YOUR FUTURE IN CHEMISTRY

Find out the facts and explore your options after GCSE.
Where I work

What I do?

What I enjoy most about it?

What the 'impact' is of what I do?

What inspired me to choose my career?

How I got into it?

Name to go here
Job title to go here
Company to go here
About you

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

First step: get to know YOU by asking yourself a few questions

☐ What do you enjoy?

☐ What’s important to you?

☐ How much science do you want in your life?

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

☐ Have you ruled anything out? Why?
Where do you want to work?

In education?
Part of a shared-interest-community, teaching courses, self-directed research, publishing papers

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

In a small company?
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’s important to you
- One or two jobs you’ve ruled out – and why
WHERE CHEMISTRY COULD TAKE YOU.
Career quiz
Fill in the questionnaire*

It’s just for fun!
This quiz should show that studying chemistry could take you into so many different areas of work. It’s not designed to tell you what you should or shouldn’t want to be!

*answer the questions on the next slide or on a print-out
Where could chemistry take you?

1. What sort of work do you like the sound of most?
   - A. Working with your hands
   - B. Working with numbers and data
   - C. Helping others
   - D. Problem solving
   - E. Something creative

2. What do you love doing in your spare time?
   - A. Building things, arts and crafts
   - B. Puzzles, strategy games
   - C. Meeting lots of different people
   - D. Reading the news, discussing politics
   - E. Reading books, listening to music

3. You’d think your life was a success if you:
   - A. Cured a disease
   - B. Earned a lot of money
   - C. Made a lot of people’s lives better
   - D. Fixed some of society’s biggest issues
   - E. Could express yourself

4. What’s your biggest strength?
   - A. Your attention to detail
   - B. Thinking logically
   - C. Getting on with different types of people
   - D. Working through problems
   - E. Your imagination

5. Apart from science, what subjects at school do you like 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

6. Pick the 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
Check your scores and find the most relatable jobs

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<tr>
<th>Mostly As</th>
<th>Mostly Cs</th>
<th>Mostly Es</th>
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<tr>
<td>Researcher</td>
<td>Teacher</td>
<td>Games designer</td>
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<tr>
<td>Medicinal chemist</td>
<td>Doctor</td>
<td>Food scientist</td>
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<td>Cosmetic scientist</td>
<td>Vet</td>
<td>Science journalist</td>
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<td>Biochemist</td>
<td>Nurse</td>
<td>Art restorer</td>
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<td>Material scientist</td>
<td>Midwife</td>
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<td>Science policy advisor</td>
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<td>Software designer</td>
<td>Environmental scientist</td>
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<td>Seismologist</td>
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As a chemical scientist you could be...

- **Making a difference** to life through **drug discovery**, and **combating antibiotic resistance**
- **Developing ways of removing plastic waste from the oceans**
- **Reducing pollution**, and discovering ways to **harness and store energy using clean, green power**
Chemical scientists are employed in many sectors

Just some places where Royal Society of Chemistry members work

- University research: 32%
- Hospital, local and central government: 5%
- Consumer goods and other manufacturing: 20%
- Medicines and drug research: 16%
- IT / computers, publishing other service industries: 10%
- Teaching in schools: 9%
- Energy and the environment: 8%
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Chemical scientists are well paid

- Chemistry graduates get **15% higher** starting salaries compared with the average for graduates
- Chemistry graduates have a **high employment rate**
- **70%+** of chemistry students enter a **professional or managerial role** after graduation
- Double the UK average of graduates go into further study
Chemical scientists have the skills employers look for!

You’ll learn skills for being successful in the future, such as:

- Problem solving
- Logical thinking
- Reasoning
- Numerical ability and computational skills
- Teamwork
- Communication skills
A future in chemistry

Take chemistry and you could become...

An analytical chemist
You’ll be checking what’s in substances – for example, breath samples, or blood at a crime scene.

A lab technician
You’ll collect samples, analyse and carry out tests on chemicals, materials or products.
Take chemistry and you could become...

An associate scientist
You’ll design and develop medicines to treat diseases.

A development chemist
You’ll develop things that are made from chemical reactions, such as inks, makeup and fertilisers.
Take chemistry and you could become...

A research chemist
You’ll study substances to find out the best ways to make products such as new medical treatments, makeup, electrical goods, food and drink.

An environmental chemist
You’ll find out what’s in the air, water and soil to understand our world better and how humans affect it.
So... what else you can do with chemistry?

From teaching and writing, to the law and banking, so many employers value a chemistry qualification. One chemistry graduate even went on to be Prime Minister!
A future in chemistry

...all employers and sectors value chemistry!

You could:

- Become a doctor
- Advise on science policy
- Analyse data for reports
- Help people protect their ideas
- Sell scientific equipment
- Become a science communicator
Some of the ways chemistry is used at work

☐ Analytical chemists use chromatography to check human samples and meet anti-doping laws.

☐ Automotive chemists use electrolysis to coat vehicles with metal to make them last longer and 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 affect the product’s colour.
Where can you work with a chemistry qualification?

You could work at a

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

Just about anywhere!
A future in chemistry

TIME FOR A BREAK

What surprised you about the jobs that are linked to chemistry? Tell the person next to you!

Now ask the same person:
“Tell me one thing that might be good for your future if you take a chemistry qualification”
How to get qualified

School
Chemistry, physics, maths, biology, combined science, computer science

University degree
Foundation degree (level 5)
BSc / BEng (level 6)
MChem / MSc / MEng (level 7)

Sixth form / FE
A-levels / T-levels / Highers / IB / BTEC / TechBacc

Work
Work-based learning
Intermediate / Advanced / Higher / Degree Apprenticeship / HNC / HND
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).
A future in chemistry
Your career starts here

Discover your future in chemistry at our careers website [rsc.li/future-in-chemistry](http://rsc.li/future-in-chemistry)
Useful links

Teach chemistry: faces of chemistry: printable career profiles
www.rsc.org/learn-chemistry/collections/faces-of-chemistry/careers-with-chemistry

LMI for all: compare up to three careers
www.lmiforall.org.uk/widget

National careers service: browse 100s of roles
nationalcareers.service.gov.uk/search-results?searchTerm=chemistry

#TeamScience: compare careers
www.teamsceince.org.uk
Get some experience of a workplace

- Why? You’ll find out about different jobs you’re interested in, expand your network, and gain experience and skills.

- Where to start:
  - Ask your career adviser, teacher and family if they know of chemical sciences.
  - Get in touch with a local education business partnership.
  - Browse Chemistry World Jobs or New Scientist Jobs. Although there may not be any ads for work experience placements, you’ll get ideas of what different companies do.

[jobs.chemistryworld.com](jobs.chemistryworld.com)
[jobs.newscientist.com/en-gb/](jobs.newscientist.com/en-gb/)