Aylesbury High School | Prepare, Challenge & Inspire

KS3 Science

Curriculum Intent

Key Stage 3

KS3 Science introduces students to the exciting worlds of Biology, Chemistry and Physics, they also get the chance to develop their experimental skills. Their curiosity and interest is stimulated through a wide range of practical work, problem solving, and ICT based activities. By the end of KS3 students have a strong foundation of knowledge which they will build upon at GCSE level.

Year 7 starts with 'Introduction To Science' which starts to develop the skills that students will need to progress in Science. We develop these skills further in Year 7 and Year 8 building upon what students will have studied at KS2. Students study 2 topics from each of the three disciplines.

Year 8 builds upon and further develops the concepts that students meet in Year 7. We also introduce key ideas and skils that students will meet again in more depth during the GCSE years.

Year 9 rounds off the KS3 Curriculum and prepares students to begin their GCSE studies through completing two units of work for each Science at GCSE level.

In addition KS3 Science Club allows students to experience a co-curricular enhancement and broadening of their knowledge.

Curriculum Implementation

Key Stage 3

Year 7	Year 8	Year 9
• Introduction To Science • What Am I? • Energy and Particles • Space • Atoms, Acids and Bases • Digestion • Electricity and Energy	• New Life • The Periodic Table and Equations • Forces • Experimental Skills—Graphs • Chemistry of Planet Earth • Light Vs Sound • Experimental Skills - Evaluating • Ecology	• Electricity and Magnetism • Chemical Reactions • Variety of Life **GCSE Topics:** • Ecology—Organisms and Adaptations • Changes of the Atmosphere • Space Physics (Part 1) • Ecology— Ecosystems and Humans • Atomic Structure • Energy (Part 1)

Impact

Key Stage 3

Scientific knowledge and conceptual understanding

Developed through the disciplines of biology, chemistry and physics. Our schemes of work give students an understanding of the big ideas in science, e.g. the links between structure and function in living organisms, the particulate model as the key to understanding the properties of matter, and the transfer of energy.

Nature, processes and methods of science

Different types of investigative techniques help students to answer scientific questions about the world around them. Students are taught about working Scientifically through a range of practical investigations.

Uses and implications

Evaluation and critical analysis of information is encouraged. In recent years we have incorporated topical issues into our teaching; such as sustainability and the environment

Our booklets help EAL students and templates are also provided. Glossaries are used to encourage the learning of scientific vocabulary.

By the end of year 9, students have:

- Studied all the topics included in the KS3 Curriculum, and started their GCSE work.
- Gained confidence and competence in manipulating equations, drawing graphs, and using mathematics to solve problems, including units in their answers.
- Gained an understanding of the concepts, often abstract, covered in Science.
- Be competent in using a range of apparatus, including data loggers to investigate relationships and gather data.
- Gained knowledge of how Science is useful in the outside world, including an awareness of careers where a knowledge of Science is useful.
- Gain skills in answering exam style questions, including: carefully reading questions, extracting key information, carrying out calculations, or giving an explanation in sufficient detail.