FEDERATION OF
FOLLIFOOT & SPOFFORTH
CHURCH OF ENGLAND PRIMARY SCHOOLS
Love Learn Thrive

Our Computing Curriculum Sequence

Our computing Curriculum starts with the expectations of the National Curriculum set out below in the aims and subject content.

Computing National Curriculum

Aims

The national curriculum for computing aims to ensure that all pupils:

1. can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation
2. can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems
3. can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems
4. are responsible, competent, confident and creative users of information and communication technology.

Computing Subject content

Key stage 1 (Years 1&2)

Pupils should be taught to:

- 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.

Key stage 2 (Years 3-6)

Pupils should be taught to:

- 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.

Our Computing Curriculum

Through our curriculum our children acquire and build knowledge and skills in three strands of computing:

1. Computer Science: (Theory and Programming) This deals with the learning statements developing understanding and application of programming and coding.
2. Digital Literacy: This deals with the learning statements developing understanding and application of online communication and safety
3. Information Technology: This deals with the learning statements developing understanding and application of using technology purposefully to create, store, organise, manipulate and retrieve digital content.

In each strand pupils are incrementally taught the concepts and language to develop their knowledge of computing, whilst being provided opportunities to develop their skills through increasingly complex or mature activities across the Key Stages

	Computer Science	Digital Literacy	Information Technology
Early Years	The distinct section on Technology has been removed from the new Early Years framework on the understanding that children now have very high levels of access to ICT such as phones and tablets. ICT is understood as a way that children may record and develop their play and thinking switching fluidly between first hand and on-screen experiences In EY children are provide ICT opportunities to support the 2020 development matters guidance and work closely with parents to understand the ICT opportunities children have at home. Opportunities will support and enhance Development Matters guidance such as; 'Fine Motor Skills - Begin to show accuracy and care when drawing' - Children may move fluidly between using traditional pencil and digital tools to draw and make marks.		

	National Curriculum		
	Computer Science	**Digital Literacy**	**Information Technology**
Key Stage 1	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	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.	Use technology purposefully to create, organise, store, manipulate and retrieve digital content
Key Stage 2	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	Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. 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

Computing Long Term Plan
Cycle A – 2024/2025 Cycle B – 2025/2026

	Annual Cycle A	Annual Cycle B	Annual Cycle A	Annual Cycle B	Annual Cycle A	Annual Cycle B
	Years 1&2	Years 1&2	Years 3&4	Years 3&4	Years 5&6	Years 5&6

Autumn	COMPUTING SYSTEMS AND NETWORKS Technology around us (Y1)	COMPUTING SYSTEMS AND NETWORKS Information technology around us (Y2)	COMPUTING SYSTEMS AND NETWORKS Connecting Computers (Y3)	CREATING MEDIA Desktop publishing (Y3)	COMPUTING SYSTEMS AND NETWORKS Communication (Y6)	PROGRAMMING A/B Variables in games (Y5 Unit) Sensing (Y6 Unit)
Online safety	Project Evolve – Online Relationships	Project Evolve – Self image and identity	Project Evolve - Heath, well-being and lifestyle	Project Evolve – Online Relationships	Project Evolve – Self-image and identity	Project Evolve – Online relationships
Spring	CREATING MEDIA Digital Painting (Y1)	PROGRAMMING B - Introduction to animation (Y1)	PROGRAMMING A Sequencing sounds (Y3)	PROGRAMMING A Repetition in shapes (Y3)	PROGRAMMING A/B Selection in physical computing Selection in quizzes (Y5/6)	DATA AND INFORMATION Flat-file databases (Y6 Unit)
Online safety	Project Evolve – Privacy and security	Project Evolve – Online Reputation	Project Evolve – Self-image and identity –	Project Evolve – Online Bullying	Project Evolve – Copyright and ownership	Project Evolve – Online bullying
Summer	PROGRAMMING A Moving a robot (Y1)	PROGRAMMING B Introduction to quizzes (Y2)	PROGRAMMING B Events and actions (Y4)	PROGRAMMING B Repetition in games (Y4)	CREATING MEDIA 3D modelling Web page creation (Y6)	CREATING MEDIA Vector drawing Video editing (Y5)
Online safety	Project Evolve – Online Bullying	Project Evolve – Heath, well-being and lifestyle	Project Evolve – Privacy and security	Project Evolve – Managing online information	Project Evolve – Managing online information	Project Evolve – Heath, well-being and lifestyle

Year 1/2

Strand of curriculum	**Unit**	**Software/hardware**
Computer systems and networks	Technology around us	https://paintz.app/
Creating media	Digital painting	https://paintz.app/
Programming A	Moving a robot	Beebots
Computer systems and networks	IT around us	Unplugged/ Slide sorting activity

Programming B	Introduction to animation	Scratch Jr
Programming B	Introduction to quizzes	Scratch Jr

Year 3/4

Strand of curriculum	**Unit**	**Software/hardware**
Computer systems and networks	Connecting computers	Unplugged (online paint app e.g. paintz.app, ppt lesson 3)
Programming A	Sequence in music	Scratch
Programming B	Events and actions (maze)	Scratch
Creating media	Desktop publishing	Adobe Spark (free for education, but requires signing up) Can adapt to use with Google Slides/Docs
Programming A	Repetition in shapes	Turtle Academy https://turtleacademy.com/playground
Programming B	Repetition in games	Scratch

Year 5/6

Strand of curriculum	**Unit**	**Software/hardware**
Computer systems and networks	Communication	Online websites
Programming A	Selection in physical computing	Crumbles, Crumble accessories and Crumble software (based on Scratch environment)
Programming B	Selection in quizzes	Scratch
Creating media	Vector drawing	Google Drawings (or MS Publisher or MS PowerPoint can be substituted)
Programming A	Variables in games	Scratch
Programming B	Sensing	Micro-bit (although can use an emulator https://makecode.microbit.org/)
Data handling	Flat-file databases	J2E http://www.j2e.com/help/videos/datags4
Creating media	Website creation	Google Sites

Principles

- Online Safety is also taught in PSHCE units and on an ongoing basis in respond to any emerging or developing arsing issues e.g. responding to a new form of social media being used by children.
- Flexible to achieve progression in mixed aged classes
- General core concepts and skills that can be applied in new and emerging contexts e.g. new software and hardware

- Ability to adapt and evolve and use cross curricular (in particular digital literacy and information tech
- Ensuring computer science units are effectively taught and appropriately proportionate part of curriculum recognising major role of computer science in modern world
- Use of DB to ensure consistency in quality and to support staff in delivering high quality within capacity of hardware and software knowledge and skills more important than which software as this will change and evolve
- Introduce use of 'real life software'

Quality First Curriculum Implementation - Key Resources

Our quality first curriculum implementation of our computing curriculum is supported by the following two high quality resources to ensure consistency and accessibility for all children.

Project Evolve – Online Safety resources using UKCIS framework to provide relevant resources for all areas of internet safety.

Teach Computing – National Centre for Computing Education resource units for Ks1&2