Astley Community High School

# Chemistry Curriculum Overview

| What are the aims of the Chemistry curriculum? |
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| Our Chemistry curriculum provides students with an exciting insight into the world of chemistry and allows students to develop their understanding of the composition, structure and properties of matter. As students move into KS4 we develop our students' understanding of the conceptual models of atoms and how they interact to make new materials and structure, as well as developing students' practical, observational, analytical skills. Key Stage 5 is an excellent preparation for students wishing to progress onto university or work in STEM related fields. It covers the key concepts of chemistry and the underlying practical skills that underpin our understanding of chemistry. |

| How does the Chemistry curriculum support the Seaton Valley Federation's curriculum vision and intent? |
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| Chemistry provides students with a challenging curriculum with many interesting and engaging topics that link to contemporary and cultural issues in the world around us. Students use their literacy and numeracy skills to solve problems and conduct experiments throughout the curriculum. Chemistry also allows our students to become independent learners through trial and error, encouraging independent problem solving skills to develop. |

| How is the Chemistry curriculum sequenced to support pupils to make effective progress and how is transition managed between key stages? |
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| The fundamental skills of working scientifically are woven and developed throughout the chemistry curriculum. At key stage 3 students become confident in the particulate nature of matter and how chemical reactions involve the rearrangements of particles. Alongside this students also look at the way materials can be classified as elements,mixture or compounds.<br>These foundations are then refined and developed during key stage 4 as our chemistry students become confident using the atomic model to explain how atoms are organised and bond together to make different structures; why chemical reactions take place and the energy changes that take place in these reactions. How materials can be separated and analsyed to identify pure and impure substances. Students also learn how our atmosphere has developed and is impacted by human activity.<br>During key stage 5 students further develop their knowledge of the quantitative measurements that underpin our understanding of chemistry, as well as developing their understanding of physical, inorganic and organic chemistry.<br>Throughout all areas of the curriculum the practical skills that underpin our understanding of chemistry and the scientific method are developed during experiments and the analysis of data.<br>Smooth transition between Year 8 and 9 and key stage 3 and 4 is ensured through the consistent interweaving of the fundamental skills required in chemistry, which then allows students to apply to the new knowledge introduced. |

| How is assessment and feedback used to aid progress? |
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| Regular formal assessment is carried out throughout the curriculum, to monitor students progress and performance; this takes the format of both mini assessments, tracking and topic assessments and formal assessment at the end of KS4 and KS5.<br><br>Teachers also assess students regularly through oral feedback, particularly at key stage 3, as well as using peer and self assessments to consolidate and confirm students' learning and understanding. |

| How is staffing organised within Chemistry? |
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| Throughout year 9 and KS4 students will have one designated chemistry teacher, alongside one biology and one physics specialist.<br><br>At KS5 Chemistry is delivered by two specialist teachers, one concentrating on the physical and inorganic chemistry content and the other on the organic and analysis topics. Mr Hiscock, Mrs Keay and Mrs Godden are the specialist chemistry teachers. |

| Examined courses – exam board and course code (exams and controlled assessment elements) |
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| AQA GCSE Chemistry<br>AQA GCSE Combined Science<br>OCR A-level Chemistry A H032/H432 |