



Followers of Christ	Resilient Thinkers	Responsible Community	Respectful Individuals	Excellent Achievers	Family
					
Faith	Resilience	Community	Respect	Excellence	Family

**“It is the glory of God to conceal things, but the glory of kings is to search things out.”**

**Proverbs 25:2**

The Science department at All Saints Catholic College believe that scientific concepts allow us to understand the world around us. Through learning science, our pupils are preparing to make informed decisions and participate fully as global citizens.

The Science curriculum builds on our pupils’ prior knowledge and their natural curiosity that science elicits, to help them understand and value the world around them. Through observation, experimentation and analysis, the pupils will learn how science can be used to explain the past, examine the present and innovate the future.

Our curriculum provides our pupils with the opportunity to develop a deep and broad body of knowledge, as well enabling critical thinking skills such as problem solving, analysing, creating, evaluation.

### KEY STAGE 3

We focus all our lessons on 9 Big Ideas in science: cell survival, genetics and evolution, ecosystems, building blocks of our universe, chemical and physical changes, organising the elements, the Earth and solar system, forces and energy.

These Big Ideas build upon work at Key Stage 2 to establish continuity and they increase in challenge as the pupil moves through Key Stage 3 to Key Stage 4. Within each Big Idea we have three topics which allows us to explore and reinforce the key concepts in preparation for further study. Within all our units of

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work we teach, develop and assess key scientific skills enabling pupils to be able to make scientific decisions about their future with enough knowledge and skills to be able to do so effectively.

We assess pupils at Key Stage 3 within each topic. The method of assessment varies for example graded creative activities, extended writing, exam style questions or skills-based tasks. These take place throughout each topic, building on knowledge or skills that has been previously studied.

#### KEY STAGE 4

During year 10 and 11 we build on knowledge that we have studied at Key Stage 3, where we deepen our understanding of complex scientific phenomena. In the classroom we encourage our pupils to have enquiring minds and develop their scientific language alongside their knowledge and skills.

We encourage all students to learn the essential aspects of knowledge, methods and processes. They should gain appreciation of how complex and diverse the natural world can be.

Key Stage 4 science enables pupils to:

- Develop scientific knowledge and conceptual understanding through the specific disciplines of Biology, Chemistry and Physics
- Develop understanding of the nature, processes and methods of science, through different types of scientific enquiries that help them to answer scientific questions about the world around them
- Develop their ability to evaluate claims based on science through critical analysis of the methodology, evidence and conclusions, both qualitatively and quantitatively.
- We have eight core practical's per science discipline where we develop skills, knowledge and understanding of working scientifically.

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Assessment at key stage 4:

We assess the pupils throughout and at the end of each unit of work using a variety of assessment methods to include end of topic tests, exam practice and skills-based assessments. The science examinations are tiered and pupils are entered for the tier that is best suited to their ability in science.

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