



Newcastle



Computing Learning Journey

Intent, Implementation and Impact

Our community is inspired by our Christian values to enable all to flourish in mind, body, heart and spirit.

"HE SET MY FEET ON A ROCK AND GAVE ME A FIRM PLACE TO STAND"
(PSALM 40 V. 2)

Intent

All areas of our curriculum are rooted in our Gospel values, with clear links made across subjects. Each subject follows a progressive learning journey from EYFS to Year 6, built around core skills. Knowledge ensures full coverage of the National Curriculum and enables children to apply their skills effectively.

At St Giles' and St George's, children leave with secure academic knowledge and skills, strong Christian and moral values, and rich real-life experiences that raise aspirations and foster a love of learning.

Our Computing curriculum equips children with the skills and knowledge to thrive safely and responsibly in an increasingly digital world. Through progressive learning and engaging activities, pupils become confident, independent users of technology.



Implementation

In line with the National Curriculum, St Giles' and St George's Computing curriculum is built around five key areas drawn from the strands of Computer Science, Information Technology and Digital Literacy:

- **Computer systems and networks**
- **Programming**

- **Creating media**
- **Data handling**
- **Online safety**

These areas are delivered through a spiral curriculum, allowing pupils to revisit and build on prior learning to deepen their knowledge and skills.

The curriculum ensures broad and balanced coverage of National Curriculum requirements. 'Skills Showcase' units enable pupils to apply transferable skills, with cross-curricular links to subjects such as art, science and music.

Computing is taught for one hour per week or two hours fortnightly, depending on the unit and year group. Each unit begins with an 'explore' activity to recap prior learning and introduce key vocabulary. Lessons include appropriate scaffolding, with assessment focused on addressing misconceptions and identifying next steps. Units conclude with a review to inform future planning.

Online Safety is taught for one hour each half term and follows the same structure.



In Computing, work is recorded on Evidence Me, with any additional work on the network's Pupil Share channel in year group folders for monitoring and sharing purposes

EYFS

Computing throughout explored term's topic. their knowledge practical, experiences, and using a

including

Online through

helping technology

Evidence of

captured on Evidence Me and linked to the relevant Development Matters statements and Early Learning Goals where appropriate.



Reception Theme Subject Journey



Explore

Children have the opportunity to explore the topic and subject area through tuff trays and child led learning. KWL grids and mind maps used to identify prior learning.

Teach

Input and carpet sessions, in the moment teaching opportunities, concrete materials, teaching of new topic specific vocabulary.

Practise

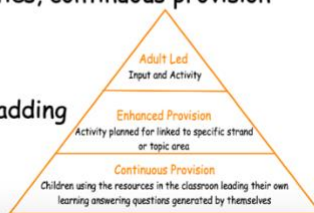
Group work, teacher guided sessions, tuff tray activities after input, key questions for children to explore and investigate on their own after being taught skills.

Apply

Independent tasks, some enhanced provision opportunities, continuous provision opportunities, child-led learning

Review

Mini input on previous learning, KWL revisit, mind map adding repeating 'explore' activities.



in EYFS is embedded the curriculum and through each half Children develop computing and skills through hands-on adult-led activities continuous provision range of digital technologies, tablets, cameras and programmable toys

safety is taught everyday experiences, children to use safely and responsibly. learning is

ELG	Personal, Social and Emotional Development	Managing Self	• Be confident to try new activities and show independence, resilience and perseverance in the face of challenge. • Explain the reasons for rules, know right from wrong and try to behave accordingly.
	Expressive Arts and Design	Creating with Materials	• Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.

Impact

In addition to the outcomes shown on our curriculum tree, the specific impact of the St Giles' and St George's Computing Learning Journey is that children will:

- ✓ Be critical thinkers and able to understand how to make informed and appropriate digital choices in the future.
- ✓ Understand the importance that computing will have going forward in both their educational and working life and in their social and personal futures.
- ✓ Understand how to balance time spent on technology and time spent away from it in a healthy and appropriate manner.
- ✓ Understand that technology helps to showcase their ideas and creativity. They will know that different types of software and hardware can help them achieve a broad variety of artistic and practical aims.
- ✓ Show a clear progression of technical skills across all areas of the National curriculum - computer science, information technology and digital literacy.
- ✓ Be able to use technology both individually and as part of a collaborative team.
- ✓ Be aware of online safety issues and protocols and be able to deal with any problems in a responsible and appropriate manner.
- ✓ Have an awareness of developments in technology and have an idea of how current technologies work and relate to one another.
- ✓ Meet the end of key stage expectations outlined in the National curriculum for Computing.

Formative assessment takes part in each lesson and misconception and next steps of the focus for feedback. Summative assessment is completed for each child at the end of each unit of teaching using the assessment overviews at the end of this document. A best fit approach to statements achieved results in an end of year summative grade.

Adaptive Teaching Strategies

Cognition and Learning	Communication and Interaction	SEMH	Physical and Sensory
- Alternative methods of recording (talking tins, laptops, creative tasks) - Differentiated tasks - Visual supports - Word banks/phonic maps - Pre-teaching of vocabulary - Teaching of key skills - Coloured overlays - Timers and chunked activities - Use of practical apparatus - Sit close to the board - Allow extra time	- Talking tins - Pre-teaching language - Visuals to support - Social stories - Now/Next - Increased focus on Oracy and developing talk opportunities - Thinking time - Explicit instructions - Makaton signs - Steps to success (one task at a time)	- Brain and movement breaks - Calmbrain - Reward time - Reflection areas (weighted blankets) - Sensory/fidget toys - Sit near to the teacher - Steps to success (one task at a time) - Peer buddies	- Own learning space (workstation) - Brain breaks - Appropriate seating - Fidget toys - Adapted resources (scissors, rulers etc) - Sloping board - Alternative methods of recording - Wobble cushions - Use of a sensory areas (tent) - Chew buddies - Pencil grips/sloping boards



Computing Overview

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2	Online Safety
EYFS	All About Me	There's No Place Like Home	Once Upon a Time	Life on the Farm	A Pirate's Life for Me	Commotion in the Ocean	Online safety
	Creative Media Capturing Moments Taking photographs and exploring digital devices.	Computing Systems & Networks Push, Press, Go! Exploring buttons, switches, remotes, inputs and outputs; understanding cause and effect.	Programming Bee-Bot Adventures Giving simple instructions, predicting outcomes, creating simple sequences and debugging when things don't go as expected.	AI/ Computing Systems and Networks Using AI-supported tools (e.g. iNaturalist) with adult support to identify plants or animals and using tablets to research information.	Data Handling Sorting Treasure Sorting, grouping and categorising objects and information.	Creative Media Ocean Artists Creating digital artwork using drawing and painting tools.	Opportunities to discuss During snack and social.
Year 1	Computing systems and networks	Programming 1	Digital Literacy	Programming 2	Creating media	Data handling	Online safety
	Improving mouse skills	Algorithms unplugged	AI	Programming Bee-bots	Digital imagery <i>Why do we fight and argue? Should we be kind to our friends?</i> 	Introduction to data	Online safety Y1 1 lesson per half term.
Year 2	Computing systems and networks 1	Programming 1	Computing systems and networks 2	Programming 2	Digital Literacy	Data handling	Online safety
	What is a computer?	Algorithms and debugging	Word processing	Programming: ScratchJr	AI	International Space Station <i>When have you experienced moments of wonder?</i> 	Online safety Y2 1 lesson per half term.
Year 3	Computing systems and networks 1	Programming	Computing systems and networks 2	Computing systems and networks 3	Digital Literacy	Data handling	Online safety
	Networks and the Internet	Programming: Scratch	Emailing	Journey inside a computer	AI	Comparison cards databases	Online safety Y3 1 lesson per half term.
Year 4	Computing systems and networks	Programming	Creating media	Digital Literacy	Programming 2	Data handling	Online safety
	Collaborative Learning <i>What responsibilities do I have for others?</i> 	Programming: Scratch	Website design (video skills)	AI	Computational thinking	Investigating weather <i>What would it be like without seasons?</i> 	Online safety Y4 1 lesson per half term.
Year 5	Computing systems and networks	Programming 1	Data handling	Programming 2	Creating media	Digital Literacy	Online safety
	Search engines	Programming music	Mars Rover 1	Micro: bit	Stop motion animation	AI	Online safety Y5 1 lesson per half term.
Year 6	Computing systems and networks	Computing systems and networks	Programming	Data handling	Data handling	Digital Literacy	Online safety
	Bletchley Park and History of Computers <i>Are my beliefs important?</i> 		Intro to Python	Big data 1	Big data 2	AI	Online safety Y6 1 lesson per half term.

National Curriculum Coverage

	KS1	LKS2	UKS2
Computing Systems and Networks	recognise common uses of information technology beyond school.	Understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information	Understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information
Programming	Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions Create and debug simple programs	Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs	Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts

	Personal, Social and Emotional Development Work and play cooperatively and take turns with others.	Use logical reasoning to predict the behaviour of simple programs	Use sequence, selection, and repetition in programs; work with variables and various forms of input and output	Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs
Creating Media	N/A	Use technology purposefully to create, organise, store, manipulate and retrieve digital content	Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts	Use sequence, selection, and repetition in programs; work with variables and various forms of input and output
Data Handling	Communication and Language -Articulate their thoughts and ideas in well-formed sentences. -Use talk to help work out problems and organise thinking and activities, and to explain how things work and why they might happen. - Participate in small group, class and one-to-one discussions, offering their own ideas, using recently introduced vocabulary. Mathematics -Count objects, actions and sounds. - Subitise. -Count beyond 10. -Compare numbers. -Understand the 'one more than/ one less than' relationship between consecutive numbers. -Continue, copy and create repeating patterns. -Compare length, weight and capacity.	Use technology purposefully to create, organise, store, manipulate and retrieve digital content	Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content	Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content

Online Safety	Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies	Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact	Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact
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Planning and Assessment Overviews

Please find below the planning and assessments overviews for each unit of Computing. They are organised into the five strands of our Computing Curriculum, which are as follows:

Computing Systems and Networks

Programming

Creating Media

Digital Literacy: AI

Data Handling

Online Safety













