

Subject Curriculum Statement of Intent

Subject	Subject Leader	Completed By	Date
Science	Alan Price	AP	2/12/19

Observable behaviours		
Care for Self	Care for Others	Care for our Environment
<ul style="list-style-type: none"> I take responsibility for my own emotions and behaviours. I take responsibility for my own learning. I am proud of my achievements. I am resilient when things get difficult. 	<ul style="list-style-type: none"> I reflect upon my impact on others. I celebrate in others achievements. I practice being honest, compassionate and empathetic. I talk to people, not about them. 	<ul style="list-style-type: none"> I respect my own and others property. I care about our environment. I show a contribution to our community.

Intent	
<p>How is our school's intent represented throughout the curriculum for this subject?</p>	<ul style="list-style-type: none"> <u>Care for Self</u>: Pupils are encouraged to care for themselves by developing safe working practices and risk assessment strategies through practical scientific learning tasks. Pupils actively engage in a wide range of learning experiences that promote a knowledge of all areas of the science curriculum: biology, chemistry, physics and thinking scientifically. Feedback on learning within lesson, at key assessment points and verbally ensures pupils are stretched and challenged both academically and personally this helps promote resilience. Within the work place pupils will be required to have the skills of independent working and working with others; therefore, opportunities are provided for pupils to develop their own learning skills and their social and emotional learning skills though group work where they can apply their knowledge to problems and real life scenarios. <u>Care for Others</u>: Pupils are encouraged to care for others though safe working practice. Social and emotional learning skills are promoted through paired and small group work. Pupils are also encouraged to help each other and lead aspects of learning where they feel comfortable. This improves confidence in learning but also strengthens social skills and maintains positive working relationships. <u>Care for our Environment</u>: Pupils are encouraged to care for the learning environment by tidying equipment away on completion of practical work. Care for the wider environment is encouraged through the learning of human impact on ecosystems and through learning outside the classroom opportunities.

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Implementation	
How is the subject timetabled? How do we know this happens?	Where ever possible science is timetabled for morning lessons because pupils are able to concentrate for longer periods and absorb new information effectively. Bespoke timetables and interventions are created as and when needed to assist learning. Staff are consulted two weeks prior to timetable changes and invited to give feedback or share their views. Each group receives two periods per week of science and wherever possible is within the science lab – where this isn't possible a rotation between groups is used to make sure that access to the science lab is available and doesn't affect pupils' experiences and learning.
How is the subject mapped out? How are we ensuring coverage?	A scheme of work guides the learning focus for the academic year. This acknowledges coverage of the key stage three National Curriculum and examination syllabi. There is fluidity in its execution and staff are empowered to stray from this to incorporate pupils' interests, skills, and ability. In addition to daily reflective conversations between the two science staff, termly science department meetings provide opportunity to review the curriculum and plan any interventions or amendments to the scheme of work (if necessary). In addition, this provides a platform to discuss topics that have been particularly well received and plan ahead to incorporate significant diary events that give pupils real life experiences and enriched curriculum opportunities. Coverage is ensured through planning, mapping to examination syllabi and departmental meetings.
Can we see progression across the school within pupils' books?	Regular marking scrutiny monitors both pupil progress, curriculum coverage, and underpins progress alongside a termly assessment which is written in alignment with the topics covered. Progress is recorded on the science data spreadsheet regularly, termly pupil progress is recorded on whole school core subject spreadsheet. Marking scrutiny (half termly) is recorded on Perspective so is monitored and evaluated. This progress is discussed at Curriculum Lead and department meetings so information can be shared and acted on. A progression grid for thinking scientifically has been developed with the intention of using this to assist progression and give feedback to pupils. As a consequence of this marking will not specifically focus on SPG beyond key scientific words.
How is assessment used to impact learning? How do we know it is accurate?	At key stage three, end of unit assessments are used to assess pupil progress each half term. These are marked in accordance with published schemes of work. Work scrutiny and classwork will be drawn on to strengthen judgements when needed. At key stage four, assessment is in line with the specific requirements of exam boards. The current provider 'Gateway' have external moderators that visit school termly and assess the quality and content of work.
How confident are staff with the subject? How do we know?	The Curriculum Lead liaises regularly with the other staff member in the department to discuss matters around effective teaching and delivery of science. Staff support each other with regard to challenging topics, overcoming misconceptions, marking effectively, and improving the quality of science education. The intimate size of the school allows good communication within the department and this is seen as a strength of the subject. Both science teachers are competent outdoor practitioners and value opportunities for learning outside the classroom. Environmental science, biology and physics are considered curriculum strengths, as neither teachers are chemistry specialists.

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Impact (Desired)	
Do all groups have equal access to the curriculum? How do we know?	All groups are accessing the curriculum as teachers are empowered to make a professional judgement and create innovative lessons that Elmwood pupils can relate to. Qualifications are selected for individuals depending on their level of ability and pathway for the future. Curriculum Lead meetings discuss progress, address significant shortfalls and highlight patterns across the curriculum. Educational Health Care Plan meetings provide the opportunity to discuss progress and successes in the curriculum. Progress and achievement reviews also give teachers a termly opportunity to provide feedback and ensure all pupils are accessing the curriculum equally. One pupil in key stage four currently has a limited exposure to the science curriculum due to them being flexi-schooled, but staff have worked collaboratively to support this provision after school enabling a science qualification to be achieved.
How does varying staff confidence impact on the curriculum?	As we have a wealth of knowledge and expertise within the department we are able to share good practice and innovative lesson plans which give depth to our delivery and improves impact for the Pupils. Attainment and achievement in pupils is good overall due to the variety of lessons we can provide which tap into our learner's strengths and skills. This is monitored through lesson observations which aims to ensure 100% of lessons have a judgement of at least a Good standard. Published schemes of work help inform the teaching particularly in chemistry – further knowledge / assistance can be gained from CLEAPPS / the web or science technician from Ormiston Sheffield Academy.
How are 2e students provided with the opportunity to show mastery and depth of understanding of the curriculum?	Following identification of 2e pupils, they are offered a variety of enriching activities and visits that enhance their learning experience with a view to deepening understanding. We offer leadership and coaching within and beyond the classroom environment. It is our intention that by providing our pupils the opportunity to exercise their skills in a variety of environments that they begin to develop mastery and transferrable skills that can be used in their onward pathways.
How does learning outside of the classroom impact the curriculum?	Pupils develop a greater understanding of how their knowledge and learning impacts on themselves, others and their environment. Learning becomes more accessible as it is relatable to real life situations and so retention is improved. Many of our pupils have experienced barriers to learning whilst inside the classroom so relate to these previous hindrances by default. It is therefore invaluable that we can take our learning away from the very places that have previously caused upset and anxiety but provide a learning platform that has no pre conceptions or negativity attached.
How does presentation of pupil work impact the curriculum?	Pupils are encouraged to show pride and care over their presentation in order to care for their own learning. Improved attention to classwork and finished pieces naturally lends itself to an improved standard and quality of work. Elmwood feels it is important to encourage pupils to improve the quality of their presentation with the intention of improving standards achieved. It gives pupils the chance to reflect on their learning journeys and prepare them for the next stage of their education.

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Things to celebrate	Next Steps
<ul style="list-style-type: none"> • In KS3 90% of pupils are making at or above expected progress from their baseline assessments into the school, with 63% of them working above expected progress. (Autumn Term 2019). • In KS4 89% of pupils are making at or above expected progress from their EKS3 assessments, with 47% of them working above expected progress. (Autumn Term 2019). • A variety of Pathways available to all of our learners including Gateway Level 1 & 2 and GCSE qualifications. • A developing scheme of work that give staff a reference point to ensure high quality lessons within science across Elmwood. • Elmwood pupils benefit from an enriched curriculum that takes into account their barriers to learning and additional educational needs. • Science is positively received across both key stages. • Pupils positively participate in cross curricular activities and STEM Challenges. • Pupils are able to live through their core values by being responsible for their own learning journeys, celebrating successes, and showing pride in their achievements. 	<ul style="list-style-type: none"> • To continue to up skill staff to confidently deliver the thinking scientifically and chemistry. • To review and evaluate the curriculum offered to pupils with cognition and learning barriers and those who require significant stretch and challenge enabling full access and providing challenge. • To have professional discussion to up-skill staff in aspects of the curriculum, to provide updates around the subject and reflect on what has gone well and what more we can do. • To improve the quality of thinking scientifically, and how this is reported upon. • Ensure that the increased number of GCSE target pupils are accommodated and planned for both with the curriculum and taking into account staff capabilities. • To maintain staff well-being.