St. John's C of E Primary School Computing Curriculum

Intent

At St John's, our computing curriculum is designed to equip pupils with the knowledge, skills, and confidence to navigate the digital world effectively and responsibly. We aim to inspire a love of technology and foster creativity, critical thinking, and problem-solving skills, preparing pupils for the opportunities and challenges of the modern, interconnected world.

Through an engaging and carefully structured curriculum, we will:

- **Develop Digital Literacy:** Ensure pupils can use technology confidently and competently to express themselves, create content, and communicate effectively, forming a strong foundation for lifelong digital engagement.
- **Build Computational Thinking Skills:** Introduce pupils to the principles of logic, algorithms, and programming, enabling them to approach problems methodically and develop creative solutions.
- **Promote E-Safety and Responsibility:** Teach pupils to use technology safely, respectfully, and responsibly, equipping them to recognise and mitigate potential online risks while fostering positive digital citizenship.
- **Encourage Creativity and Innovation:** Inspire pupils to use digital tools to design, create, and innovate, fostering confidence and curiosity in exploring the possibilities of technology.
- **Connect Learning to Real-World Contexts:** Help pupils understand the relevance of computing in everyday life, from communication and work to entertainment and global issues such as sustainability.

Our computing curriculum aims to empower all pupils to be active participants in the digital world, preparing them for future learning and the evolving demands of the workplace. By embedding our school values within the curriculum, we will ensure pupils develop not only technical skills but also the ethical and social awareness needed to thrive as responsible, informed, and confident digital citizens.

Implementation

EYFS Curriculum

Within the new EYFS curriculum the 'Technology' strand has been removed from 'Understanding the World' and has not been replaced with any updated guidance. However, computing and technology are still vitally important subjects to teach to Foundation children. Teaching computing within the curriculum ensures that children enter Year 1 with a strong foundation of knowledge. Computing lessons in EYFS also ensure that children develop listening skills, problem-solving abilities and thoughtful questioning — as well as improving subject skills across the seven areas of learning.

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We live in a technological world and there is no escape from the reality that technology is integrated into the lives of young children. Just as we ensure the children in our care are ready for the adult world by teaching them maths and literacy, we should also make sure that they are fluent in computer literacy and all-important e-safety.

Primary Curriculum

Year	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
1	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
2	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
3	Computing Systems and Networks – Connecting Computers	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
4	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
5	Computing Systems and Networks – Systems and Searching	Creating Media – Introduction to Vector Graphics	Programming A – Selection in Physical Computing	Creating Media – Video Production	Data and Information – Flat-File Databases	Programming B – Selection in Quizzes
6	Computing Systems and Networks – Communication and Collaboration	Creating Media – Web Page Creation	Programming A – Variables in Games	Data and Information – Spreadsheets	Creating Media – 3D Modelling	Programming B – Sensing Movement
Link to Planning	https://stjohnsdanburyessexsch.sharepoint.com/:f:/s/CURRICULUM/EnDWQFf-gNNAt7hSrmFOlGkB6SqoWwjcP1lymsMwGxtQAg?e=qtvSBc					

National Curriculum Objectives KS1

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	Year 1						Year 2					
NC Objective	Comp. Systems & Networks	Creating Media (1)	Program-ming A	Data & Info.	Creating Media (2)	Program-ming B	Comp. Systems & Networks	Creating Media (1)	Program-ming A	Data & Info.	Creating Media (2)	Program-ming B
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 predict the behaviour of simple programs			✓			✓			✓			✓
Use technology purposefully to create, organise, store, manipulate and retrieve digital content	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	
Recognise common uses of information technology beyond school	✓		✓				✓	✓				
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.												

National Curriculum Objectives KS2

	Year 3						Year 4					
NC Objective	Comp. Systems & Networks	Creating Media (1)	Program-ming A	Data & Info.	Creating Media (2)	Program-ming B	Comp. Systems & Networks	Creating Media (1)	Program-ming A	Data & Info.	Creating Media (2)	Program-ming B
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	✓		✓			✓			✓	✓		✓
Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs			✓			✓			✓			✓
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												
Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content					✓		✓	✓				
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	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.		✓					✓	✓			✓	

	Year 5						Year 6					
NC Objective	Comp. Systems & Networks	Creating Media (1)	Program-ming A	Data & Info.	Creating Media (2)	Program-ming B	Comp. Systems & Networks	Creating Media (1)	Program-ming A	Data & Info.	Creating Media (2)	Program-ming B
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	✓		✓			✓			✓			✓
Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs			✓			✓			✓			✓
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	✓						✓					
Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content		✓		✓				✓				
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												
Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.		✓					✓	✓			✓	

Impact

The impact of the computing curriculum at St. John's will be evident in the knowledge, skills, and attitudes pupils develop, ensuring they are well-prepared to thrive in an increasingly digital world. By the time pupils leave our school, they will be confident, responsible, and creative users of technology with the skills and understanding necessary for future learning and life.

Impact on Pupils

- **Strong Digital Literacy:** Pupils will be proficient in using a range of digital tools to communicate, create, and solve problems, enabling them to engage effectively with technology in education and beyond.
- **Confident Problem-Solvers:** Through developing computational thinking skills, pupils will approach challenges with resilience and creativity, applying logical reasoning and innovative ideas to solve problems.
- **Safe and Responsible Digital Citizens:** Pupils will have a clear understanding of online safety and digital responsibility, allowing them to navigate the online world with confidence while recognising and managing risks.
- **Curiosity and Creativity:** Pupils will demonstrate enthusiasm for exploring new technologies and applying their skills creatively across a variety of contexts, fostering a love of innovation.

- **Awareness of the Digital World:** Pupils will understand how technology influences modern life and recognise its potential for addressing global challenges, inspiring them to use technology in meaningful and ethical ways.

Impact on the School Community

- **Positive Digital Culture:** A robust and inclusive computing curriculum will cultivate a school-wide appreciation for technology as a tool for learning, collaboration, and creativity.
- **Preparation for the Future:** Pupils will leave St. John's equipped with the foundational computing skills and knowledge needed for success in secondary education and future careers.
- **Values-Driven Learning:** The integration of the school's Christian values into the curriculum will ensure pupils develop not only technical competencies but also the ethical awareness to use technology for good.

Impact on Wider Society

- **Informed and Ethical Users:** Pupils from St. John's will be informed, thoughtful, and responsible participants in the digital world, contributing positively to online communities and society as a whole.
- **Inspiration for Future Careers:** By fostering curiosity and confidence, the curriculum will inspire aspirations in technology-related fields, helping to address future skills gaps in STEM industries.

Through the computing curriculum at St. John's, we aim to nurture pupils who embrace technology as a tool for learning, collaboration, and creativity, and who use their skills to make a positive impact in the world.