

Question	Notes
<b>INTENT</b>	
Describe the curriculum design and state why have you done it that way?	The science curriculum is designed to be progressive, with an emphasis on 'Working like a scientist.' Key stage three uses teaching units from a published scheme of work to ensure a broad and balanced curriculum that enables pupils to progress onto accredited routes in key stage four.
How have you secured a "broad and balanced" curriculum?	<p>Teaching units are sequenced, so that in key stage three the topic changes every half term; topics are rotated on a biology, chemistry, physics basis, with working scientifically a theme that runs across all teaching.</p> <p>In key stage four: Pathways Level 1 and 2 Vocational science awards consist of a range of units from biology, chemistry and physics.</p> <p>Single science GCSE is offered to pupils who require this type of qualification for entry into FE and aligned to their Post 16 destinations aspirations.</p>
What are the important things they need to know before they leave Elmwood?	<p>Science gives all pupils the necessary skills for further education and employment, deepens their knowledge of scientific ideas and enables them to engage in the processes of Science.</p> <p>The Elmwood Science Strategy has two important purposes:</p> <ul style="list-style-type: none"> <li>• To help pupils entering the UK workforce of the 21<sup>st</sup> century to have the knowledge and skills necessary to contribute to economic, scientific and technological development.</li> <li>• To allow pupils to have an understanding of scientific and technological approaches and evidence, so that they will be able to make informed decisions on topical scientific and technological issues.</li> </ul>
How is the curriculum sequenced (long, medium, weekly, daily) and why do we do it that way?	The curriculum has a long term overview that sequences the units of teaching.

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	<p>Medium term planning utilises published schemes of work at key stage three and qualification syllabi at key stage four.</p> <p>Lessons are planned weekly, based on the medium term scheme of work, progression through the unit and areas of identified concern.</p> <p>Planning in this way ensures variety of topic, thus helping to maintain pupil interest, it can be responsive to pupil need and also supports the teaching of others science department staff.</p>
<p>Is there an example of where the curriculum builds on knowledge and skills?</p>	<p>Newly introduced this academic year (2019 -20) is a focus on 'Working like a scientist'. This allows for pupils to build on three distinct skill areas; Thinking, Investigating and Communicating. A progression grid has been developed linked to Elmwood's Assessment Band system, this allows investigations to be assessed against the grid and particular skills can be identified and annotated. The grid also enables pupil feedback.</p> <p>This approach has been applied to the investigations 'Extension of a spring' and 'Frictional surfaces'. In these investigations pupils applied the skills making accurate observations or whole number measurements, presented simple scientific data using tables and charts, showed scientific data more than one way, distinguished independent and dependent variables in the investigations. Opportunities each term will be provided through investigative work to practice and extend the skills identified on the progression grid.</p> <p>The next step is to develop a pupil record that can be dated to identify when skills have been applied in an investigation rather than generate an overall grade.</p>

<p>How successful is the curriculum, and how do you know this?</p>	<p>It may too early to say with certainty because the curriculum was introduced in September 2019 with myself as new Curriculum Lead teacher. However, after one term progress is:</p> <ul style="list-style-type: none"> <li>• Key stage three 90% of pupils are making <b>at</b> or <b>above</b> expected progress from their baseline assessments into the school, with 63% of them working <b>above</b> expected progress.</li> <li>• Key stage four 89% of pupils are making <b>at</b> or <b>above</b> expected progress from their EKS3 assessments, with 47% of them working <b>above</b> expected progress.</li> </ul>
<p>How innovative is the curriculum?</p>	<p>The approach of thinking scientifically is a move away from a purely skilled best curriculum and a focus on retention and appropriately selecting and applying the acquired knowledge and understanding to solve the investigation. This approach is innovative from previous science curriculums and is challenging pupils thinking and approach to teaching and assessment.</p>
<p><b>IMPLEMENTATION</b></p>	
<p>How do you keep abreast of new developments?</p>	<p>CLEAPS newsletters. Curriculum Lead teacher is currently on NPQML programme, which also opens up opportunities to discuss and liaise with other Curriculum Leads from Secondary mainstream schools across the alliance. Science Pod casts through BBC sounds. Online short courses.</p>
<p>Are there any published schemes of work you use, if so why?</p>	<p>Key stage 3 currently using Oxford's Activate scheme – this is used to ensure a broad and balanced curriculum is delivered and that learners are prepared for progression into key stage four qualifications.</p>
<p>What schemes are you currently working towards, and what resources are you using?</p>	<p>Key stage three – Oxford's Activate is used as a basis for the content of planning, but lessons are adapted to try to include greater opportunities for practical learning.</p>

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How effective is teaching?	Teaching will be consistently good. (1 staff equate to Good; 1 staff equate to Requires Improvement – this is being managed through a supportive plan).
How do you ensure that pupils understand and remember information?	<p>In key stage three: Pupil work in books is regularly marked in accordance with the science department method of work. End of unit progress tests are used each half term to assess learning / progress.</p> <p>Feedback is provided to pupils on the end of unit tests, in the form of 'Top Tips' with questions that are modelled in lesson. This occurs at term mid points. At the end of each term, individual written feedback is provided, this is linked to parental reports.</p> <p>Investigations are marked and annotated using the 'Working as a Scientist' progress grid and opportunities to rehearse and extend these skills are provided during investigations in each topic.</p> <p>In key stage four: Pupil work in books is regularly marked in accordance with the science department method of work. Assessed tasks for used for portfolio evidence.</p> <p>All science data is maintained on the Science spreadsheet. Updated half termly.</p>
<b>IMPACT</b>	
Does the curriculum lead to good results?	The introduction of the new curriculum and focus on 'Working as a scientist' currently seems to be positive, with the first terms progress.

	<p>4/8 (50%) of pupils in Year 11 have already achieved their Level 2 Certificate in Applied Science and Technology and have progressed onto the GCSE Biology qualification.</p> <p>4/8 (50%) have 2 additional units to complete in order for them to achieve their Level 1 Certificate in Applied Science and Technology.</p>
<p>Does learning over time show appropriate challenge, how do you know?</p>	<p>This is an area that the department is conscious of and planning is trying ensure that all pupils are stretched and challenged appropriately. This will be evidenced through workbook scrutiny by the Curriculum Lead and SLT.</p>

Science Department