The Fisher Way: Curriculum

The Fisher Way aims to educate and inspire with joy, faith an
love because we are an inclusive Catholic community.

Successful and resilient learners who aspire to and achieve excellence

Confident individuals who can explore and communicate effectively

Responsible citizens who are active, loving and wise in all their endeavours

Subject	Chemistry
Year Group	Year 10
Intent	Successful and resilient learners: who understand chemical concepts, apply them to unfamiliar situations and develop confidence through practical enquiry. Confident individuals: who approach problems and practical work with curiosity, communicate explanations clearly and evaluate evidence. Responsible citizens: who understand the local and global implications of chemistry, including its contribution to health, industry and the sustainable use of resources.

Narrative	Learners revisit atomic structure and bonding before studying chemical changes, energy changes, quantitative chemistry, rates and equilibrium, and atmospheric chemistry. The sequence links particle-level explanations to practical observations, calculations and industrial decisions. Year 9 analysis and energy work provide a foundation for making salts, electrolysis and reaction investigations. Learners develop increasingly secure use of equations, graphs and evidence, with calculations and Separate Science extensions taught according to pathway and tier. This prepares learners for organic chemistry, resources and chemical analysis in Year 11, while revisiting the concepts needed across both GCSE papers.					
Half term	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Knowledge (topics studied)	Atomic structure and bonding review; chemical changes: metal reactivity, extraction and acid reactions.	Making salts and electrolysis; energy changes, reaction profiles and bond-energy calculations (Higher Tier).	Quantitative chemistry: mass, formula mass, concentration and measurement; mole calculations (Higher Tier).	Rates of reaction: collision theory, variables, catalysts and required practical work.	Reversible reactions and equilibrium; Higher Tier equilibrium predictions; rates consolidation.	Chemistry of the atmosphere: development, greenhouse gases, climate change, pollutants and carbon footprints.
Key skills	Predict reactions; write equations; compare extraction methods and explain observations.	Prepare a pure salt; investigate electrolysis and temperature changes; evaluate practical methods.	Balance equations; calculate masses and concentrations; use ratios, units and appropriate precision.	Measure rates; plot and interpret graphs; use tangents where appropriate; control variables.	Explain changes at equilibrium; apply calculations; justify industrial choices using evidence.	Interpret climate data; distinguish correlation and causation; evaluate emissions-reduction strategies.

Half term	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Cultural capital and careers	Metallurgy and pharmaceuticals; neutralisation in healthcare and industry.	Salt manufacture and aluminium production; electrochemistry and laboratory quality control.	Chemical manufacturing; reducing waste through accurate measurement and efficient reactions.	Industrial catalysts and process engineering; balancing rate, cost and safety.	Chemical engineering and sustainable production; evaluating competing industrial requirements.	Atmospheric scientists and environmental policy; informed decisions about energy and transport.
Assessment	Topic checks; practical and exam questions.	Topic assessment; feedback and recovery.	Topic checks; calculations and data questions.	Topic assessment; practical feedback and recovery.	Cumulative assessment and targeted revision.	Year 10 assessment; question-level feedback and recovery.