

Year 12 Chemistry

Chemistry at A-Level is split into three key areas: organic, inorganic and physical chemistry and these areas are taught across both years. The AQA A-Level course begins with the topics 'Amount of Substance' and 'Atomic Structure' both of which build directly upon knowledge from GCSE and require students to recall and apply this prior learning. The course is taught by two teachers, so students will be learning two different topics simultaneously.

Twelve required practicals must be completed in order for the students to gain a teacher endorsement and six of these are carried out in Year 12. These are in addition to any other practical work that may be carried out to support learning and develop practical skills.

Practical work is important for a number of reasons; it supports and consolidates the concepts being taught, develops investigative, transferable skills and also helps students learn how to master practical skills such as handling specialist equipment with confidence.

Methods of deepening and securing knowledge:

Interleaving	Starter tasks are designed to check knowledge from not only the previous lesson, but also lessons earlier in the topic and sometimes even other topics within chemistry which they will have covered previously.
Checkpoints/ mini plenaries	These are used within lessons to check understanding and address any misconceptions before moving on.
Independent study	Exam questions are used to provide plenty of practise at applying students' knowledge to new situations.
Assessment for Progress	Each of the topics conclude with an end of topic test from which feedback is provided.

	Autumn term 1	Autumn term 2	Spring term 1
Topic(s)	<ul style="list-style-type: none"> • Amount of substance. • Atomic structure. • Bonding. 	<ul style="list-style-type: none"> • Energetics. • Kinetics. • Introduction to organic chemistry. • Alkanes. 	<ul style="list-style-type: none"> • Equilibria. • Redox. • Alkenes.
Assessment	End of topic tests.	End of topic tests.	End of topic tests.

CEIAG (<i>Careers that are linked to that topic</i>)	Chemical engineering.	Chemical engineering, organic chemistry, pharmacology, petrochemistry.	Chemical engineering, pharmacology.
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	Spring term 2	Summer term 1	Summer term 2
Topic(s)	<ul style="list-style-type: none"> • Group 2. • Group 7. • Alcohols. • Organic analysis. 	<ul style="list-style-type: none"> • Rates of reaction. • Isomerism. 	<ul style="list-style-type: none"> • Thermodynamics. • Compounds containing the carbonyl group.
Assessment	End of topic tests.	End of topic tests.	Year 12 trial exam.
CEIAG (<i>Careers that are linked to that topic</i>)	Quality control chemist, chemistry technician, metallurgy.	Chemical engineering.	Chemical engineering, pharmacology, biochemistry.

Independent Study

Exam question independent study is given weekly and Seneca learning is used to support learning and provide low-stakes assessment tasks.