

Because we are “*we all come together to learn*”,
**there is a strong universal element to our curriculum:
we give all learners, particularly the most disadvantaged,
the knowledge and cultural capital they need to succeed in life.**

SCIENCE

Intent

- We value students for the global citizens, the stewards of creation, that they will become; we believe all students must understand the wider consequences of their day-to-day decisions. The chief intent underpinning our Science curriculum, therefore, is for students to develop a clear understanding of the major issues our world is facing, and the science behind their causes and solutions. Students will master key concepts in the three Sciences, and examine them within the context of current global issues such as pollution, food sustainability, climate change *etc.*
- We believe Science comes to life when it is applied to the real world. Linking students’ learning to recent/historical global events strengthens engagement, provides context and purpose to learning, kindles passion and deepens understanding. Applying knowledge to practical contexts (*eg* understanding electricity bills, choosing a car wisely, the importance of screening) does this too, and develops students’ independence.
- Our practical activities ensure pupils understand the purpose of scientific enquiry and gain the skills needed to draw valid conclusions.

Implementation

- Many of our students study Science post-16. Pre-14, therefore, we group topics into themes within each of the three sciences (*eg* biodiversity, health; acid rain, atmosphere; forces and matter). From this they learn about areas of specialism within ‘Science’ that they may study further.
- Our topics are heavily sequenced to ensure students understand the fundamentals before applying them. As we teach a topic higher up the school prior knowledge is tested to see how well it has been retained. Various forms of assessment (*eg* hinge questions) check learners’ understanding during teaching. Our resources are generated collaboratively ensuring all students enjoy a high-quality, challenging learning experience. Area specialists play in ensuring misconceptions are addressed. Resources are regularly reviewed once they have been used.
- We employ an evidence-based, common pedagogy, *eg* using ‘no hands up’ and promoting deeper responses using SMA Responsive Feedback.
- Our intent focuses on the application of Science, so we help pupils research and read around current affairs, *eg* by using literature from books and articles for homework. We regularly engage with local Universities (trips out, visitors in) and lay on extra-curricular STEM activities.

Impact

- We assess the impact of our teaching through Responsive Feedback, reviewing work each lesson *eg* to identify misconceptions. Low-stake quizzes supplement end-of-unit key fact tests, which are repeated later to ensure retention. In keeping with our intent, application style questions also feature in end-of-unit tests. Main tests with a deep synoptic element, similar to GCSE papers, complete our measures of impact.

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