

# Key Stage 4 Subject Overview: GCSE Chemistry

**Course Information:** This course offers you the chance to gain a good understanding of the nature of substances and how they react together, how Chemistry is used in business and industry, how our use of raw materials in fuels and manufacturing can affect the global and local environment.

Course name: **CHEMISTRY**

Exam Board: AQA

Subject Code: 4402

## Course Structure:

Unit title	Unit 1	Unit 2	Unit 3	Unit 4
Description	CHEMISTRY 1	CHEMISTRY 2	CHEMISTRY 3	INVESTIGATIVE SKILLS ASSESSMENT
Course weighting	25% (written paper 1 hour)	25%( written paper 1 hour)	25% (written paper 1 hour)	25% (two written controlled assessments, research scientific method, scientific investigation, collecting and analysing data).

## Key Stage 4 Timeline

Year 10			Year 11		
Autumn	Spring	Summer	Autumn	Spring	Summer
<b>CHEMISTRY 1</b> Fundamental Ideas, atoms and periodic table. Limestone and it's uses, Calcium Carbonate, Metal and their uses, extracting metals, properties of metals and alloy. Crude oil and fuels, obtaining useful substances from crude oil.	<b>CHEMISTRY 1</b> Plant oils and their uses, emulsions. Changing in the earth and its atmosphere. Fractional distillation of air.  <b>CHEMISTRY 2</b> Structure and Bonding, Structure and Properties	<b>Chemistry 2</b> Atomic structure analysis and- Quantitative Chemistry.  Rates of reaction and energy transfer in a reaction.  Centre Assessed Unit	<b>CHEMISTRY 2</b> Completion of Centres assessed Unit. Electrolysis  <b>Chemistry 3</b> Compare the early Periodic Table with the modern periodic table. Trends in the periodic table	<b>CHEMISTRY 3</b> Hard and Soft Water, purification of water, Calculating and explaining energy changes. Analysing substances.  Alcohols, carboxylic acids and esters.	<b>REVISION and EXAMS</b>

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Apply content knowledge to a range of events . Analyse data to draw conclusion . Evaluate arguments and justify own opinion based on scientific evidence . Rearrange equations to perform calculations and use answers from calculations. Make recommendations based on scientific evidence . Assess the limitation of scientific evidence.	Applying knowledge from each topic to everyday events. Plan experiments to investigate scientific ideas. Calculate chemical quantities in titration. Calculate energy transfer in reactions using supplied bond energies. Interpret models and evidence to show how scientific ideas have changed over time. Rearrange equations to perform calculations. Calculate empirical formula.	Compare results and processes. Explain all the concepts above. Carry out investigations analyse results and evaluate process. Interpret graphs and tables. Carry out calculations using data sheet Make and interpret models to show scientific ideas.