

## Science

The Science curriculum communicates the excitement of the scientific world we live in. Our aim is to develop ambitious and resilient learners who exceed expectations, question and can apply their working knowledge of Science in a modern day world.

Across Key Stage 3 and 4, the Science curriculum is taught in separate Biology, Chemistry and Physics modules. This ensures the pupils understand the difference between the natures of the three sciences and that they acquire the essential knowledge in all three areas. The curriculum is designed to optimise the number of links made between modules within and across the disciplines of science. The amount of content and the difficulty of each module increases each year as pupils' progress towards the GCSE curriculum. The modules are designed to be practical in nature whilst challenging pupils thinking and ensuring they acquire the essential knowledge for each of the three sciences. Pupils will be tested on the knowledge and skills they learn through cumulative assessments and this will greatly improve their scientific knowledge and understanding.

### Year 7

The pupils will start to learn and master the key basic knowledge and skills which are essential to be successful at GCSE. The module content will be new and exciting for the pupils and made engaging to increase their interest in Science.

Pupils will be challenged to increase their scientific inquiry, questioning skills and exam technique. They will embed the Science learned in all pieces of written work clearly and concisely. Pupils will be trained in practical skills throughout each module so experiments can be completed safely, with the focus on practical method and technique.

The modules studied are: Cells, Acids and Alkalis, Forces, Eco-systems, Particles, Electricity, Reproduction and Solvents. Each module will focus on a scientific idea that forms the basic knowledge which will be built upon throughout Key Stage 3.

### Year 8

The key basic knowledge and skills will be built upon, retrieved and retested in Year 8 as the modules increase in difficulty. Pupils will continue to build upon the skills they have learned in Year 7 but focus will start to turn to answering GCSE style questions.

Pupils will improve their data analysis techniques, using and rearranging equations, assessing reliability of resources of information and refine their literacy and numeracy skills further.

The modules studied are: Microbes, Bubbles, Bangs and Burning, Light and Sound, Breathing and Respiration, its Elementary, Energy Resources, Food and Digestion, Energy Transfers.

Pupils will also complete a practical skills module at the end of the year to focus on concluding and evaluating the information they have gathered.

## **Year 9**

This will be a transition year into GCSE topics as pupils will now have the necessary knowledge and skills to understand more complicated ideas. All knowledge and skills will be built upon further as the key basics are revisited and retested through an end of key stage exam. Pupils will regularly complete GCSE questions and build model answers to improve their exam technique. They will build on and practice all the skills they have learned so far. Learning to link the individual skills and understanding how to use them in GCSE papers for theory and practical skills.

The modules studied are: Inheritance, Making Materials, Using Forces, Growing Plants, Metals, Electricity and Magnetism, Health, Environmental Chemistry and Space.

By the end of Year 9, pupils will have built up a fantastic foundation to move onto more complex topics that they will need to understand for GCSE.