Saint John Wall Catholic School
A Catholic School For All

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KS4 Computing Across the Curriculum

At Saint John Wall Catholic School, we are committed to developing our students' Computing and digital skills across Key Stage 4. Our curriculum supports the National Curriculum for Computing, which aims to ensure that all pupils can understand and apply the fundamental principles and concepts of Computer Science; can analyse problems in computational terms; can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems; and are responsible, competent, confident and creative users of information and communication technology.

We have grouped our approach into three key strands: Digital Literacy, Computational Thinking, and Computer Science/IT Application. Each strand contributes directly to meeting the requirements of the National Curriculum and ensures pupils are equipped with the digital knowledge and skills necessary for further education, employment, and life.

Digital Literacy

Digital Literacy is developed across several subjects. In English, students use Bedrock Learning to build vocabulary and grammar skills through adaptive online modules. GCSEPod is used to support revision with audio-visual podcasts tailored to the GCSE curriculum in English Language and Literature, helping students consolidate learning and engage with content in multimedia formats. Students also create digital presentations for the Spoken Language Endorsement and conduct online research to develop contextual understanding of literature texts.

In Religious Education, students engage with platforms such as TrueTube and BBC Bitesize to explore topics and watch video-based resources. They also access revision materials containing hyperlinks to interactive videos and quizzes, including the use of Seneca Learning, which provides automated feedback and progress tracking. Interactive tools like Blooket, a gamified quiz platform, are used occasionally to support recall and revision.

In Business, students collect, analyse and present market research data using spreadsheets and presentation software, reflecting the requirement in the Computing curriculum to use software to support data handling and digital communication. The department also explores the impact of digital systems such as e-commerce and digital marketing, supporting students in understanding how Computing is applied in real-world business contexts.

In PE and Sport Studies, students use computers to complete coursework and investigate how technology enhances sports performance, including research on performance tracking and wearable technology. The SEND Hub promotes Digital Literacy by integrating laptops for students with access arrangements and providing revision materials created using AI tools. Careers research is supported

through safe and structured online exploration of professions. Tools such as Kahoot, Wordwall and Quizizz are also used to reinforce learning in a way that is engaging and accessible.

The library supports Digital Literacy by providing access to online platforms during break and lunchtimes to complete assignments and revision tasks.

In the Performing Arts, including Drama and Music, students use iPads and PCs for research, scriptwriting, and coursework. In Drama, pupils access digital theatre archives and use video editing software such as Stream to review and refine their performances. Music students compose and edit using digital audio workstations such as YuStudio, which allows them to produce and manipulate sound using virtual instruments.

Computational Thinking

Computational Thinking is promoted in several departments through activities that require problem-solving, logic and structured thinking. In Maths, students use Sparx Learning, a platform that combines AI and adaptive learning to support practice and feedback, and Desmos to explore mathematical graphs dynamically. These tools help students break problems into steps and recognise patterns, supporting the Computing aim of developing logical reasoning.

In Science, virtual labs using PhET simulations allow students to model experiments digitally, especially when physical resources are limited. These simulations teach students to modify variables and interpret outcomes, reinforcing key Computing skills such as modelling and abstraction. Excel is widely used for graphing, calculations, and data analysis, helping students interpret results, spot trends and solve real-world problems through technology.

In PE, students use digital tools to analyse performance and evaluate results using structured templates and tables. Within the SEND Hub, personalised tutoring platforms like Maths Whizz are used to support logical reasoning, problem solving, and sequential learning.

Computer Science / IT Application

Computer Science and IT Applications are integrated throughout the curriculum to ensure students apply their knowledge in meaningful, subject-specific ways. In Business, students use Microsoft Office tools, particularly PowerPoint, to present business plans, and research real-world business applications of digital technologies such as payment systems, cybersecurity, and social media marketing.

In Art, students research artists and use online resources to inform their portfolios.

In Music, YuStudio enables students to compose, arrange and edit digital music. They learn to manipulate sound layers and understand the structure of digital music production, gaining insight into creative and technical processes aligned with the Computing curriculum.

In Drama, students use digital editing tools and lighting software to enhance production quality. They also research and document coursework using word processors and access theatre reviews online.

In Health & Social Care, students develop digital literacy through the use of Word and PowerPoint to write and present reports. Research-based tasks help them explore professional practice and apply digital tools to real-world healthcare issues. In IT, students use PowerPoint, Canva and other digital platforms to produce coursework, helping to build competence in using digital tools to communicate information clearly and creatively.

Online Safety and Digital Citizenship

Across the school, students are taught how to use technology safely and respectfully, in line with the Computing National Curriculum requirement to understand the impact of technology on safety, privacy and identity. Key topics include online misinformation, protecting personal data, cyberbullying, and building a positive online presence. These are delivered through our school's Values@ Days, whole-school assemblies, in Computing lessons.

Catholic Life

At Saint John Wall Catholic School, our Computing provision is rooted in our shared mission and values as a Catholic community. Our school mission, "To educate each and every unique child in our care to hear and respond to what God calls them to be," underpins our approach to teaching, learning and the development of digital skills. Technology is used not just to prepare pupils for academic success and employment, but also to encourage reflection, creativity, and service in accordance with our Gospel values.

The school values of Faith, Respect, Compassion, Forgiveness, Service, and Truth guide how we use technology to build inclusive learning environments, support individual progress, and develop responsible digital citizens. These values are embedded in both our curriculum and wider school life, influencing how pupils interact online, express themselves creatively, and support others. By integrating Catholic values with modern digital competencies, we aim to ensure our pupils grow intellectually, spiritually and morally—equipped to navigate the digital world with integrity and purpose.

By embedding Computing into all subject areas, we ensure our students are digitally fluent, computationally capable, and fully prepared for the demands of future study, employment, and life in a digital world.