

EMMANUEL COLLEGE  
THE SCIENCE DEPARTMENT  
Philosophical Statement



Our curriculum allows all students to gain a foundational knowledge and understanding of the natural world through the specific disciplines of biology, chemistry and physics. By building up a body of key concepts about how biological, chemical and physical processes work, students will be able to see the power of rational explanation, and we hope that they will develop a sense of awe and wonder of the universe that they are part of! Our curriculum has been deliberately designed to develop an understanding of the 'big ideas' in science by multiple interactions with the concepts within the idea across their five formal years of science studies. As students take part in science lessons, they will develop the confidence and skills needed to plan, conduct and evaluate scientific investigations and be able to apply analytical (including mathematical) skills to a range of problems and scenarios, both academic and real-world.

During their experimental work, we want them to see the importance of following a systematic methodology based on evidence. We hope this will equip them to make responsible decisions in the future. It is our intent that everything we teach about science will be linked to real-world applications and problems, so that students will see the importance of scientific development in individual livelihoods, wider society, and the way people attend to the world. This will help students think through a range of issues rationally, learning to discern 'where the evidence leads them'. It is important to also see that while scientific ideas are based on evidence, value judgements often have to be made, and these will be influenced by a person's 'worldview'. Students will also develop an awareness of the social, moral and cultural issues that underpin a range of topics that are delivered across the curriculum. We hope that good scientific literacy will be developed by students of all abilities and backgrounds so that they are equipped to tackle misinformation and 'fake news'. Most of all, we want students to see that science makes a radical difference to the quality of human existence, and that an understanding of scientific ideas is essential for everyone to deal with everyday problems and make positive contributions to society.