



INTENT

In science our aim is to foster an environment of discovery and curiosity. Science is everything from how our own bodies work to the formation of the universe and everything in between.

The science curriculum is not only designed to give students a basic scientific literacy in the three specific disciplines of Biology, Chemistry and Physics but to also give students the tools to be able to answer the questions they have not even thought of yet. While we will of course prepare our students for external examinations, more importantly we want them to be able to understand the changing world around them so they are better prepared to look after themselves and their planet.

IMPACT

The aims and learning outcomes of this curriculum is to enable students to develop the ability to:

- Develop knowledge and understanding in science through opportunities for working scientifically.
- Understand how scientific methods and theories develop over time.
- Use a variety of models to solve problems, make predictions and to develop scientific explanations and understanding of familiar and unfamiliar facts.
- Appreciate the power and limitations of science and consider any ethical issues which may arise.
- Explain everyday and technological applications of science; evaluate associated personal, social, economic and environmental implications; and make decisions based on the evaluation of evidence and arguments.
- Evaluate risks both in practical science and the wider societal context, including perception of risk in relation to data and consequences.
- Recognise the importance of peer review of results and of communicating results to a range of audiences.
- Use scientific theories and explanations to develop hypotheses.
- Recognise when to apply a knowledge of sampling techniques to ensure any samples collected are representative.
- Evaluate methods and suggest possible improvements and further investigations.
- Interpreting observations and other data (presented in verbal, diagrammatic, graphical, symbolic or numerical form) including identifying patterns and trends, making inferences and drawing conclusions.
- Being objective, evaluating data in terms of accuracy, precision, repeatability and reproducibility and identifying potential sources of random and systematic error.

KEY PRIORITIES

- Continued focus on disciplinary knowledge but with more exam emphasis. More time given to required practicals and standardised exam practice integrated into the curriculum. Introduction of two units introducing disciplinary knowledge in years 7 and 8 as a foundation.
- Deeper integration between Maths and Science. Introduction of maths/science buddies to give PoC between departments. Continued shared department meetings to highlight specific areas. Proposed introduction of STEM days (off timetable multi-disciplinary days with a science/maths focus).
- Reorganisation of KS3 into larger topics with integrated time for formative assessment as well as "quiz and relearn" lessons to receive immediate feedback. Less time spent on assessment of learning, more time on assessment for learning.
- Revamp of year 9 curriculum to be more of a bridge between KS3 and KS4. Introduction of a new unit on the fundamentals of matter incorporating aspects of both KS3 units as well as 4 GCSE units from Chemistry and Physics. Students will continue to learn the fundamentals of Biology in year 9 (Cells).
- Standardised knowledge retrieval practice across all units of KS4 science.



"Everybody Matters, Everbody Succeeds, Everybody Helps"