



St Paul's Catholic Primary School

'Do Everything with love.'

Computing Statement

INTENT

At St Paul's Catholic Primary School, we believe that high-quality Computing lessons inspire children to prepare for a rapidly changing world through the use of technology. Our high-quality computing curriculum is designed to enable all pupils to explore three main areas of computing: Computer Science, Information Technology, and Digital Literacy (including Online Safety). With technology playing such a significant role in society today, we believe that 'Computational Thinking' is a skill children must be taught if they are to participate effectively, responsibly, and safely in an increasingly digital world. At St Paul's, our Computing Curriculum is based on the National Centre for Computing Education's Teach Computing program and Project Evolve. We use the principles of computing throughout our curriculum, ensuring they are adapted and linked where appropriate to our wider curriculum questions.

At St Paul's, our computing curriculum endeavours to introduce children to a wide range of technology—including Chromebooks, digital cameras, programmable toys, interactive whiteboards, and emerging technologies such as Artificial Intelligence (AI)—allowing them to continually practice and improve the skills they learn. Starting from Year 1, pupils begin developing foundational awareness and skills in interacting with new and emerging AI technologies. As children progress into Years 5 and 6, they engage directly with AI within a controlled and secure environment, exploring its practical applications, understanding its ethical implications, and learning how to use it safely and critically. This ensures our pupils become digitally literate, capable of expressing themselves and developing ideas through information technology at a level suitable for the future workplace and as active, informed participants in a modern world.

The aims of our Computing curriculum are to develop pupils who:

- Are responsible, competent, confident, and creative users of information and communication technology.
- Know how to keep themselves safe online in an ever-changing technological landscape—including understanding the unique risks and safety considerations surrounding Artificial Intelligence and new media.
- Understand and critically evaluate emerging technologies, such as AI, gaining practical experience in Key Stage 2 with its ethical and safe applications in a controlled environment.
- Become responsible, respectful, and competent users of data, information, and communication technology.
- Can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems.
- Can analyse problems in computational terms, and have repeated practical experience writing computer programs in order to solve such problems.
- Can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms, and data representation.
- Become digitally literate and active participants in a digital world.
- Can use critical thinking to assess whether information online—including AI-generated content—is from a viable, credible, and ethical source.
- Are equipped with the capability to use technology throughout their lives.

- Understand the importance of governance and legislation regarding how information is used, stored, created, retrieved, shared, and manipulated.
- Have a 'can do' attitude when engaging with technology and its associated resources.
- Utilise computational thinking beyond the Computing curriculum.
- Understand that Online Safety messages and responsible use practices keep them safe online.
- Know who to contact if they have concerns or encounter inappropriate content.
- Apply their learning in a range of contexts, e.g., at school and at home.

Online Safety

St Paul's Catholic Primary School takes online safety extremely seriously. Our curriculum for delivering this is based on Project Evolve and Education in a Connected World, updated to address the dynamic challenges posed by expanding technologies like Artificial Intelligence. We maintain a robust online safety policy that provides guidance for teachers and children on using the internet and digital tools safely and ethically. Every year group participates in structured lessons on online safety so that children understand how to safeguard themselves and others in an evolving digital environment. As a school, we feel it is crucial to support our wider community as well; to this end, we have a group of pupil Computing Ambassadors who create a fortnightly Online Safety Newsletters, we arrange online safety training and workshops for our families and regularly share local Family Learning courses with all our parents and carers.

IMPLEMENTATION

To ensure high standards of teaching and learning in computing, we implement a curriculum that is progressive throughout the whole school. Our implementation of the computing curriculum is in line with the 2014 Primary National Curriculum requirements for Key Stage 1 and Key Stage 2, as well as the Early Years Foundation Stage (EYFS) framework. This provides a broad framework that outlines the knowledge and skills taught in each key stage. Although Computing is not explicitly named as a standalone subject within the Early Years Foundation Stage framework, we have designed an ambitious and purposeful EYFS curriculum that equips our youngest pupils with foundational skills, ensuring they are fully prepared for the Key Stage 1 curriculum and beyond.

Computing teaching is delivered through half-termly units. Our computing progression model is broken down into three main strands: Computer Science, Information Technology, and Digital Literacy.

- Computer Science underlines the knowledge and skills relating to programming, coding, algorithms, and computational thinking.
- Information Technology underlines the knowledge and skills relating to communication, multimedia, data representation, and handling.
- Digital Literacy underlines the knowledge and skills relating to online safety, technology uses, and emerging technologies—all of which are covered whether combined or discreetly.

The subject leader for Computing monitors, evaluates, and reviews the implementation of the subject throughout the school. This provides opportunities for sharing good practice as well as forming the basis for further improvement.

Key Aspects of Implementation:

- **Progressive Half-Termly Units:** Half-termly units cover the three core strands of the computing curriculum, ensuring systematic skill progression from EYFS through to Year 6.

- **Bespoke AI Curriculum:** Pupils across Key Stage 1 and Key Stage 2 take part in a tailored AI curriculum unit designed to progressively build their knowledge, practical understanding, and ethical awareness of Artificial Intelligence and emerging technologies.
- **Early Years Foundation Stage (Nursery & Reception):**
 - In Nursery, children develop early computational concepts such as cause and effect through hands-on exploration with push-and-go toys, mechanical objects, and interactive devices.
 - Across EYFS, pupils access a range of digital devices—including drawing pads, interactive whiteboards (IWBs), and digital cameras—to investigate the basics of technology.
 - A dedicated online safety program utilizes engaging stories to bring key online safety messages to life, instilling the vital habits of recognizing online risks and speaking to a trusted adult.
- **Enrichment Opportunities:** Each year group is provided with computing enrichment activities at least once a year.
- **STEM Partnerships:** We work closely with UTC Portsmouth to support, extend, and enrich our computing curriculum for all pupils.

IMPACT

Our Computing Curriculum is high quality, well thought out, and planned to demonstrate clear progression, building on and embedding existing skills from Early Years through to Key Stage 2. We focus on the systematic progression of knowledge, technical vocabulary, and practical skills across all computational components—including Computer Science, Information Technology, Digital Literacy, and Artificial Intelligence (AI).

By the time pupils leave St Paul's Catholic Primary School, they will be confident, critical, and ethical users of technology, well-prepared for the digital demands of secondary education and the wider world. If children are keeping up with the curriculum expectations, they are deemed to be making good or better progress.

We measure and evaluate the impact of our curriculum through the following methods:

- **Half-Termly 'Sticky Knowledge' Assessments:** Assessing pupils at the end of each half-term against core 'sticky knowledge' objectives to ensure key concepts are retained long-term.
- **Targeted Goals for SEND Pupils:** Setting tailored sticky learning goals specifically designed for our SEND pupils, ensuring ambitious yet accessible outcomes for every learner.
- **Weekly 'Flashback 4' Retrieval Practice:** Utilizing weekly Flashback 4 activities to continually revisit, reinforce, and embed previously taught sticky knowledge and technical vocabulary.
- **Pupil Voice:** Conducting pupil discussions and interviews to evaluate children's depth of understanding regarding computing concepts, AI literacy, and online safety principles.
- **Work & Portfolio Scrutiny:** Reviewing digital portfolios, saved projects, and photo evidence of practical hands-on learning across all year groups.
- **Learning Walks & Teacher Voice:** Conducting regular learning walks and gathering reflective feedback from teaching staff to monitor classroom delivery, engagement, and subject knowledge.
- **Cross-Curricular Transfer:** Observing how effectively pupils independently apply their computational thinking, digital literacy, and technology skills across the wider curriculum.

- **Safety & Ethical Awareness:** Monitoring children's understanding of online safety, their awareness of safe and ethical AI usage, and their confidence in reporting concerns to a trusted adult.
- **Collaborative Leadership & Moderation:** Engaging in professional dialogue between teachers and moderating standards alongside computing leads from partner schools to ensure continuous improvement.