



CHEMISTRY

A-LEVEL CHEMISTRY

A-level Chemistry is an extremely rewarding subject, well regarded by top universities for a variety of different courses.

Choosing A-level Chemistry can lead to many careers in healthcare such as medicine, pharmacy and dentistry. It is also extremely useful for careers in the biological sciences, physics, mathematics, pharmacology and analytical chemistry.

Chemistry is also taken by many law applicants as it shows the ability to consider complex concepts and logical thinking.

Good Science and Maths GCSEs (Grade 7 or above) are helpful for making the transition from GCSE to A-level, as well as ensuring the best chance to achieve top grades.

THE COURSE

During the 2 years of A-level study, students will be taught by chemistry specialists at WGS; Miss England, Mr Shah and Mr Cliffe.

There is no coursework or externally assessed material during the course, it is all based on the exams at the end of the second year.

Periodic Table of the Elements

The periodic table is color-coded by groups: Alkali Metal (red), Alkaline Earth (orange), Transition Metal (yellow), Basic Metal (green), Semimetal (light green), Nonmetal (blue), Halogen (purple), Noble Gas (dark purple), Lanthanide (light blue), and Actinide (dark blue). The table includes element symbols, atomic numbers, and names. The Lanthanide and Actinide series are shown as separate rows below the main table.

1 1A	2 2A	3 3A	4 4A	5 5A	6 6A	7 7A	8 8A										
1 H Hydrogen 1.008	2 He Helium 4.003																
3 Li Lithium 6.941	4 Be Beryllium 9.012																
11 Na Sodium 22.990	12 Mg Magnesium 24.305																
19 K Potassium 39.098	20 Ca Calcium 40.078	3 B Boron 10.811	4 C Carbon 12.011	5 N Nitrogen 14.007	6 O Oxygen 15.999	7 F Fluorine 18.998	8 Ne Neon 20.180										
27 Co Cobalt 58.933	28 Ni Nickel 58.693	9 Al Aluminum 26.982	10 Si Silicon 28.086	11 P Phosphorus 30.974	12 S Sulfur 32.066	13 Cl Chlorine 35.453	14 Ar Argon 39.948										
35 Br Bromine 79.904	36 Kr Krypton 83.80	15 Ga Gallium 69.723	16 Ge Germanium 72.64	17 As Arsenic 74.922	18 Se Selenium 78.972	19 Br Bromine 79.904	20 Kr Krypton 83.80										
43 Tc Technetium 98.907	44 Ru Ruthenium 101.07	21 Sc Scandium 44.956	22 Ti Titanium 47.88	23 V Vanadium 50.942	24 Cr Chromium 51.996	25 Mn Manganese 54.938	26 Fe Iron 55.845	27 Co Cobalt 58.933	28 Ni Nickel 58.693	29 Cu Copper 63.546	30 Zn Zinc 65.39	31 Ga Gallium 69.723	32 Ge Germanium 72.64	33 As Arsenic 74.922	34 Se Selenium 78.972	35 Br Bromine 79.904	36 Kr Krypton 83.80
37 Rb Rubidium 85.468	38 Sr Strontium 87.62	39 Y Yttrium 88.906	40 Zr Zirconium 91.224	41 Nb Niobium 92.906	42 Mo Molybdenum 95.94	43 Tc Technetium 98.907	44 Ru Ruthenium 101.07	45 Rh Rhodium 102.906	46 Pd Palladium 106.42	47 Ag Silver 107.868	48 Cd Cadmium 112.411	49 In Indium 114.818	50 Sn Tin 118.710	51 Sb Antimony 121.760	52 Te Tellurium 127.6	53 I Iodine 126.905	54 Xe Xenon 131.29
55 Cs Cesium 132.905	56 Ba Barium 137.327	57-71 Lanthanide Series	72 Hf Hafnium 178.49	73 Ta Tantalum 180.948	74 W Tungsten 183.85	75 Re Rhenium 186.207	76 Os Osmium 190.23	77 Ir Iridium 192.22	78 Pt Platinum 195.08	79 Au Gold 196.967	80 Hg Mercury 200.59	81 Tl Thallium 204.383	82 Pb Lead 207.2	83 Bi Bismuth 208.980	84 Po Polonium (209)	85 At Astatine (209)	86 Rn Radon (222)
87 Fr Francium (223)	88 Ra Radium (226)	89-103 Actinide Series	104 Rf Rutherfordium (261)	105 Db Dubnium (262)	106 Sg Seaborgium (266)	107 Bh Bohrium (264)	108 Hs Hassium (265)	109 Mt Meitnerium (268)	110 Ds Darmstadtium (271)	111 Rg Roentgenium (272)	112 Cn Copernicium (285)	113 Uut Ununtrium (288)	114 Fl Flerovium (289)	115 Uup Ununpentium (294)	116 Lv Livermorium (293)	117 Uus Ununseptium (294)	118 Uuo Ununoctium (294)
57 La Lanthanum 138.905	58 Ce Cerium 140.12	59 Pr Praseodymium 140.908	60 Nd Neodymium 144.24	61 Pm Promethium 144.913	62 Sm Samarium 150.36	63 Eu Europium 151.964	64 Gd Gadolinium 157.25	65 Tb Terbium 158.925	66 Dy Dysprosium 162.50	67 Ho Holmium 164.930	68 Er Erbium 167.26	69 Tm Thulium 168.934	70 Yb Ytterbium 173.04	71 Lu Lutetium 174.967			
89 Ac Actinium 227.033	90 Th Thorium 232.038	91 Pa Protactinium 231.036	92 U Uranium 238.029	93 Np Neptunium 237.048	94 Pu Plutonium 244.064	95 Am Americium 243.061	96 Cm Curium 247.070	97 Bk Berkelium 247.070	98 Cf Californium 251.080	99 Es Einsteinium 252.083	100 Fm Fermium 257.105	101 Md Mendelevium 258.10	102 No Nobelium 259.101	103 Lr Lawrencium (262)			

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OUR RESULTS

The Chemistry Department is one of the strongest at Woodhouse Grove, achieving very high A* - A grades and full passes every year, with the majority of students achieve a D grade or better.

30% of our Chemistry A-level students achieved A* or A grade.

Our excellent results are largely due to the experience and dedication of the department's teachers.

Grade/Year	2024	2023	2022	2021
A*-B	55%	52%	67%	89%
A*-D	100%	89%	100%	100%

It's hard work, but everyone in the department is friendly and supportive; they always offer extra help when you need it.

Chemistry is great! It's rewarding and interesting; and necessary for me to study medicine.



EXAMINATIONS

Paper 1:

105 marks of short and long answer questions, predominantly physical and inorganic chemistry. 35% of the A-level.

Paper 2:

105 marks of short and long answer questions, predominantly organic and some physical chemistry. 35% of the A-level.

Paper 3:

60 marks of short and long answer questions on practical experiments and data analysis and 30 marks of multiple choice across all topic areas. 30% of the A-level.

OUR STUDENTS

Many of our students go on to study in medical or science related fields at Russell Group universities. The notice board outside Chemistry lists our recent leavers, with their chosen courses and university destinations.

Every year we are extremely proud of our chemists achievements and do our utmost to support them in their careers beyond the Sixth Form.

Please feel free to ask Mr Shah, Miss England or Mr Cliffe if you have any further questions.