

Chemistry

Our intent: In KS3 Science journey our core intention is to share our passion for the three separate subjects. We care deeply about the nurturing of critical thinking skills, problem solving, natural curiosity and creative thought. We aim to provide a rich, exciting, and challenging programme for our very able cohort.

Skills: Our curriculum is designed to develop the skills and knowledge we know stimulates interest and enthusiasm. The purpose is to allow each child to thrive within the scientific disciplines. Our aim is to build confidence and ability in practical science, develop social skills such as teamwork, negotiation, supporting others and working towards common goals.

Knowledge: By the end of KS3 in Chemistry students will have a good understanding of how particles underpin the material world. They will recognise through a fun and stimulating programme that the modern world is very reliant on chemical reactions and the products made. Students should see that the chemical evidence for processes pushes forward scientific and societal developments.

| Year | Half term | Content |
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| 7 | a) | Lab Matters - Safety, Introduction to Bunsen burners, solids, liquids and gases, particles |
| | b) | Lab matters continued - diffusion, density. Water -changes of state, filtration |
| | c) | Water continued - distillation, chromatography, solutions, investigation. |
| | d) | Acids and Alkalis - pH scale, neutralisation, metals and acids, types of indicators |
| | e) | Chemical reactions - Chemical and physical changes. Revision for exams. |
| | f) | Exam feedback. Chemical reactions - continued - testing gases, composition of the air, candle investigation. |
| 8 | a) | Elementary - Periodic Table, metals and non metals, elements and compounds |
| | b) | Elementary continued - pure substances and mixtures, test. 'Patterns' - Reactivity Series |
| | c) | Patterns continued -Reactivity series, displacement, corrosion and prevention of rusting |
| | d) | Environmental Chemistry -Acid rain, carbon cycle |
| | e) | Environmental Chemistry continued-Global Warming, Revision for exams |
| | f) | Geological cycles. |
| 9 | a) | Salts - reactions producing salts, word and symbol equations |
| | b) | Salts practical project - students design and carry out a practical to produce a salt and explain the chemistry behind it. |
| | c) | Atoms, Formulae, separation techniques |
| | d) | History of atomic structure, subatomic particles, isotopes |

We seek to use lively minds, to work hard, to develop all our talents and to grow through sharing, to be the best version of ourselves

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| e) | Periodic table and its history |
| f) | Exams, exam feedback, further study of the Periodic Table. |

