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

### Reception

Computing in Reception (Early Years Foundation Stage, EYFS) is not taught as a formal, isolated subject. Instead, it is integrated into daily play, continuous provision, and areas of learning like Understanding the World, Expressive Arts and Design, and Personal, Social and Emotional Development (PSED). The primary goal is to build digital literacy, basic problem-solving, and a strong foundation for Year 1 computing.

### Core Elements of Computing in Reception

- Hardware & Devices: Children interact with everyday tech such as class iPads, interactive whiteboards (IWBs), desktop computers, digital cameras, and audio/listening stations.
- Programming & Beebots: Pupils use programmable toys (like Bee-Bots or Blue-Bots) to learn simple directional language (forward, backward, turns), test predictions, and press "GO" to execute sequences.
- Unplugged Computing: Activities without screens teach logical reasoning, debugging (trial and error), breaking tasks down into steps, and following or giving precise instructions.
- Creating and Communicating: Children use age-appropriate software to paint pictures, record sound clips, take photos/videos, and sort simple data or pictograms.
- Basic Computer Skills: Introduction to using a mouse or trackpad, pressing keys, recognizing simple icons and basic logging in/out routines.
- Online Safety: Children learn simple internet rules, how to identify trusted adults, recognize device-based kindness versus unkindness, and who to tell if something unexpected or worrying appears on a screen.

### 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

| | Early Years Framework | | |
|---|---|---|---|
| | **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<br><br>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.<br><br>Opportunities will support and enhance Development Matters guidance such as;<br>'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<br><br>Create and debug simple programs<br><br>Use logical reasoning to predict the behaviour of simple programs | Recognise common uses of information technology beyond school<br><br>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<br><br>Use sequence, selection, and repetition in programs; work with variables and various forms of input and output<br><br>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.<br><br>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<br><br>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 – 2026/2027 Cycle B – 2027/2028

| | 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<br>Technology around us (Y1)<br><br>CREATING MEDIA<br>Digital Painting (Y1) | DATA AND INFORMATION<br>Grouping Data (Y1)<br><br>CREATING MEDIA<br>Digital Photo (Y2) | COMPUTING SYSTEMS AND NETWORKS<br>Connecting Computers (Y3)<br><br>CREATING MEDIA<br>Stop Frame animation (Y3) | DATA AND INFORMATION<br>Branching databases (Y3)<br><br>CREATING MEDIA<br>Desktop publishing (Y3) | COMPUTING SYSTEMS AND NETWORKS<br>Systems and searching (y5)<br><br>CREATING MEDIA<br>Video production (Y5) | DATA AND INFORMATION<br>Flat-file databases (Y5)<br><br>CREATING MEDIA<br>Vector drawing (Y5) |
| **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 | PROGRAMMING A<br>Moving a robot (Y1)<br><br>COMPUTING SYSTEMS AND NETWORKS<br>Information tech around us (Y2) | PROGRAMMING B - Introduction to animation (Y1)<br><br>DATA AND INFORMATION<br>Pictograms (Y2) | PROGRAMMING A<br>Sequencing sounds (Y3)<br><br>COMPUTING SYSTEMS AND NETWORKS<br>The Internet (Y4) | PROGRAMMING A<br>Repetition in shapes (Y3)<br><br>DATA AND INFORMATION<br>Data Logging (Y4) | PROGRAMMING A<br>Selection in physical computing (Y5)<br><br>COMPUTING SYSTEMS AND NETWORKS<br>Communication and collaboration (Y6) | PROGRAMMING A<br>Selection in quizzes (Y5 Prog B)<br><br>DATA AND INFORMATION<br>Spreadsheets (Y6) |
| **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 | CREATING MEDIA<br>Digital Writing (Y1)<br><br>PROGRAMMING B<br>Robot Algorithms (Y2) | CREATING MEDIA<br>Digital Music (Y2)<br><br>PROGRAMMING B<br>Introduction to quizzes (Y2) | CREATING MEDIA<br>Photo Editing (Y4)<br><br>PROGRAMMING B<br>Events and actions (Y4) | PROGRAMMING B<br>Repetition in games (Y4)<br><br>CREATING MEDIA<br>Audio Production (Y4) | CREATING MEDIA<br>Web page creation (Y6)<br><br>PROGRAMMING B<br>Variables in games (Y6) | CREATING MEDIA<br>3D modelling (Y6)<br><br>PROGRAMMING B<br>Sensing Movement (Y6) |
| **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)<br>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

Oak National Academy - Computing resources and planning for each unit.