**Curriculum Intent - CHEMISTRY**

STATEMENT

**Curriculum Implementation**

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|  | | | **Autumn** | | **Spring** | | **Summer** | |
| HT1 | HT2 | HT3 | HT4 | HT5 | HT6 |
| **Year 10** | **BROAD** | Core content, knowledge and skills | C2 The periodic table (recap)  C3 Structure and bonding | C4 Chemical Calculations  C5 Chemical changes | C6 Electrolysis  C7 Energy changes | C8 Rates and Equilibrium | Revision and TES  C9 Crude Oil and fuels | C10 Organic reactions  C11 Polymers (if time) |
| Ways the Y10 curriculum goes beyond the national curriculum, including extra-curricular opportunities | Science week activities | | | | | |
| **COHERENT** | Prior knowledge required to access this unit | KS3 Activate resources:  C1.1 Particles and their Behaviour  C1.2 Elements, Atoms and their Compounds  C1.3 Reactions | KS3 Activate resources:    C1.4 Acids and Alkalis | KS3 Activate resources:  C1.3 Reactions | KS3 Activate resources:   C2.3 Metals and acids | KS3 Activate resources:   C2.4 The Earth | KS3 Activate resources:  C2.3.7 Ploymers |
| Assessment | End of topic test after every topic. End of Year 10 examination. | | | | | |
| Points when this knowledge/these skills will be revisited | Thinking and linking activities every lesson.  Required practical work. | | | | | |
| **EMPOWERING** | Key vocabulary | Key words for each topic on the back of the blue sheet given at the start of each topic. | | | | | |
| Opportunities to engage with different cultures/perspectives/voices | Environmental issues linked with burning fossil fuels and the production of plastics.  Recognition that discoveries in science can sometimes have harmful and beneficial effects | | | | | |
| Relevance to real world and careers | Different aspects of the chemical industry: extracting metals, oil, making plastics. | | | | | |
| **CHALLENGING** | Homework | My GCSE Science – watch videos, answer multiple choice questions  Kerboodle – various different tasks  Seneca Learning  Exam questions | | | | | |
| Super curricular recommendations | Choose several ordinary items and explain what they are made of and how the bonding of that material helps the object to do its job  Research an unknown scientist from the website given. <https://www.sutori.com/story/history-of-the-periodic-table-timeline--BqQECxPomTF3kTiAdpVakBj>  Using details of the required practical’s found here, choose any one of them and attempt to write a similar method but exploring other variables <https://www.revisechemistry.uk/GCSE/AQA/index.htm>  Listening task <https://www.bbc.co.uk/programmes/w3ct03bt>  Read this article from the New Scientist magazine. [We're running out of lithium for batteries – can we use salt instead? | New Scientist](https://www.newscientist.com/article/mg24933180-600-were-running-out-of-lithium-for-batteries-can-we-use-salt-instead/) | | | | | |

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|  | | | **Autumn** | | **Spring** | | **Summer** | |
| HT1 | HT2 | HT3 | HT4 | HT5 | HT6 |
| **Year 11** | **BROAD** | Core content, knowledge and skills | C10 Organic reactions (if not completed from previous year)  C11 Polymers | Revision and TES  C12 Chemical analysis | C13 The earth’s atmosphere | Revision and TES  C14 Using our earth’s resources | C15 Using our resources.  Revision | Exams |
| Ways the Y11 curriculum goes beyond the national curriculum, including extra-curricular opportunities | Science week activities  GCSE Science lecture Live | | | | | |
| **COHERENT** | Prior knowledge required to access this unit | KS3 Activate resources:   C  C2.3.7 Polymers | KS3 Activate resources:  C2.2 Separation techniques | KS3 Activate resources:    C2.4 The Earth  C9 Crude Oil and fuels | KS3 Activate resources:  C2.3 Metals and acids  C2.4 The earth  Previous KS4 topics:  C5 Chemical changes  C6 Electrolysis | Previous KS4 topics:  C5 Chemical changes  C3 Structure and bonding  C11 Polymers  C8 Rates and Equilibrium  KS3 Activate resources:  C2.3 Metals and acids |  |
| Assessment | End of topic test after every topic. TES1 in November, TES2 in February | | | | | |
| Points when this knowledge/these skills will be revisited | Thinking and linking activities every lesson.  Required practical work. | | | | | |
| **EMPOWERING** | Key vocabulary | Key words for each topic on the back of the blue sheet given at the start of each topic. | | | | | |
| Opportunities to engage with different cultures/perspectives/voices | Climate change, sustainability, use of petrochemicals, recognition that discoveries in science can sometimes have harmful and beneficial effects, the environmental impact of industry. | | | | | |
| Relevance to real world and careers | Petrochemical industry, environment issues/being an environmental scientist, sustainability, carbon footprint | | | | | |
| **CHALLENGING** | Homework | My GCSE Science – watch videos, answer multiple choice questions  Kerboodle – various different tasks  Seneca Learning  Exam questions | | | | | |
| Super curricular recommendations | Calculate your carbon footprint and make a plan of ways to reduce it Link 15: <https://footprint.wwf.org.uk>  Make a virtual visit to the Science Museum and explore some of the objects and stories such as this [Building the modern world: Concrete and our environment | Science Museum](https://www.sciencemuseum.org.uk/objects-and-stories/everyday-wonders/building-modern-world-concrete-and-our-environment)  Dip into some chemistry news topics: <https://www.sciencedaily.com>  Explore the rest of the Periodic Table or listen to a podcast about an element. : <https://www.rsc.org/periodic-table/podcast>  Keep up your reading of science books. <https://www.goodreads.com/list/show/13800.Chemistry_best_books> | | | | | |