



Curriculum Intent for Biology at St Joseph's College

At St Joseph's College, our curriculum will serve to extend student's knowledge, understanding and application of biological knowledge such that we develop our students into young people who can more fully make sense of the world around them with greater biological clarity. The intent is to promote a fascination for the subject through driving student's understanding of the real world relevance and importance of biology from the historical journey which has driven our current understanding, to the way we live now and looking forward, to the importance and potential of biology in future.

Students will study a stretching and engaging curriculum which will drive a sense of curiosity in biology knowledge, to enable them to view the very small to the large, from a single cell to their own bodies and to the world around them with a sense of awe and wonder. They will also have the opportunity to develop their reading, writing, numeracy and oracy skills, building their confidence and their ability to critically analyse and consider data, and problem solve, enabling them to flourish in the wider world.

As part of the science curriculum, we will strive to ensure that we share research and achievements from a diverse array of scientists past and present and to embed in our teaching the promotion of the vast array of STEM careers that knowledge of science can open up.



Curriculum Intent for Chemistry at St Joseph's College

The aim of the KS3 Chemistry curriculum is for students to master the key skills and apply their knowledge to challenging and unfamiliar contexts. We have planned and implemented a rigorous curriculum, which builds on the prior learning and skills acquired at KS2. The content studied and skills acquired during Year 7, are revisited and extended on in Year 8.

The KS3 Curriculum provides a solid foundation for the rigour of the content at GCSE. The KS3 curriculum is delivered across two years and GCSE courses commence in Year 9. This maximises the opportunity to revisit the foundation topics of each specialism, and for students to make greater connections between content across the topics.

In Year 7, students' understanding of Working Scientifically and lab safety, are likely to vary due to variation in Science provision between primary schools and therefore initial lessons are spent reinforcing expectations for safety in the laboratory and planning investigations. The curriculum has been designed to engage learners through practicals and demonstrations, and help them develop their skills for Working Scientifically, while acquiring new knowledge across four distinct topics.

The Year 8 Curriculum builds on the knowledge and skills gained in Year 7. It covers the remainder of the KS3 Science National Curriculum. Students continue to develop their skills and acquire new knowledge, in addition to revisiting and building on the content covered in Year 7.

Our sequence of topics and lessons is followed by all to ensure all students are delivered same coherent curriculum, with content delivered in the same order.

<p>Physical Chemistry</p> <ul style="list-style-type: none"> - The Particle Model - States of Matter - Diffusion 	<p>Molecular Chemistry</p> <ul style="list-style-type: none"> - Elements - Atoms - Molecules - Compounds - Chemical formula
<p>Chemical Reactions</p> <ul style="list-style-type: none"> - Word Equations - Burning Fuels - Thermal Decomposition - Conservation of Mass - Exo & Endothermic Reactions 	<p>Neutralisation Reactions</p> <ul style="list-style-type: none"> - Acids & Alkalis - Indicators & pH - Making Salts



Curriculum Intent for Physics at St Joseph's College

What we are trying to achieve?

- To foster a love and passion for physics in our students and an understanding of the relevance of studying physics to develop their cultural capital.
- To foster curiosity and resilience by ensuring that our students develop a mastery of the fundamental skills and knowledge in physics.
- To develop a recognition of how and when physics underpins the Catholic character of the school through our Scheme of Learning (SoL) and delivery so students do not view science and the Catholic life of the school as separate.
- To develop student confidence and independence during practical work, with a core understanding of how science works; the scientific method.
- To develop the literacy and numeracy skills of students by embedding them into lessons.
- Success criteria will be supplied for lessons and tasks which are well constructed enabling students to take their learning forward.
- National policies such as British values, PSHE, SMSC and RSE are built into the Scheme of Learning. This also includes links with industry and higher education in order to promote career ambitions as part of the school's CEIAG provision.
- To provide an effective transition from Key Stage 2 (KS2) through to KS5. This includes a curriculum plan as a logical skill and knowledge-building sequence of lessons.
- In Years 7 and 8 students follow a programme that aims to build upon the skills from KS2 and ensure a depth of understanding of the key scientific concepts. This follows the KS3 National curriculum.
- 100% of students will study science at a 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/ options they are in.
- A-level physics is available for students who achieve at least a grade 6 at GCSE and also achieve at least a grade 7 in GCSE maths.