

Long Term Plan

Year group/ Unit	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<u>KS1 (Cycle A)</u> Year 2 units	Computing systems and networks – IT around us	Creating media – Digital photography	Programming A – Robot algorithms	Data and information – Pictograms	Creating media – Digital music	Programming B – programming quizzes
<u>KS1 (Cycle B)</u> Year 1 units	Computing systems and networks – Technology around us	Creating media – Digital painting	Programming A – Moving a robot	Data and information – Grouping data	Creating media – Digital writing	Programming B – Programming animations
<u>Year 3/4 (Cycle A)</u> Year 4 Units	Computing systems and networks – The Internet	Creating media – Audio production	Programming A – Repetition in shapes	Data and information – Data logging	Creating media – Photo editing	Programming B – Repetition in games
<u>Year 3/4 (Cycle B)</u> Year 3 Units	Computing systems and networks – Connecting	Creating media – Stop-frame animation	Programming A – Sequencing sounds	Data and information – Branching databases	Creating media – Desktop publishing	Programming B – Events and actions in programs

Year group/ Unit	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
KS1 (Cycle A) Year 2 units	Computing systems and networks – IT around us	Creating media – Digital photography	Programming A – Robot algorithms	Data and information – Pictograms	Creating media – Digital music	Programming B – programming quizzes
KS1 (Cycle B) Year 1 units	Computing systems and networks – Technology around us	Creating media – Digital painting	Programming A – Moving a robot	Data and information – Grouping data	Creating media – Digital writing	Programming B – Programming animations
	computers					
Year 4/5	Computing systems and networks – systems and searching	Creating media – Video production	Programming A – Selection in physical computing	Data and information – Flat-file databases	Creating media – Introduction to vector graphics	Online Safety
Year 6	Computing systems and networks – Communication	Creating media – Web page creation	Programming A – Variables in games	Data and information – Introduction to Spreadsheets	Programming B – Selection in quizzes	Online Safety

Year group/ Unit	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<u>KS1 (Cycle A)</u> Year 2 units	Computing systems and networks – IT around us	Creating media – Digital photography	Programming A – Robot algorithms	Data and information – Pictograms	Creating media – Digital music	Programming B – programming quizzes
<u>KS1 (Cycle B)</u> Year 1 units	Computing systems and networks – Technology around us	Creating media – Digital painting	Programming A – Moving a robot	Data and information – Grouping data	Creating media – Digital writing	Programming B – Programming animations
	and collaboration					

Intent:

At St Paul's Catholic Primary School, we believe that computing is an essential part of preparing our pupils for life in an increasingly digital world. Our computing curriculum aims to develop confident, capable and responsible digital citizens who can use technology creatively, safely and purposefully, while developing the knowledge, skills and understanding required to participate successfully in the modern world.

Our curriculum is underpinned by the statutory National Curriculum for Computing and is delivered through the Teach Computing Curriculum part of the National Centre for Computing Education (NCCE), which is funded by the Department for Education. The Teach Computing Curriculum

provides a structured progression of knowledge and skills across Key Stages 1 and 2 and supports high-quality teaching across the three key areas of computing: computer science, information technology and digital literacy

We want every pupil at St Paul's to see themselves as someone who can succeed in computing. Through carefully sequenced learning, pupils develop computational thinking, problem-solving, logical reasoning and creativity. They learn how computers and networks work, how data can be represented and manipulated, how algorithms and programs are created and debugged, and how technology can be used to create, communicate, collaborate and solve problems. As a Catholic school, our computing curriculum is rooted in our commitment to the dignity and uniqueness of every individual. We seek to develop pupils who use technology in ways that reflect our Gospel values and Catholic Social Teaching: treating others with dignity and respect, acting responsibly, making positive choices and recognising the impact that our actions can have on others. Pupils are taught not simply how to use technology, but how to use it ethically, respectfully, safely and responsibly

Online safety is an integral part of our computing provision. Pupils develop the knowledge and confidence to recognise potential risks, protect their personal information and identity, make informed choices about online content and communication, and know how and where to seek help when something concerns them. This complements our wider safeguarding, Relationships and Health Education and personal development provision.

We are committed to ensuring that computing is accessible to all pupils, including those with SEND and neurodiverse learners. We use adaptive teaching, appropriate scaffolding, repetition, modelling, visual supports and carefully selected technology to remove barriers to participation while maintaining high expectations. This reflects Teach Computing's emphasis on ensuring that every learner has access to high-quality computing education and that lessons and environments are adapted to meet a wide range of needs. Ultimately, we want our pupils to leave St Paul's as confident, curious and responsible digital citizens who can use technology effectively, think computationally, solve problems creatively and make safe and ethical decisions in the digital world.

Implementation:

At St Paul's Catholic Primary School, computing is taught as a discrete subject through a carefully sequenced curriculum based on the Teach Computing Curriculum. The curriculum is designed to ensure that pupils revisit, build upon and apply previously taught knowledge and skills, creating clear progression from EYFS through Key Stage 1 and into Key Stage 2. The Computing Lead is Rebecca Atkinson-Sporle.

The Teach Computing Curriculum provides structured units and lessons across the three strands of computing:

- Computer Science – developing computational thinking, algorithms, programming, logical reasoning, debugging and problem-solving.
- Information Technology – developing pupils' ability to select and use digital tools to create, manipulate, store, present and communicate information.
- Digital Literacy – developing pupils' ability to use technology safely, responsibly, respectfully and effectively.

Lessons are sequenced so that new learning builds upon prior knowledge. Particular attention is given to the progression of programming knowledge and skills, with pupils increasingly developing their ability to sequence instructions, use repetition and selection, work with variables, debug programs and apply computational thinking to increasingly complex problems. The Teach Computing KS2 curriculum provides a clear progression through these concepts from Year 3 to Year 6.

Computing lessons are practical and purposeful. Teachers model new knowledge and skills explicitly before pupils apply their understanding through increasingly independent tasks. Lessons provide opportunities for pupils to explore, create, test, evaluate, debug and improve their work. Teachers use precise computing vocabulary and explicitly teach subject-specific terminology so that pupils can explain their thinking and demonstrate secure conceptual understanding. Where appropriate, computing is linked meaningfully to other areas of the curriculum. Pupils are given opportunities to use technology to support learning across subjects, while ensuring that computing knowledge and skills remain explicit. This enables pupils to understand that technology is a tool for communication, creativity, research, problem-solving and collaboration across different contexts.

Inclusion and Adaptive Teaching:

At St Paul's, we have high expectations for every pupil. Computing lessons are adapted to ensure that pupils with SEND, including pupils accessing The Hub, The Ark and other targeted provision, can participate meaningfully in the curriculum. Teachers use appropriate scaffolding, chunking, visual representations, worked examples, repetition, guided practice and carefully selected digital tools to reduce unnecessary cognitive load and support pupils in accessing the intended learning. Where necessary, tasks and resources are adapted without reducing the ambition of the curriculum.

This approach reflects Teach Computing's specific guidance for supporting learners with SEND and neurodiversity, which emphasises adapting lessons and learning environments so that every learner can thrive in computing.

Online Safety:

Online safety is taught systematically through computing and is reinforced through the wider curriculum, safeguarding provision and Relationships and Health Education.

Pupils are explicitly taught how to:

- use technology safely, respectfully and responsibly;
- protect personal information and online identity;
- recognise inappropriate content, contact and behaviour;
- understand the potential consequences of their online actions;
- make informed decisions about digital content;
- communicate respectfully online;
- recognise when something online may be unsafe or concerning;
- report concerns and identify trusted adults who can support them.

Online safety teaching develops progressively in response to the changing and increasingly complex digital experiences of pupils as they move through the school.

Assessment:

Assessment in computing focuses on whether pupils have secured the intended knowledge and skills. Teachers use questioning, observation, discussion, practical application and completed digital work to identify pupils' understanding and misconceptions. Teachers assess pupils' ability to explain computing concepts as well as their ability to apply them. Assessment is used formatively to inform subsequent teaching, identify gaps and provide appropriate support or challenge.

The Computing Subject Leader monitors curriculum coverage, progression, pupil work, teacher planning and pupil voice to evaluate the quality and impact of computing provision across the school.

Staff Development:

Staff are supported to develop their subject knowledge and confidence through the high-quality professional development and resources provided through the National Centre for Computing Education and Teach Computing.

The Computing Subject Leader supports colleagues through curriculum guidance, modelling, monitoring and professional dialogue. Where appropriate, staff are directed towards relevant Teach Computing CPD, including resources relating to effective pedagogy, programming, adaptive teaching and supporting pupils with SEND.

This ensures that the curriculum remains current, evidence-informed and accessible to all staff, including teachers who may have less specialist computing experience.

Computing Impact

The impact of our computing curriculum is seen in pupils who develop the knowledge, skills, confidence and attitudes required to participate successfully and safely in an increasingly digital world.

By the end of Key Stage 2, pupils will have developed a secure understanding of the key concepts within computer science, information technology and digital literacy. They will be able to apply computational thinking to solve problems, design and debug programs, use a range of digital tools purposefully, communicate and collaborate using technology, and evaluate and improve their digital work.

Pupils will increasingly be able to explain how and why technology works rather than simply knowing how to operate it. They will use appropriate computing vocabulary to articulate their understanding, explain algorithms and processes, identify errors and describe how they have solved problems.

Pupils will demonstrate increasing independence and resilience when working with technology. They will understand that making mistakes and debugging are important parts of the computing process and will develop the confidence to test, evaluate and refine their ideas.

A key measure of impact is pupils' ability to use technology safely, responsibly and respectfully. Pupils will understand how to protect themselves and others online, recognise inappropriate or unsafe situations, make responsible choices and know how to report concerns. This aligns with the statutory expectations within the National Curriculum and the DfE's guidance on teaching online safety.

We will also evaluate whether computing is accessible to all pupils. Through pupil voice, work scrutiny and teacher assessment, we will ensure that pupils with SEND and neurodiverse pupils are able to participate, make progress and experience success within computing. We will monitor whether adaptations remove barriers without unnecessarily lowering expectations.

The impact of computing will be evaluated through:

- pupil voice and discussions about computing;
- assessment of knowledge and skills;
- scrutiny of pupils' digital and written work;
- observation of computing lessons;
- monitoring of curriculum coverage and progression;

- assessment of pupils' ability to use computing vocabulary;
- analysis of pupils' ability to apply knowledge independently;
- monitoring the participation and progress of pupils with SEND;
- monitoring pupils' understanding of online safety;
- staff voice and confidence;
- curriculum leadership monitoring and review.

Our ultimate measure of success is that pupils leave St Paul's as confident, creative, critical and responsible users of technology, equipped with the knowledge and skills to continue developing as digital citizens and to access future opportunities in education, employment and wider society.

Through our Catholic ethos, we want pupils to understand that technology brings both opportunities and responsibilities. They should leave St Paul's understanding not only what technology can do, but how they can use it to communicate, create, collaborate and contribute positively to the world around them.