

CHEMISTRY

Composite: Chemistry C1- Key concepts in Chemistry

Year 10

Why do we deliver this?

We teach this topic to establish a shared foundation so all students **belong** in chemistry from the outset. Explicit instruction, modelling and retrieval practice support students to **achieve**, particularly those who need structure and clarity. Mastery of these core ideas allows students to **thrive** as confident problem-solvers across the course.

Composite: Chemistry C2- States of matter and separation techniques

Year 10

Why do we deliver this?

This topic is taught to help students **belong** by linking abstract particle ideas to everyday materials and experiences. Practical work and visual representations enable students to **achieve**, especially those who benefit from concrete examples. Understanding materials helps students **thrive** by developing skills useful in science and real-world contexts.

Composite: Chemistry C3 - Acids

Year 10

Why do we deliver this?

We teach chemical reactions to build a sense of **belonging** through shared practical experiences and clear success criteria. Scaffolded calculations and structured methods support all students to **achieve**, including those with literacy or numeracy needs. These skills enable students to **thrive** by applying chemistry to industry, safety and future study.

Composite: Chemistry C4 - Extracting metals & electrolysis

Year 10

Why do we deliver this?

This topic supports **belonging** by connecting chemistry to resources, industry and sustainability. Step-by-step explanations and real-world contexts help students **achieve**, particularly those who need clarity and repetition. Understanding these processes allows students to **thrive** as environmentally aware and economically informed individuals.

Composite: SEPARATE SCIENCE ONLY

Chemistry C5 - Separate chemistry 1

Year 10

Why do we deliver this?

We teach this topic to help students **belong** by understanding Earth's resources and energy use. Clear diagrams and contextual learning enable all students to **achieve**, especially those who benefit from linking science to global issues. This knowledge supports students to **thrive** by engaging critically with environmental challenges.

Composite: Chemistry C6 - Groups in the periodic table

Year 11

Why do we deliver this?

We teach this topic to help students **belong** by recognising patterns that bring order and predictability to chemistry. Clear models, structured comparisons and retrieval practice support all students to **achieve**, particularly those who benefit from reduced cognitive load and repetition. Understanding group trends enables students to **thrive** by applying knowledge logically and confidently in unfamiliar contexts.

Composite: Chemistry C8 - Fuels & the Earth's atmosphere

Year 11

Why do we deliver this?

We teach this topic to support **belonging** by connecting chemistry to global energy use and climate responsibility. Carefully chosen case studies and clear explanations enable all students to **achieve**, particularly those who need relevance and structure to engage. This knowledge helps students **thrive** as informed citizens who can critically evaluate sustainability and future energy choices.

Composite: Chemistry C7 - Rate of reaction

Year 11

Why do we deliver this?

This topic is taught so students **belong** by linking chemistry to everyday processes such as cooking, rusting and fuel use. Practical investigations, visual graphs and scaffolded calculations help students **achieve**, especially SEND and disadvantaged learners. Understanding reaction rates and energy changes allows students to **thrive** by applying science to industry, safety and environmental issues.

Composite: SEPARATE SCIENCE ONLY

Chemistry C9 - Separate chemistry 2

Year 11

Why do we deliver this?

This topic is taught to deepen **belonging** by showing how chemistry underpins medicine, materials and technological progress. Highly structured practical work and explicit success criteria support students to **achieve**, especially vulnerable learners who benefit from routine and clarity. Developing analytical skills enables students to **thrive** through precision, confidence and readiness for further study.