



Middlewich High School



QUALITY OF EDUCATION

Science Department

Curriculum Rationale

The Curriculum rationale of the Science department is outlined below. These are the principles that shape our intent, implementation and intended impact of our subject area on the wider Middlewich High School Curriculum. We believe that every pupil, regardless of ability or background, should expect the same consistently high-quality education in every lesson taught by every teacher across our Curriculum team.

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| <p>Our Vision and Values for our Subject are:</p> | <p>Vision and Values:</p> <ul style="list-style-type: none"> ● To inspire children at Middlewich High School to become the next generation of scientists. ● To provide support and guidance so every child believes they possess the knowledge and skill to succeed in science. ● To guide students through a knowledge rich curriculum that equips them with the key theory and skills to succeed at key stages 3, 4 and beyond. ● To deliver enrichment opportunities that enhance the aspirations of our children. |
| <p>Our rationale for teaching what we teach is as follows:</p> | <ul style="list-style-type: none"> ● The introduction to science ensures all students have the foundation they need to succeed, irrespective of their prior experience. ● Great consideration has been given to the sequencing of topics. Providing a balance between breadth across all three sciences every term and depth of individual topics. ● A spiral curriculum allows children to revisit topics, deepening their understanding of key concepts. ● Models and practical activities are used frequently to facilitate children's understanding of scientific theory. Children work scientifically from a very early stage, ensuring their disciplinary knowledge is just as strong as their substantive knowledge. |
| <p>The principles that shape our Key Stage Three Curriculum are:</p> | <ul style="list-style-type: none"> ● To develop investigative skills including planning investigations, presenting data in tabular and graphical formats and analysing data to enable conclusions to be made. ● To provide a solid foundation of key concepts on which they can develop at key stage 4. ● To embed opportunities to investigate potential career paths across the 3 sciences, linked to our curriculum. |
| <p>The principles that shape our Key Stage Four Curriculum are :</p> | <ul style="list-style-type: none"> ● Deepen knowledge of key concepts introduced at key stage 3. ● Refine practical skills, planning and carrying out investigations independently. |

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| | <ul style="list-style-type: none"> ● Develop every child's application skills, enabling them to solve real life problems with knowledge gained in the classroom. ● Children fully engage in enrichment opportunities in science whether post 16 is A-levels or vocational routes or apprenticeships. |
| Our Pupil Promise: You will see the following in our lessons: | <ul style="list-style-type: none"> ● New theory will be presented in manageable chunks. Teachers will check understanding frequently to ensure knowledge has been captured. ● Models and practical activities are used frequently to facilitate children's understanding of scientific theory. ● Real world links will be made where possible to aid understanding and increase retention of knowledge. |
| Cultural Capital we offer our pupils through our Curriculum is as follows: | <ul style="list-style-type: none"> ● Enrichment opportunities such as Lego Rovers Challenge and Faraday Challenge. ● Investigating careers linked to key scientific concepts during in class discussions. ● Careers fairs promoting post 16 options in both academic and vocational routes with a guided application process. |
| Next Steps – Our aspirations. We intend that our pupils will leave us in Year 11 with the following skills and qualities: | <ul style="list-style-type: none"> ● A sound understanding of key scientific concepts. ● Strong data analysis and manipulation skills. ● A sense of inquiry about the world around them and the desire to seek answers. |

The Mission Statement of the Science Department

Our mission statement for Quality Education in our Department is outlined below.

Evolution of the human race is dependent on scientific advancements. It is our desire to open children's minds to the vast number of opportunities the world of science has to offer. Continuously deepening their understanding and passion for Science we aim to create driven, independent learners whilst encouraging their individuality and creativity.