Computing

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Computing Statement of Intent

At Folksworth Church of England Primary School we recognise how digital technologies have become integrated into every aspect of our pupil's lives. With this in mind, we aim for all pupils to become digitally literate and competent end-users of technology, able to choose the best tool to fulfil the task or challenge and to safely access an ever expanding digital world.

We use the Kapow Primary Computing Curriculum to equip children with the knowledge and skills required for future learning. Pupils develop creativity, resilience, problem-solving and critical thinking skills that will enable pupils to embrace and utilise new technology in a socially responsible and safe way in order to flourish.
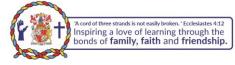
We integrate the use of digital technology into all areas of our curriculum, preparing pupils for life beyond the primary classroom.

We aim to make digital technologies accessible to all pupils, regardless of background, and to access the benefits of technology as a tool to support those with additional needs.

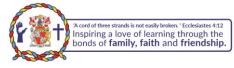It is important for our pupils to become good digital citizens recognising that, through technology, they can become part of a global community. We model and educate our pupils on how to use technology positively and safely.

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Inspiring a love of learning through the bonds of **family, faith** and **friendship.**

Computing Unit Overview

YEAR A	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
EYFS	Magical Me	Celebrations	Around the World	Come Outside! Growing	Amazing Animals	Journeys: Fun at the Seaside
	X	Using a Computer	All About Instructions	Exploring Hardware	Bee-Bots	Introduction to Data
Years 1 & 2	Paddington at the Tower *Michael Bond*	Toby and the Great Fire of London *Margaret Nash & Jane Cope*	The Jolly Postman *Janet & Allan Ahlberg*	The Magic Faraway Tree *Enid Blyton*	The Lighthouse Keepers' Lunch *Ronda & David Armitage*	George's Marvellous Medicine *Roald Dahl*
	Improving Mouse Skills	Algorithms Unplugged	Rocket to the Moon	What is a computer?	Algorithms and debugging	Word Processing
Years 3 & 4	Charlie and The Chocolate Factory *Roald Dahl*	Demon Dentist *David Walliams*	Beowulf *Rob Lloyd Jones and Victor Tavares*	The Saga of Erik The Viking *Terry Jones*	Poems to Perform *Julia Donaldson*	The Time Travelling Cat and the Egyptian Goddess *Julia Jarman*
	Emailing	Programming: Scratch	Video Trailers	Website Design	Further Coding with Scratch	Computational Thinking
Years 5 & 6	Cosmic *Frank Cottrell Boyce*	The Nowhere Emporium *Ross MacKenzie*	Rain Player *David Wisniewski*		Goodnight Mr Tom *Michelle Magorian*	Macbeth (A Shakespeare Story) *Andrew Matthews and Tony Ross*
	Mars Rover 1	Mars Rover 2 / Lego We-Do (Mars Rovers)	Introduction to Python	History of Computers	Bletchley Park	Inventing a Product

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YEAR B	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
EYFS	Magical Me	Celebrations	Around the World	Come Outside! Growing	Amazing Animals	Journeys: Fun at the Seaside
	X	Using a Computer	All About Instructions	Exploring Hardware	Bee-Bots	Introduction to Data
Years 1 & 2	Dogger *Shirley Hughes*	The Owl Who was Afraid of the Dark *Jill Tomlinson*	The Tiger who came to tea *Judith Kerr*	Handa's Surprise *Eileen Browne*	The Day the Crayons Quit *Drew Daywalt & Oliver Jeffers*	The Owl and the Pussycat *Edward Lear*
	Bee - Bots	Digital Imagery	Introduction to Data	Scratch Jr	International Space Station	Stop Motion
Years 3 & 4	Stig of the Dump *Clive King*	The Firework Makers Daughter *Philip Pullman*	The Iron Man *Ted Hughes*	Run Wild *Gill Lewis*	Avoid Being a Roman Soldier *David Stewart*	The Thieves of Ostia *Caroline Lawrence*
	Networks and the Internet	Comparison Cards	Journey inside a computer	Collaborative Learning	Investigating Weather	HTML
Years 5 & 6	Tudor Tales: The Thief, the Fool and the Big Fat King *Terry Deary*	The Spy Master: First Blood *Jan Burchett & Sara Vogler*	The Storm Keeper's Island *Catherine Doyle*	The Highwayman *Alfred Noyes*	Beasts of Olympus: Beastkeeper *Lucy Coats & David Roberts*	Percy Jackson and the Lightning Thief *Rick Riordan*
	Search Engines	Micro:Bit	Programming Music	Stop Motion Animation	Big Data 1	Big Data 2

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Computing Progression of Knowledge and Skills

By Year Group

	Computer Science	E-Safety	Information Technology	Digital Literacy

Year Group	Standardised Objectives
Year 1	- Begin to develop an understanding of algorithms - Begin to understand that programs work by following instructions - Create simple programs and begin to debug them - Develop reasoning to predict the behaviour of simple programs - Begin to recognise common uses of information technology beyond school - Develop an understanding of how to use technology safely - Know where to go for help/support when they have concerns about content/contact on internet - Use technology to create, store and retrieve digital content
Year 2	- Understand what algorithms are - Understand how algorithms are implemented as programs on digital devices - Understand that programs execute by following precise and unambiguous instructions - Use logical reasoning to predict the behaviour of simple programs - Create and debug 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/support when they have concerns about content/contact on internet/other online technologies - Use technology purposefully to create, store, retrieve, organise and manipulate digital content

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Year 3	- Start to use reasoning to understand how algorithms work - Detect errors in algorithms and programs - Begin to solve problems by decomposing them into smaller parts - Start to use sequence and selection in programs - Begin to develop understanding of how to write and debug programs that accomplish specific goals - Begin to work with various forms of input/output - Show emerging understanding of computer networks including the internet and how they provide multiple services - Use some search technologies effectively and appreciate how results are ranked - Decide which questions to ask when using search engines - Use technology safely, responsibly and respectfully - Recognise acceptable/unacceptable behaviour - Identify ways to report concerns about content/contact - Use a variety of software on digital devices
Year 4	- Use logical reasoning to understand how algorithms work - Detect and correct errors in algorithms and programs - Begin to solve problems by decomposing them into smaller parts - Start to use sequence, selection and repetition in programs - Write and debug programs that accomplish specific goals - Work with variables and various forms of input/output - Understand computer networks including the internet and how they provide multiple services - Use search technologies effectively and appreciate how results are selected and ranked - Evaluate the reliability of digital content - Begin to ask and answer questions based on the reliability of digital content - Recognise acceptable/unacceptable behaviour and identify ways to report concerns about content/contact

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	- Select and use a variety of software on digital devices
Year 5	- Use logical reasoning to understand how algorithms work and detect and correct errors in algorithms and programs - Solve problems by decomposing them into smaller parts - Use sequence, selection and repetition in programs - Write and debug programs that accomplish specific goals - Accurately manipulate variables and various forms of input/output - Use a wide range of search technologies effectively and appreciate how results are selected and ranked - Be discerning in evaluating the reliability of digital content - Recognise the opportunities computer networks offer for communication and collaboration - Confidently, competently and responsibly use information and communication technology - Express own ideas by selecting, using and combining a variety of software on digital devices to design and create programs
Year 6	- 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 accurately in programs - Accurately manipulate a wide range of variables and various forms of input/output - Securely use logical reasoning to understand how algorithms work and detect and correct errors in algorithms and programs - Appreciate how results are selected and ranked and use this to retrieve accurate content - Be discerning in evaluating the reliability of digital content - Use the opportunities computer networks offer for communication and collaboration - Confidently, competently and responsibly use information and communication technology - Express own ideas by selecting, using and combining a variety of software on a range of digital devices and create programs

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By Theme

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Computer Science						
	Begin to develop an understanding of algorithms Begin to understand that programs work by following instructions Create simple programs and begin to debug them Develop reasoning to predict the behaviour of simple programs	Understand what algorithms are Understand how algorithms are implemented as programs on digital devices Understand that programs execute by following precise and unambiguous instructions Use logical reasoning to predict the behaviour of simple programs Create and debug simple programs	Start to use reasoning to understand how algorithms work Detect errors in algorithms and programs Begin to solve problems by decomposing them into smaller parts Start to use sequence and selection in programs Begin to develop understanding of how to write and debug programs that accomplish specific goals, including controlling or simulating physical systems Begin to work with various forms of input/output	Communicate, generate and develop ideas using a range of strategies eg prototypes, pattern pieces Use research to inform design and develop design criteria Take risks to become innovative and resourceful	Communicate, generate, develop and model ideas using a range of strategies eg computer-aideddesign, cross-sectional and exploded diagrams Use research to inform design and generate own design criteria Communicate, generate and develop ideas, drawing on other disciplines eg science, maths, computing Confidently take calculated risks to become innovative, resourceful and enterprising	Communicate, generate and develop ideas, drawing on other disciplines eg science, maths, computing Use research to inform innovative design and generate own design criteria Confidently take calculated risks to become innovative, resourceful and enterprising
Digital Literacy						
	Use technology to create, store and retrieve digital content	Use technology purposefully to create, store, retrieve, organise and manipulate digital content	Use a variety of software on digital devices	Select and use a variety of software on digital devices	Express own ideas by selecting, using and combining a variety of software on digital devices to design and create programs	Express own ideas by selecting, using and combining a variety of vsoftware on a range of digital devices and create programs

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EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Information Technology						
	Begin to recognise common uses of Information technology beyond school	Recognise common uses of Information technology beyond school	Show emerging understanding of computer networks including the Internet and how they provide multiple services such as the World Wide Web

Use some search technologies effectively and appreciate how results are selected

Decide which questions to ask when using search engines | Understand computer networks including the Internet and how they provide multiple services such as the World Wide Web

Use search technologies effectively and appreciate how results are selected and ranked

Evaluate the reliability of digital content

Begin to ask and answer questions based on the reliability of digital content | Recognise the opportunities computer networks offer for communication and collaboration

Use a wide range of search technologies effectively and appreciate how results are selected and ranked

Be discerning in evaluating the reliability of digital content | Use the opportunities computer networks offer for communication and collaboration

Appreciate how results are selected and ranked and use this to retrieve accurate content

Be discerning in evaluating the reliability of digital content |
| **E-Safety** | | | | | | |
| | Develop an understanding of how to use technology safely

Know where to go for help/support when they have concerns about content/contact on Internet | Use technology safely and respectfully, keeping personal information private

Identify where to go for help/support when concerned about content/contact on Internet/other online technologies | Use technology safely, respectfully and responsibly

Recognise acceptable/unacceptable behaviour and identify ways to report concerns about content and contact | Recognise acceptable/unacceptable behaviour and identify ways to report concerns about content and contact | Confidently, competently and responsibly use information and communication technology | Confidently, competently and responsibly use information and communication technology |

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