Implementation of the Science Curriculum

We have a dynamic and relevant science curriculum developed by all departmental members which identifies opportunities for pupils to develop their self-reliance, confidence, enquiring and independent mindsets. We have high standards which are evidenced within the curriculum and the department sets aspirational targets whilst ensuring that the needs of learners, including SEN & disadvantaged are supported (planned within and beyond the classroom).

There are ten key themes within KS3 science, and these diversify and develop further at GCSE and A Level.

Over the course of a student's time in science they will experience an equal balance of Biology, Chemistry and Physics content at Key Stage 3 and 4. Lessons will cover the substantive and disciplinary knowledge in science such as core principles, mathematical skills, required practical's and all working scientifically concepts. Furthermore, the interleaving and common ideas within each science specialism, across science specialisms and cross curricula will also be emphasised and explored.

Lessons will be a mixture of teacher led, group work, independent work and practical work. The department is well resourced and there is a wide range of scientific equipment, print, digital and online resources that will be used.

Teachers within the department have worked collaboratively on a curriculum map which meets the KS3 and KS4 national curriculums. This has informed the design of the departments schemes of work to ensure substantive and disciplinary knowledge are clearly taught and linked together to ensure a coherent flow for students through the science curriculum. The design also encourages the support of long-term retainment of these substantive and disciplinary knowledges, ensuring students are ready to apply them in their future lives and careers.

Students will also experience science beyond the classroom, experiencing enrichment activities such as trips and entering national science competitions. Social, moral, spiritual, and cultural content will also be emphasised within the curriculum and careers linked to both:

Substantive Knowledge - is **knowledge of the products of science**, such as models, laws and theories

Disciplinary Knowledge – is **knowledge of the practices of science**

This teaches pupils how scientific knowledge becomes established and gets revised and will be discussed within lessons across all years.

Impact of curriculum

The impact of the curriculum will be measured in a number of ways.

1. **In class teacher led reviews and formative feedback – this low-risk challenge and review environment for pupils will include:**

- recap recall quick starters, home learning, forms quizzes and use of Kahoot (know)
- review tasks, multichoice and extended questions, GCSE Pod (extend)
- in class exam style questions linked to required practical's (apply)

2. Through rigorous, reliable and accessible assessment.

- Formal assessments at the end of every unit of work across all 3 science subjects,
- End of term and year exams.

Assessments will be departmentally moderated, and outcomes will be analysed and discussed within the department and interventions and extra support set up where appropriate. Specific groups such as SEN & Disadvantaged will be closely monitored.

1. Lessons observations and work scrutinises
2. Pupil and teacher voice
3. Departmental data tracking

- Constant reviewing of a student's progress within an academic year, across their academic years and at key transition points – KS3 to GCSE, GCSE to A level and A level to university/work/training.

We are confident that through the delivery of substantive and disciplinary knowledge in the curriculum and the way in which it is delivered, pupils will appreciate the importance of science within the world and the relevance it has on their lives within a global environment.