnaire (see over)

Please note: This quiz is a bit of fun that aims to broaden your ideas of where studying chemistry could lead you.

It is in no way telling you what you should or shouldn't aspire to be!

QUIZ: Where could chemistry lead you?

Q1. Which kind of work appeals to you the most?

- A. Working with your hands
- B. Working with numbers and data
- C. Helping others
- D. Problem solving
- E. Something creative

Q2. My greatest strength is:

- A. My attention to detail
- B. Thinking logically
- C. Getting on with different types of people
- D. Working through a problem
- E. My imagination

Q3. In my spare time, I like to:

- A. Build things, arts and crafts
- B. Puzzles, strategy games,
- C. Meet lots of different people
- D. Read the news, discuss politics
- E. Read books, listen to music

Q4. Aside from science, which subjects at school do you enjoy the most?:

- A. Art/Textiles/Design tech
- B. Maths/ICT/Computer science
- C. Health and social care/Sociology
- D. History/Politics/Geography
- E. English/Music/Media

Q5. I would consider my life a success if I:

- A. Cured a disease
- B. Earned a lot of money
- C. Made a lot of people's lives better
- D. Fixed some of societies biggest issues
- E. Was able to express myself

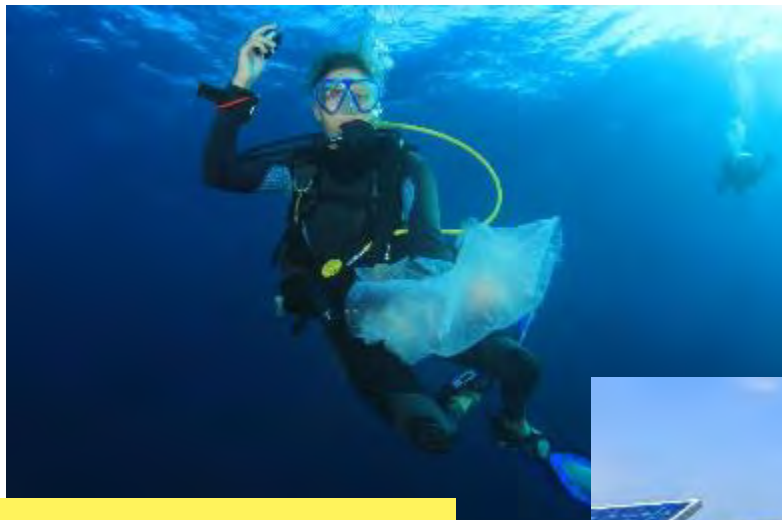
Q6. Pick a word that most closely describes what you'd like the world to be in 10 years time:

- A. Healthy
- B. Prosperous
- C. Happy
- D. Harmonious
- E. Radiant

Check your answers

| Your Score | Related jobs |
|------------|--|
| Mostly As | Researcher Medicinal chemist Cosmetic scientist Biochemist Material scientist Oceanographer |
| Mostly Bs | Tax accountant Patent attorney Systems analyst Software designer |
| Mostly Cs | Teacher Doctor Vet Nurse Midwife |
| Mostly Ds | Forensic scientist Science policy advisor Politician Environmental scientist Conservationist Seismologist |
| Mostly Es | Games designer Food scientist Science journalist Art restorer Chef |

As a chemical scientist you could be...



Developing ways of removing plastic waste from the oceans

Making a difference to life through drug discovery, combating antibiotic resistance

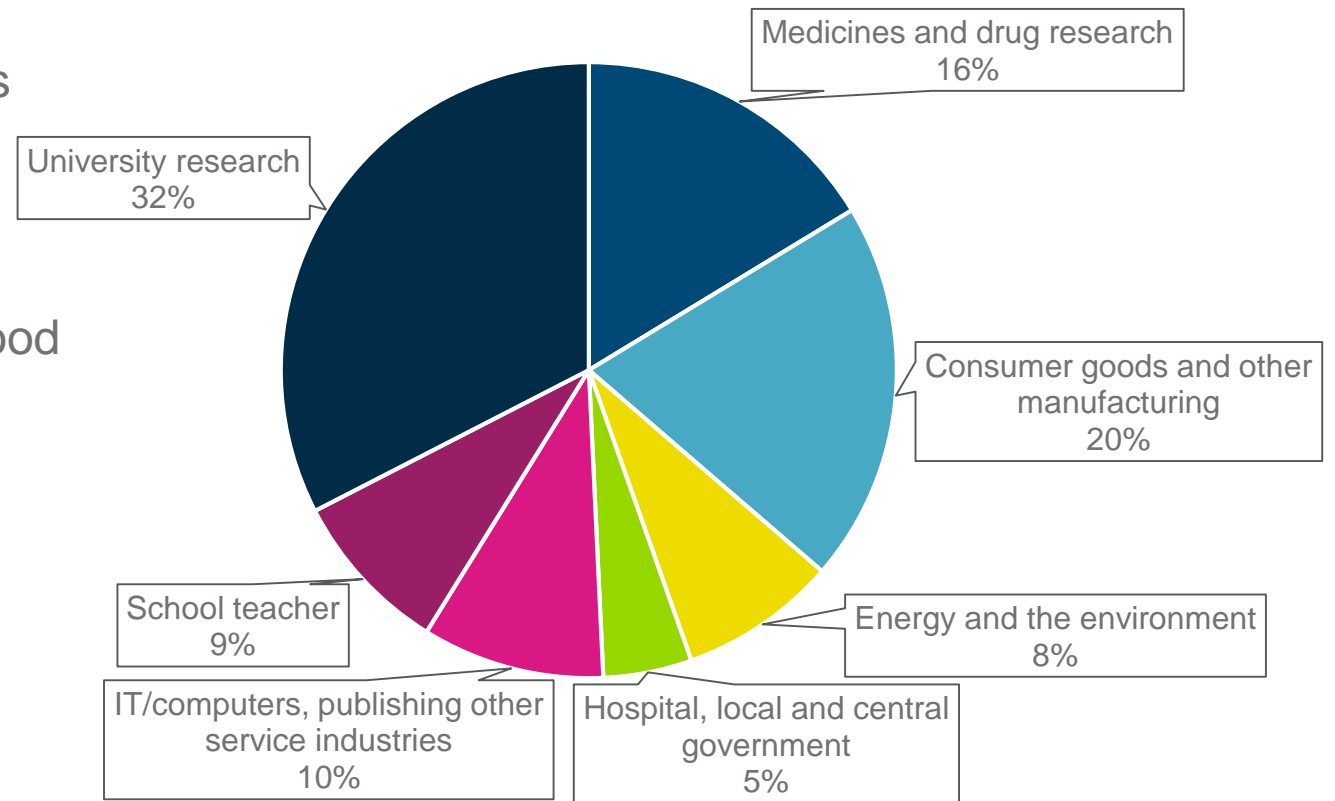


Reducing pollution, discovering ways to harness and store energy using clean, green power

Chemical scientists are employed across many sectors

Where Royal Society of Chemistry members work*

- Medicines and drug research
- Manufacturing e.g. everyday materials, food and drink, agrochemicals, toiletries,
- Education
- Medical/health sector to work in scientific support, analysis, teaching or research



* 2017 RSC membership annual report

Chemical scientists are paid well

- 15% higher starting salaries for chemistry graduates compared with graduate average
- Chemistry graduates have a high employment rate
- >70% of chemistry students enter a professional or managerial role after graduation
- Double the UK average go into further study after graduation



Chemical scientists have the skills employers look for

Skills for successful careers:

- Problem solving
- Logical thinking
- Reasoning
- Numerical ability and computational skills
- Team working
- Communication



Picture: © Royal Society of Chemistry / Stephen Lake

What you can do as a chemical scientist

You could become an

Analytical chemist: you check what chemicals there are in substances e.g. blood at a crime scene.

Laboratory technician: you collect samples, analyse and perform tests on chemicals, materials or products.

Medicinal scientist: you design and develop drugs to treat disease.

Production chemist: you develop and improve oil, cosmetics, fertilisers and other products made from chemical reactions

Research chemist: you find out about chemical compounds to create and improve processes and products, from new medical treatments to cosmetics, electrical goods and food and drink

Environmental scientist: you monitor what is in the air, water, and soil to find out what affects they have, and how human activity affects the environment.

*Britain's first female
prime minister and the
first Briton in space
both studied
chemistry at university*

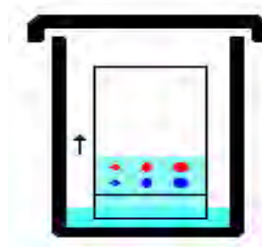
What else you can do as a chemical scientist

- Teaching
- Law
- Financial service
- Business/Management
- Medicine
- Veterinary science
- Computer Science
- Chemical Engineering
- **...all employers and sectors value chemistry**



Some of the ways chemistry is used at work

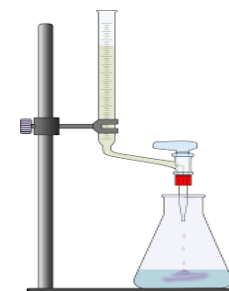
Forensic Scientists use **chromatography** to help identify criminals and bring them to justice.



Automotive chemists use **electrolysis** to electroplate vehicles to make them last longer and to look good.



Food scientists use **titration** to discover the amount of salt or sugar in a product or the concentration of vitamin C, which can effect the product's colour



Where can you work with a chemistry qualification?

You could work at a

- Pharmaceutical, food, energy, materials, polymers, biotechnology, paint or chemicals company
- Hospital
- Environmental agency
- Consultancy
- University
- Government agency
- Public health laboratory
- Testing company

Anywhere

Manufacturing industries and scientific research companies seek people with chemistry qualifications

Chemical scientists can work in any sector

The criminal justice system needs qualified chemists to work as forensic scientists

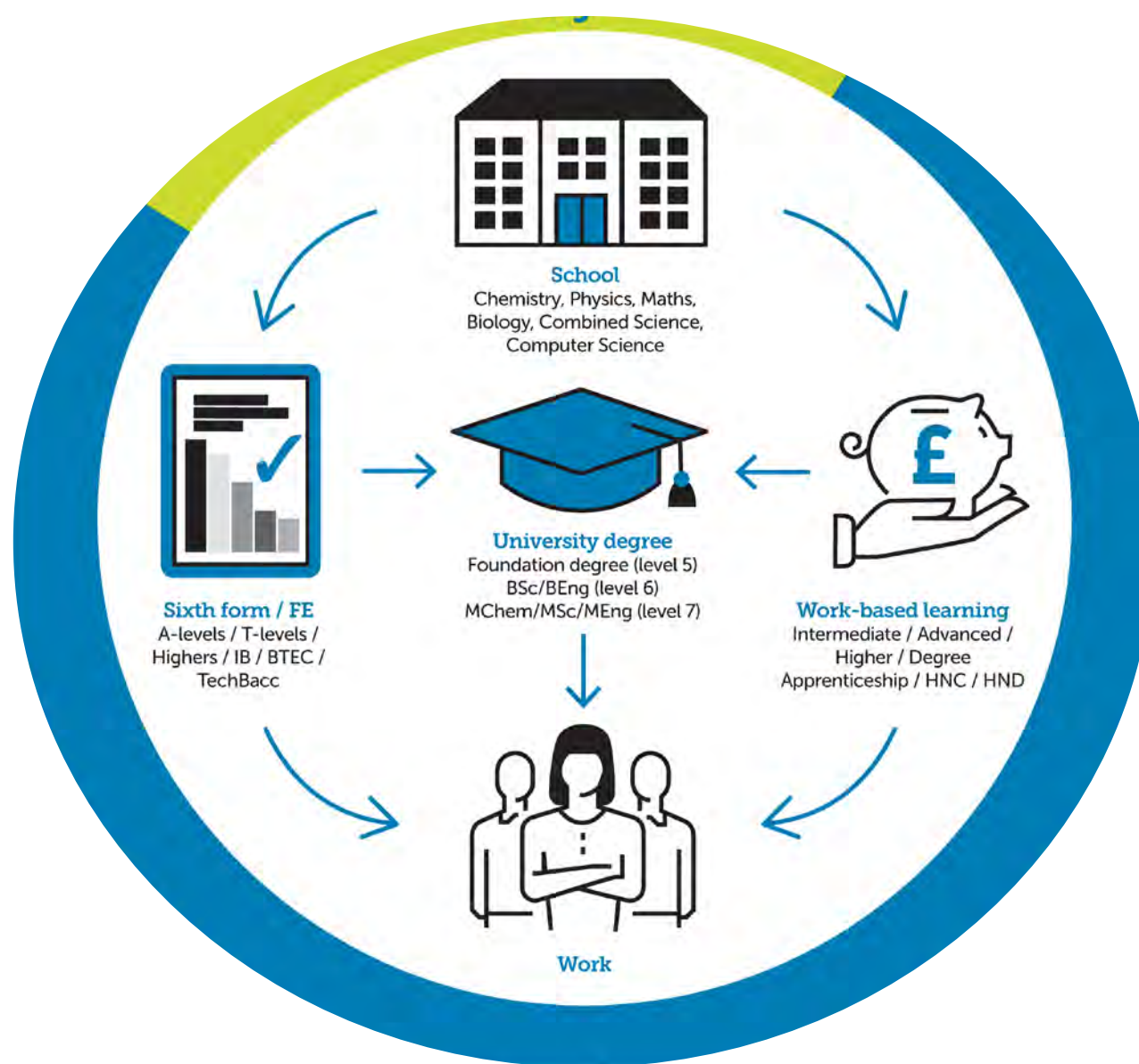


How to get qualified

Options after GCSE



Getting in to Chemistry



Continue studying

A levels:

two year curriculum study with final assessment. Emphasis on academic skill. Progression on to higher education, to an apprenticeship or entry level employment in the science sector. Recognised by UK universities

BTEC: level 3 in applied science (various options), flexible and equivalent to up to three A levels. Emphasis on vocational content. Progression to higher education, to an apprenticeship or entry level employment in the science sector. Recognised by some universities, check admissions policy of university

International Baccalaureate Diploma: two year programme, academic. Progression to higher education, to an Apprenticeship or entry level employment in the science sector. Recognised by many universities worldwide

Combine study with work

Options:

- **Apprenticeships** suitable if you know what occupation you want to pursue, want to earn a wage and learn at the same time and are ready to enter the workforce at age 16. 80% on-the-job, 20% in the classroom.
- **Higher National Certificates (HNCs) and Higher National Diplomas (HNDs)** work related qualifications which are equivalent to the first year of a degree course (HNCs) or the first two years of a degree course (HNDs)
- **T levels**, available 2021, equivalent to three A levels these two year courses offer a mixture of classroom learning (80%) and 'on-the-job' experience (20%) during an industry placement of at least 315 hours (approximately 45 days).

Pause

Ask your neighbour

- what most surprised them about what chemists do
- and what they found interesting about where a chemistry qualification can lead

Top tips

Get some experience of a workplace

- Why? You will find out about different jobs you are interested in, expand your network, gain experience and skills
- Where to start:
 - Ask your career adviser, teacher, family if they know of chemical sciences' companies who offer work visits, job shadowing or work experience
 - Get in touch with a local education business partnership
 - theaebp.co.uk/professionals/
 - Browse Chemistry World Jobs or New Scientist Jobs. Although there may not be any ads for work experience placements, you will get ideas of what different companies do
 - jobs.chemistryworld.com
 - jobs.newscientist.com/en-gb/

Find out more about careers in chemistry

A Future in Chemistry: *Explore the careers of over 50 professional chemists*

www.rsc.org/careers/future/all-profiles

National careers service: *Browse 100s of roles*

nationalcareers.service.gov.uk/search-results?searchTerm=chemistry

#TeamScience: *Compare careers*

www.teamscience.org.uk/



Cancer Researcher and
Science Communicator



Consumer Products
Technician



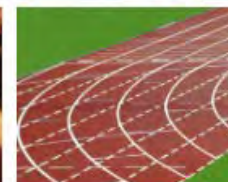
Founder of Saaf Skincare



Vice President of Research
and Development



Freelance Science Publicist



Senior Sports Scientist



Project Leader In Enhanced
Experimentation



Research Portfolio Director



Project Manager



Applications Chemist



Senior Committee Specialist



Research Fellow



A Future in Chemistry

Your career starts here

Discover your future in chemistry with our careers website

[rsc.li/future-in-chemistry](https://www.rsc.li/future-in-chemistry)



Thought for the day

You have 80,000 hours in your career.

Make the right career choices, and you can help solve the world's most pressing problems, as well as have a more rewarding, interesting life.