

**Periodic Table of the Elements**

1 <b>H</b> Hydrogen 1.008																	2 <b>He</b> Helium 4.003
3 <b>Li</b> Lithium 6.941	4 <b>Be</b> Beryllium 9.012											5 <b>B</b> Boron 10.811	6 <b>C</b> Carbon 12.011	7 <b>N</b> Nitrogen 14.007	8 <b>O</b> Oxygen 15.999	9 <b>F</b> Fluorine 18.998	10 <b>Ne</b> Neon 20.180
11 <b>Na</b> Sodium 22.990	12 <b>Mg</b> Magnesium 24.305											13 <b>Al</b> Aluminium 26.982	14 <b>Si</b> Silicon 28.086	15 <b>P</b> Phosphorus 30.974	16 <b>S</b> Sulphur 32.06	17 <b>Cl</b> Chlorine 35.453	18 <b>Ar</b> Argon 39.948
19 <b>K</b> Potassium 39.098	20 <b>Ca</b> Calcium 40.078	21 <b>Sc</b> Scandium 44.956	22 <b>Ti</b> Titanium 47.88	23 <b>V</b> Vanadium 50.942	24 <b>Cr</b> Chromium 51.996	25 <b>Mn</b> Manganese 54.938	26 <b>Fe</b> Iron 55.845	27 <b>Co</b> Cobalt 58.933	28 <b>Ni</b> Nickel 58.693	29 <b>Cu</b> Copper 63.546	30 <b>Zn</b> Zinc 65.38	31 <b>Ga</b> Gallium 69.723	32 <b>Ge</b> Germanium 72.63	33 <b>As</b> Arsenic 74.922	34 <b>Se</b> Selenium 78.96	35 <b>Br</b> Bromine 79.904	36 <b>Kr</b> Krypton 83.80
37 <b>Rb</b> Rubidium 85.468	38 <b>Sr</b> Strontium 87.62	39 <b>Y</b> Yttrium 88.906	40 <b>Zr</b> Zirconium 91.224	41 <b>Nb</b> Niobium 92.906	42 <b>Mo</b> Molybdenum 95.94	43 <b>Tc</b> Technetium 98.906	44 <b>Ru</b> Ruthenium 101.07	45 <b>Rh</b> Rhodium 102.906	46 <b>Pd</b> Palladium 106.42	47 <b>Ag</b> Silver 107.868	48 <b>Cd</b> Cadmium 112.411	49 <b>In</b> Indium 114.818	50 <b>Sn</b> Tin 118.71	51 <b>Sb</b> Antimony 121.76	52 <b>Te</b> Tellurium 127.6	53 <b>I</b> Iodine 126.905	54 <b>Xe</b> Xenon 131.29
55 <b>Cs</b> Caesium 132.905	56 <b>Ba</b> Barium 137.327	57-71 Lanthanides	72 <b>Hf</b> Hafnium 178.49	73 <b>Ta</b> Tantalum 180.948	74 <b>W</b> Tungsten 183.84	75 <b>Re</b> Rhenium 186.207	76 <b>Os</b> Osmium 190.23	77 <b>Ir</b> Iridium 192.22	78 <b>Pt</b> Platinum 195.084	79 <b>Au</b> Gold 196.967	80 <b>Hg</b> Mercury 200.59	81 <b>Tl</b> Thallium 204.38	82 <b>Pb</b> Lead 207.2	83 <b>Bi</b> Bismuth 208.98	84 <b>Po</b> Polonium 209	85 <b>At</b> Astatine 210	86 <b>Rn</b> Radon 222
87 <b>Fr</b> Francium 223	88 <b>Ra</b> Radium 226	89-103 Actinides	104 <b>Rf</b> Rutherfordium (261)	105 <b>Db</b> Dubnium (262)	106 <b>Sg</b> Seaborgium (263)	107 <b>Bh</b> Bohrium (264)	108 <b>Hs</b> Hassium (265)	109 <b>Mt</b> Meitnerium (266)	110 <b>Ds</b> Darmstadtium (271)	111 <b>Rg</b> Roentgenium (272)	112 <b>Cn</b> Copernicium (285)	113 <b>Uut</b> Ununtrium (288)	114 <b>Fl</b> Flerovium (289)	115 <b>Uup</b> Ununpentium (290)	116 <b>Lv</b> Livermorium (293)	117 <b>Uus</b> Ununseptium (294)	118 <b>Uuo</b> Ununoctium (294)
57 <b>La</b> Lanthanum 138.905	58 <b>Ce</b> Cerium 140.12	59 <b>Pr</b> Praseodymium 140.908	60 <b>Nd</b> Neodymium 144.24	61 <b>Pm</b> Promethium 144.913	62 <b>Sm</b> Samarium 150.36	63 <b>Eu</b> Europium 151.964	64 <b>Gd</b> Gadolinium 157.25	65 <b>Tb</b> Terbium 158.925	66 <b>Dy</b> Dysprosium 162.50	67 <b>Ho</b> Holmium 164.930	68 <b>Er</b> Erbium 167.26	69 <b>Tm</b> Thulium 168.934	70 <b>Yb</b> Ytterbium 173.04	71 <b>Lu</b> Lutetium 174.967			
89 <b>Ac</b> Actinium 227	90 <b>Th</b> Thorium 232.038	91 <b>Pa</b> Protactinium 231.036	92 <b>U</b> Uranium 238.029	93 <b>Np</b> Neptunium 237.048	94 <b>Pu</b> Plutonium 244.064	95 <b>Am</b> Americium 243.061	96 <b>Cm</b> Curium 247.070	97 <b>Bk</b> Berkelium 247.070	98 <b>Cf</b> Californium 251.083	99 <b>Es</b> Einsteinium 252.083	100 <b>Fm</b> Fermium 257.095	101 <b>Md</b> Mendelevium 258.1	102 <b>No</b> Nobelium 259.101	103 <b>Lr</b> Lawrencium 260			

# A level Chemistry

# Year 12 Modules



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- Module 1 Development of Practical Skills
- Module 2 Foundations in Chemistry
- Module 3 Periodic table and energy
- Module 4 Core organic chemistry

Year 12 mocks are made up of 2 papers which assess the content from modules 1 - 4



# Year 13 Modules

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- Module 5 Physical chemistry and transition metals
- Module 6 Organic chemistry and analysis

3 exam papers end of year 13

Paper 1 – modules 1, 2, 3, 5 (2 ¼ hours)

Paper 2 – modules 1, 2, 4, 6 (2 ¼ hours)

Paper 3 – any content modules 1 – 6 (1 ½ hrs)



# Module 1: Development of Practical Skills

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- Skills of planning, implementing, analysis and evaluation are learnt through between 12 to 36 key practicals
- These skills are assessed in all of the final written examinations
- In addition, if you complete all skills successfully you will be awarded the 'practical endorsement'

# Overview



Chemistry	Assessment Overview	
Content is split into 6 teaching modules		
Module 1	Development of Practical Skills	A Level Paper 1 - Periodic Table, Elements and Physical Chemistry
Module 2	Foundations in Chemistry	
Module 3	Periodic Table & Energy	A Level Paper 2 - Synthesis & Analytical Techniques
Module 4	Core Organic Chemistry	
Module 5	Physical Chemistry & Transition Elements	A Level Paper 3 - Unified Chemistry
Module 6	Organic Chemistry & Analysis	
Paper 1 assesses the content from Modules 1, 2, 3 and 5		A Level Practical Endorsement
Paper 2 assesses the content from Modules 1, 2, 4 and 6		
Paper 3 assesses the content from Modules 1 to 6		

# Bursaries for teaching (2023/24) – example that chemistry is an in demand subject area

Subject	Bursary	Scholarship
Art and design	£10,000	
Biology	£25,000	
Chemistry	£28,000	£30,000
Computing	£28,000	£30,000
Design and technology	£25,000	
English	£10,000	
Geography	£25,000	
Languages (French, German and Spanish only)	£25,000	£27,000
Languages (all other languages, including ancient languages)	£25,000	
Maths	£28,000	£30,000
Music	£10,000	
Physics	£28,000	£30,000
Religious education	£10,000	



## Example that chemistry is an in demand subject area

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### Top 5 Subjects for Average Graduate Salaries

Rank	Subject	Professional Salary	Non-professional Salary
1	Dentistry	£30,432	--
2	Chemical Engineering	£28,603	£17,187
3	Complementary Medicine	£28,259	--
4	Medicine	£28,191	--
5	Economics	£28,157	£18,132

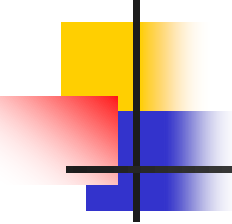


# Types of careers

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- Medicine
- Dentistry
- Veterinary science
- Pharmacology
- Environmental Chemist
- Chemical Engineer
- Accountant/ Auditor / investment banking
- Forensic Researcher





Our 2022/3 cohort went on to study and  
our 2024 cohort are applying for.....

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- Medicine
- ODP (Operating department practitioner)
- Veterinary science
- Geology
- Sports science
- Forensic science
- Astrophysics
- Biology
- Pharmacology



# Staff

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- The course is taught by experienced teachers
- Mrs Boyle – Head of Chemistry  
BSc (Hons), MSc, PGCE(M)
- Mrs Julian – MBChB, PGCE
- Ms McCullar – Head of year 10 BSc, PGCE



# Requirements

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- You need a **minimum** of grade 66 at GCSE Science including grade 6 in the Chemistry component  
**OR** a 6 in GCSE Chemistry
- You need a **minimum** of grade 6 at GCSE Maths
- Students who do not gain a 6 in Maths will struggle with the style of questions, the complexity of language and the level of maths in A level Chemistry and may fail to gain a grade
- Like all A-levels, you must have a strong work ethic and **lots of time** available to study



# Expectations

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- Organisation - folder
- Reading logs
- Homework
- Dedication
- Resilience
- Reflection
- Support sessions