

| Year 9 | T1 | T2 | T3 | T4 | T5 | T6 |
|---|---|--|---|--|--|--|
| Content / Topic for Term | Atomic structure and the periodic table | Atomic structure and the periodic table (cont) | Energy | Rates of reaction | Rates of reaction (cont) Chemistry of the atmosphere | Chemistry of the atmosphere (cont) |
| Key Knowledge for acquisition, recall and application in assessment or exam | <p>Atomic structure and the periodic table</p> <ul style="list-style-type: none"> • introduction to the periodic table, • atomic structure, • electronic configuration • isotopes • history of the atom • compounds and chemical <p>Formulas</p> <ul style="list-style-type: none"> • word and symbol equations • balancing equations | <p>Atomic structure and the periodic table (cont)</p> <ul style="list-style-type: none"> • separating mixtures • chromatography • group 1 • group 7 • group 0 • trends in reactivity • transition metals • history of the periodic table | <p>Energy</p> <ul style="list-style-type: none"> • exothermic and endothermic • energy in reactions • chemical cells and batteries • fuel cells | <p>Rates of reaction</p> <ul style="list-style-type: none"> • rate introduction and collision theory • temperature and rate • concentration and rate • surface area and rate • catalysts and rate | <p>Rates of reaction (cont)</p> <ul style="list-style-type: none"> • reversible reactions • dynamic equilibrium • changing conditions <p>Chemistry of the atmosphere</p> <ul style="list-style-type: none"> • evolution of the atmosphere • the greenhouse effect | <p>Chemistry of the atmosphere (cont)</p> <ul style="list-style-type: none"> • global warming and climate change • atmospheric pollutants <p>Revisit content</p> |

Chemistry
Year 9 curriculum map

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|---|--|--|--|--|---|---|
| Key skills to apply in assessment or exam | <ul style="list-style-type: none"> • Use scientific vocabulary, terminology and definitions. • Safe use of a range of equipment to separate chemical mixtures. • Use SI units and the prefix nano. • Visualise and represent 2D and 3D forms including two dimensional representations of 3D objects. • Explain how testing a prediction can support or refute a new scientific idea. | <ul style="list-style-type: none"> • Use scientific vocabulary, terminology and definitions. • Carry out experiments appropriately having due regard for the correct manipulation of apparatus, the accuracy of measurements and health and safety considerations. | <ul style="list-style-type: none"> • Use scientific vocabulary, terminology and definitions. • Use a variety of models such as representational, spatial, descriptive, computational and mathematical to solve problems, make predictions and to develop scientific explanations and understanding of familiar and unfamiliar facts. | <ul style="list-style-type: none"> • Use scientific vocabulary, terminology and definitions. • Evaluate risks both in practical science and the wider societal context, including perception of risk in relation to data and consequences. | <ul style="list-style-type: none"> • Use scientific vocabulary, terminology and definitions. • Use scientific theories and explanations to develop hypotheses. • Presenting reasoned explanations including relating data to hypotheses. | <ul style="list-style-type: none"> • Use scientific vocabulary, terminology and definitions. |
| Title of Knowledge Organiser | <ul style="list-style-type: none"> • Atomic structure and the periodic table | <ul style="list-style-type: none"> • Atomic structure and the periodic table | <ul style="list-style-type: none"> • Energy | <ul style="list-style-type: none"> • Rates of reaction | <ul style="list-style-type: none"> • Chemistry of the atmosphere • Rates of reaction | <ul style="list-style-type: none"> • Chemistry of the atmosphere |