

Computing Progression - One Page Overview (Cornerstones & Barefoot Curriculum)

St Paul and St Timothy's Catholic Infant School

This table shows clear progression in computing knowledge, skills and vocabulary from EYFS to Year 2. It reflects the school's vision for Computing, is aligned with the National Curriculum for Computing (KS1), and is delivered through the Cornerstones Curriculum using the Barefoot Computing framework. The curriculum develops confident, safe and creative digital citizens.

Area of Progression	EYFS - Understanding the World	Year 1 (National Curriculum links)	Year 2 (National Curriculum links)
Computing Focus / Projects	Children explore technology through play and everyday experiences.	Discrete computing projects using Barefoot & Cornerstones Cross-curricular links	Discrete computing projects using Barefoot & Cornerstones Cross-curricular links
Computer Science (Algorithms & Programming)	- Use programmable toys in play - Give simple instructions (forwards, backwards) - Begin to understand cause and effect	- Understand what an algorithm is - Create and follow simple sequences of instructions - Use programmable devices (e.g. Bee-Bots) - Predict outcomes of simple programs	- Create and debug simple programs - Understand that programs execute by following precise instructions - Use logical reasoning to predict and explain program behaviour
Computational Thinking	- Solve problems through play - Begin to sequence actions	- Break simple tasks into steps (decomposition) - Recognise patterns in instructions - Use logical thinking to solve problems	- Apply decomposition to more complex tasks - Use pattern recognition and logical reasoning - Begin to debug when programs do not work
Information Technology (Digital Content)	- Use technology to take photos and videos - Use simple apps and programs	- Create and edit digital content (text, images, drawings) - Organise and save work - Use technology to support learning in other subjects	- Create, store and retrieve digital content - Combine text, images and data - Use technology purposefully to present information
Digital Literacy & Online Safety	- Begin to understand that some things are personal - Talk about safe behaviour with devices	- Know how to stay safe online - Understand what personal information is - Know who to tell if something worries them	- Use technology safely and respectfully - Understand how to keep personal information private - Know how to seek help and report concerns
Technology & the Wider World	Talk about technology used at home and school	Identify everyday uses of technology at home and school	- Describe how technology is used beyond school - Talk about how technology

			helps people in daily life
Hardware & Devices	· Explore tablets, computers and programmable toys	· Use iPads, computers and programmable devices · Understand that computers have inputs and outputs	· Use a range of digital devices confidently · Understand that digital devices follow instructions
Vocabulary	· Simple technology words (computer, tablet, button)	· Algorithm, program, instruction · Debug, device, keyboard, mouse	· Sequence, predict, logical reasoning · Data, content, online, private
Recording & Evidence	· Talking about what they did · Photos and observations	· Saved digital work · Screenshots and teacher observations	· Saved programs and digital content · Explanations of how programs work
End of Phase Expectations	· Confident using technology in play · Curious about how things work	· Secure understanding of Year 1 computing objectives · Beginning to think like a computer scientist	· Working at age-related expectations for KS1 computing · Confident, safe and creative digital users

This progression ensures children develop strong foundations in Computer Science, Information Technology and Digital Literacy from EYFS to the end of Key Stage 1. Learning is carefully sequenced so that key concepts such as algorithms, programming, and online safety are introduced early and revisited in increasingly meaningful and challenging ways.

Computing is embedded across the wider Cornerstones curriculum, enabling children to apply their digital skills in real and purposeful contexts. Pupils use technology to enhance learning in subjects such as geography, science and mathematics, helping them understand how digital tools support problem-solving, creativity and communication.

A strong emphasis is placed on computational thinking. Children are taught to use logical reasoning, decomposition, pattern recognition, abstraction, algorithms and debugging through hands-on activities, collaborative tasks and age-appropriate programming experiences. These skills help children to think methodically and confidently when approaching challenges.

Digital literacy and online safety are woven throughout the curriculum. From EYFS onwards, children learn how to use technology safely, respectfully and responsibly, understand how to protect personal information, and know where to seek help if they are worried. Whole-school events such as Safer Internet Day reinforce these messages.

By the end of Key Stage 1, pupils leave St Paul and St Timothy's as confident, creative and responsible digital citizens. They understand how technology works, how it is used in the wider world, and how their choices online can have an impact on themselves and others, preparing them well for future learning in computing and beyond.