

Curriculum statement – Science

Intent – What we are trying to achieve?

- To foster curiosity and resilience by ensuring that our students develop a mastery of the fundamental skills and knowledge in biology, chemistry and physics.
- To develop student confidence and independence during practical work, with a core understanding of how science works.
- To develop the literacy and numeracy skills of students by embedding them into lessons.
- Success criteria will be supplied for all tasks that are well constructed and enable students to take their learning forward.
- National policies such as British Values, PSHE and RSE are built into the scheme of learning. This also includes links with industry and higher education in order to promote career ambitions.
- To provide a seamless transition from KS2 through to KS5 science with consistency across the MAC.
- In Years 7 and 8 students follow a programme that aims to build upon the skills from key stage 2 and ensure a depth of understanding of the key scientific concepts.
- 100% of students will study science at GCSE level.
- In Years 9, 10 and 11 students will study either the separate sciences or the combined science (trilogy) GCSE depending on the pathway they are in.
- A-Level biology, chemistry and physics are available for students who achieve a grade 7 at GCSE. A-Level applied science is available for those who achieve a grade 5 at GCSE.

Implementation – How do we translate our vision into practice?

- Success criteria are graded and provide strategies that enable students to gauge their own progress within a lesson. These will also provide built in follow-up tasks in homework in order to reduce the marking burden on teachers.
- At KS4, we aim for all classes to have a specialist subject teacher. At KS5, biology, chemistry and physics are only taught by specialist subject teachers.
- Members of staff are supported with resources and / or schemes of learning are available for the development of new resources. Staff are given opportunities for CPD in-house, in webinars, from learning walks, during half-termly PDA, through observations and with external courses.
- Setting in all year groups enable students to make the maximum progress. Class setting is reviewed after every assessment to ensure all students are in the most appropriate class to maximise their learning and progress.
- The scheme of learning has an extensive range of resources included and is followed by all staff. A “big picture” overview is to be shared with all students. These are reviewed yearly in light of exam analysis.
- Assessment is rigorous and in key stage 4 and 5 consists of GCSE/GCE questions. Full past papers are completed as mocks from the end of Year 10. Assessment always includes current topics and also questions on previous topics to ensure a spiral learning approach. All assessments are teacher marked, graded and individual follow-up work set.
- Homework is set and assessed fortnightly for key stages 3 and 4 in line with school policies. For key stage 5 students are set 3 hours of assessed work and 3 hours of independent work per week.
- Past papers are used extensively in Year 11.
- KS2 SATs tests are completed by Year 7 students in order to assess prior learning and inform class teaching.
- Data is analysed after each assessment to track the progress of all learner demographics.
- Interventions at lunchtime and after school for Year 11, 12 and 13 are extensive. Intervention lists are continually renewed in light of student progress meetings. Master classes are run in A-Level subjects.
- Revision sessions are run at Eater for KS4 and KS5 students. These are streamed in order to maximise progress in the session.
- Revision work is provided to all students and set as homework prior to assessments.
- Extra-curricular activities –Year 6 induction, Year 8 Science and Maths day, Year 8 Maths and Science day, key stage 5 taster lessons.

- Pupil premium students are provided with additional resources including revision guides, work books and pupil premium specific intervention sessions.

Impact – What is the impact of our curriculum on the students?

- Students across all abilities achieve good results in external exams, low ability students in particular. Results can be more variable with assessments but this is followed up with monitoring and intervention to address difficulties and subsequent assessments will include questions from these prior topics.
- Revision skills develop over the 5 years and the majority of students have a clear understanding of the best approaches to science revision, particularly the need for exam questions.
- Students recognise and appreciate the rigour of the work ethic expected and student voice indicates a recognition of the thorough preparation for exams, particularly practice exam questions.
- Uptake of all 4 A-Level courses is very good, with biology and chemistry often needing multiple classes. Practical skills at KS5 are excellent with 100% of students passing the practical endorsement element and extremely positive feedback was received from the last review carried out by OCR.