

WJEC A Level Chemistry and Careers in Chemistry

Find examples of the most relevant careers for subsections of the curriculum and link through to up to five job profiles for further information. The profiles will give your students real world examples of jobs in the aspects of chemistry they enjoy most. They are written by teachers for teachers.

Simply click on the job title to go to the job profile on A Future in Chemistry.

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AS Unit 1 – The language of chemistry, structure of matter

1.1 Formulae and equations

- Scientist, food and pharmaceuticals
- > <u>Senior laboratory technician</u>

1.2 Basic ideas about atoms

- > <u>Chemistry engineer, nuclear</u>
- > Radioactive waste consultant
- > <u>Research assistant</u>

1.3 Chemical calculations

- Analyst higher apprentice, organic chemistry
- Analytical chemist
- > <u>Chemistry engineer, nuclear</u>

1.4 Bonding

- > Analytical technician, plastics
- Bionanotechnology PhD student
- <u>Co-founder and machine learning</u>
 <u>lead of tech startup Ignota Labs</u>

- <u>Technical services chemist,</u> <u>cosmetics</u>
- Scientist, food and pharmaceuticals
- Secondary school science teacher
- > Medicinal chemist
- Scientist, food and pharmaceuticals
- > <u>Computational toxicologist</u>
- <u>Technical services chemist,</u> <u>cosmetics</u>



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1.5 Solid structures

- Bionanotechnology PhD student Senior software developer >
- Co-founder and machine learning > lead of tech startup Ignota Labs
- > Professor and enterprise, partnerships and innovation lead

1.6 The periodic table

- > <u>Analyst higher apprentice</u>, organic chemistry
- Chemistry engineer, nuclear >
- **Development chemist, printing** > and inks

- > Technical services chemist, cosmetics

- Museum scientist
- Process chemist higher apprentice, pharmaceuticals
- 1.7 Simple equilibria and acid-base reactions
- Analytical chemist
- Development chemist, printing > and inks
- > Laboratory analyst and higher degree apprentice, water
- Scientist, food and pharmaceuticals
- Senior laboratory technician



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AS Unit 2 – Energy, rate and chemistry of carbon compounds

2.1 Thermochemistry

- > <u>Chemistry engineer, nuclear</u>
- > Chief chemist
- <u>Process chemist higher</u>
 <u>apprentice, pharmaceuticals</u>

2.2 Rates of reaction

- > <u>Chemistry engineer, nuclear</u>
- > Chief executive officer
- <u>Process chemist higher</u>
 <u>apprentice, pharmaceuticals</u>

2.3 The wider impact of chemistry

- Head of research and sustainability
 <u>Senior principal scientist</u>
- > Pollution control officer
- > Principal air quality consultant

2.4 Organic compounds

- > Associate principal scientist, food
- Associate researcher, pharmaceuticals
- Development chemist, printing and inks

- Scientist, food and pharmaceuticals
- Senior laboratory technician
- > <u>Secondary school science teacher</u>
- > <u>Senior principal scientist</u>

- > Forensic toxicologist
- > Microplastics toxicologist

Senior science manager

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2.5 Hydrocarbons

- > <u>Analytical technician, plastics</u>
- > Associate principal scientist, food
- Chief technology officer and cofounder of Lixea, a sustainable solutions company

2.7 Alcohols and carboxylic acids

- > Forensic scientist
- > <u>Secondary school science teacher</u>

2.8 Instrumental analysis

- > Analytical chemist
- > Forensic toxicologist

 Scientist, food and pharmaceuticals
 Senior laboratory technician

Principal air quality consultant

Senior science manager

> R&D chemist

- > Pollution control officer
- A2 Unit 3 Physical and inorganic chemistry
- 3.1 Redox and standard electrode potential
- > <u>PhD researcher</u>
- Professor and enterprise, partnerships and innovation lead
- > <u>Research fellow, battery recycling</u>

3.2 Redox reactions

> <u>Chemistry engineer, nuclear</u>

- > <u>Scientific consultant</u>
- Solar technology engineer

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- 3.4 Chemistry of the d-block transition metals
 - Bioleaching lab technician >
 - Chief executive officer
 - **Environmental process specialist**
- 3.5 Chemical kinetics
- > Chemistry engineer, nuclear
- 3.6 Enthalpy changes for solids and solutions
- Chemistry engineer, nuclear >
- > Project leader in enhanced experimentation, oil & gas

- **Chief chemist** >
- 3.7 Entropy and feasibility of reactions
- > Chemistry engineer, nuclear

3.9 Acid-base equilibria

- > Analytical chemist
- Development chemist, printing and inks
- > Laboratory analyst and higher degree apprentice, water
- > Scientist, food and pharmaceuticals

A2 Unit 4 – Organic chemistry and analysis

- 4.1 Stereoisomerism
- Associate principal scientist, food

 Research innovations manager
- Medicinal chemist

- Secondary school science teacher
- Nanotoxicologist

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- Laboratory scientist apprentice
 - Senior laboratory technician



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Nanotoxicologist

4.2 Aromaticity

- > Analytical technician, plastics
- > Associate principal scientist, food
- 4.3 Alcohols and phenols
- Secondary school science teacher Senior science manager
- 4.4 Aldehydes and ketones
- > Flavourist and innovation director

4.5 Carboxylic acids and their derivatives

> Flavourist and innovation director

4.6 Amines

 Development chemist, printing and inks

4.7 Amino Acids, Peptides and Proteins

- > <u>Postdoctoral research associate</u>
- Senior laboratory technician
- > Quality officer, genomics research

4.8 Organic Synthesis and Analysis

- > Analytical technician, plastics
- > <u>Medicinal chemist</u>

- <u>R&D chemist</u>
- <u>Technical services chemist,</u> <u>cosmetics</u>
- <u>Process chemist higher</u>
 <u>apprentice, pharmaceuticals</u>