

KS3 Computing at St Roberts:

The KS3 Computing curriculum enables pupils to embed the core Computing skills they have learned at KS2 and have the opportunity to develop their problem solving skills through the development of Computational Thinking (Abstraction, Decomposition, Patterns & Algorithms), while learning about future careers and developments in the technology field, such as Mobile App Creation, Games Development, Website Development, Programming, Animation & Digital Graphics. This curriculum design gives students a broad overview of both ICT and Computing, and demonstrates the similarities and differences between these 2 subjects at KS3.

Students also have access to an electronic notebook via the Microsoft OneNote platform that includes all of their lesson resources, homework activities and assessments. This can be accessed 24/7 via the school websites VLE link.

In year 7 students learn how to:

Consolidate Computing skills from KS2 such as using standard office applications, email, e safety, cyber bullying, online trolls, plagiarism and an introduction into how computers work. Understand a range of ways to use technology safely, respectfully, responsibly and securely, including protecting their online identity and privacy; recognise inappropriate content, contact and conduct, and know how to report concerns. Other elements that are investigated are an introduction into using binary numbers, visual programming using the BBC Micro:bit platform, as well as understanding how the Internet works and simple website development.

In Year 8 students will learn how to:

Be able to use a range of Computational thinking skills (Abstraction, Decomposition, Patterns & Algorithms) to solve problems using interactive flowcharts, understand how images can be represented and manipulated digitally in the form of binary digits by creating digital graphics. Student develop their web development skills by using HTML and CSS to build static web pages, an introduction to text based programming using JavaScript, additional programming experience using the Python programming language to reinforce key programming theory, and an investigation into Cyber Security using an immersive scenario based project.

In Year 9 students will learn how to:

Be able to design use and evaluate computational abstractions that model the state and behaviour of real-world problems and physical systems, learn about a wide range of digital devices, their hardware, and their effects on young people health and wellbeing. Students develop a mobile phone app for a target audience, with attention to design and usability. Students create digital animations to understand how instructions are stored and executed within a computer system, and undertake creative projects that involve selecting, using, and combining multiple applications to develop a video game. Students finally create an e-portfolio to demonstrate their learning of the Computing curriculum and creativity using ICT tools.