



**Friskney All Saints  
Church of England  
Primary School**



### Friskney All Saints Church of England Primary School

#### Computing Curriculum Intent

At Friskney All Saints Primary School, we are **Computer technologists!**

At our school we want pupils to be MASTERS of technology. Technology is everywhere and will play a pivotal part in students' lives,. Therefore, we want to model and educate our pupils on how to use technology positively, responsibly and safely. We want our pupils to be creators not consumers and our broad curriculum encompassing computer science, information technology and digital literacy reflects this. We want our pupils to understand that there is always a choice with using technology and as a school we utilise technology (especially social media) to model positive use. We recognise that the best prevention for a lot of issues we currently see with technology/social media is through education. Building our knowledge in this subject will allow pupils to effectively demonstrate their learning through creative use of technology We recognise that technology can allow pupils to share their learning in creative ways. We also understand the accessibility opportunities technology can provide for our pupils.

Our knowledge rich curriculum has to be balanced with the opportunity for pupils to apply their knowledge creatively which will in turn help our pupils become skilful computer scientists. We encourage staff to try and embed computing across the whole curriculum to make learning creative and accessible. We want our pupils to be fluent with a range of tools to best express their understanding and hope by Upper Key Stage 2, children have the independence and confidence to choose the best tool to fulfil the task and challenge set by teachers.

## Computing Curriculum Drivers



**Inspiration** – Our ambitious Computing curriculum is designed to ensure that every child reaches their full potential and continually strives for excellence. Each year, students' learning builds upon previously taught content through carefully sequenced units that outline substantive and disciplinary knowledge. In our Computing curriculum, we set high expectations for every student to achieve excellence in their coding and computational skills. Through structured units, students progressively develop their knowledge and skills, moving towards mastery in computational thinking and practical tasks. We prioritize the acquisition of computing terminology, ensuring that students grasp technical terms and concepts essential to computing. Regular opportunities for reviewing and reinforcing learning are woven throughout the curriculum, allowing students to solidify their understanding and retain crucial knowledge and skills. By fostering a culture of excellence, we empower students to aim for their personal best and realize their full potential as digital designers and problem solvers.



**Excellence** - Our ambitious Computing curriculum is designed to ensure that every child reaches their full potential and continually strives for excellence. Each year, students' learning builds upon previously taught content through carefully sequenced units that outline substantive and disciplinary knowledge. In our Computing curriculum, we set high expectations for every student to achieve excellence in their coding and computational skills. Through structured units, students progressively develop their knowledge and skills, moving towards mastery in computational thinking and practical tasks. We prioritize the acquisition of computing terminology, ensuring that students grasp technical terms and concepts essential to computing. Regular opportunities for reviewing and reinforcing learning are woven throughout the curriculum, allowing students to solidify their understanding and retain crucial knowledge and skills.



**Exploration** – Our Computing curriculum encourages students to explore the digital world around them through the lens of technology and innovation. By examining local and global contexts, including the community of Friskney and broader trends in Modern Britain, students gain a deeper understanding of how computing shapes our society and daily lives. Through inquiry-based learning and problem-solving tasks, students are challenged to think critically, independently, and creatively. We emphasize the development of communication skills, enabling students to articulate their ideas effectively and comprehend computing concepts. Field trips and virtual experiences provide students with hands-on opportunities to analyse digital concepts, recognize patterns, and tackle real-world computing challenges. Through a strong emphasis on personal growth, we equip students with the skills needed to navigate the complexities of the digital age and cultivate a spirit of curiosity and readiness for their future endeavours in technology.

## Computing Implementation

### EYFS

Computing	
Characteristics of effective learning	<p>Children will engage in their learning through the characteristics of effective teaching and learning.</p> <p>The three characteristics of effective teaching and learning are:</p> <ul style="list-style-type: none"><li>• <b>Playing and exploring</b> – children investigate and experience things and have a go</li><li>• <b>Active learning</b> – children concentrate and keep on trying if they encounter difficulties and enjoy achievements</li><li>• <b>Creating and thinking critically</b> – children have and develop their own ideas, make links between their ideas and develop strategies for doing things</li></ul>
What will computing look like within EYFS?	<p>The new EYFS framework does not cover technology, however, the children at XXX will still have ample opportunities to engage with technology through their learning and provision.</p> <p>This could be shown through:</p> <p>A range of technological resources e.g phones, keyboards, microwave, oven, torches, beebots, access to interactive SMART board, cameras, microscopes, range of toys, stopwatches, laptops, iPads, calculators</p> <p>Children will build up computing skills through:</p> <p>Individual log on to Rising Stars Reading Platform, individual pupil log ins to pupil laptops, use of iPads, unplugged algorithms through giving directions and use of beebots</p> <p>Children to understand the wider use of technology and participate in school learning walks to identify different technological uses and their purposes.</p> <p>Parents will be encouraged to share how children engage with technology at home through tapestry</p> <p>Key texts and stories will be used to expose the children to different technologies and moral stories about online safety.</p> <p>Children will develop an awareness of how to keep themselves safe online through E-safety Day and classroom teaching.</p>
Vocabulary	<p>Technology, internet, iPad, app, camera, switch, digital, website, mobile phone, computer, laptop, mouse, keyboard, click, open, close, program, type, record, play, headphones, speaker, volume</p>

## Long Term Plan Computing

### Resources available at Teachcomputing.org

		Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
EYFS	A and B	<p><b>Understanding the World (Technology)</b></p> <ul style="list-style-type: none"> <li>Children recognise that a range of technology is used in places such as homes and schools. They select and use technology for particular purposes.</li> <li>Understand that you may have to put your name/password into the device to retrieve your own files</li> <li>Understand that you can connect with others via a device</li> <li>Experience digital devices with an input/output.</li> <li>Change the output of a device/toy by altering the input</li> </ul> <ul style="list-style-type: none"> <li>Experience research via whole class activities</li> <li>Know that information and a range of services can be found online</li> <li>Use the keyboard to enter own name and print document</li> <li>Use the keyboard and mouse to move a character around a game</li> <li>Experience recording own voice and hearing the playback.</li> <li>Experience videos of self and ability to re-watch</li> </ul>					
Y1/2	A	Technology around us Y1 (CS AL)	Information technology around us Y2 (NW CS)	Digital Painting Y1 (ET CM)	Digital photography Y2 (ET CM)	Moving a robot Y1 (AL PG)	Robot Algorithms Y2 (AL PG)
	B	Grouping Data Y1 (DI AL)	Pictograms Y2 (DI ET)	Digital Writing Y1 (ET CM)	Making Music Y2 (CM DD)	Programming Animations Y1 (PG DD)	Programming Quizzes Y2 (PG DD)
Y3/4	A	Connecting Computers Y3 (NW CS)	The Internet Y4 (NW SS)	Stop Frame Animation Y3 (ET CM)	Audio Editing Y4 (ET CM)	Sequencing Sounds Y3 (PG DD)	Repetition in shapes Y4 (PG AL)
	B	Branching Databases Y3 (DI ET)	Data Logging Y4 (CS DI)	Desktop Publishing Y3 (ET CM)	Photo Editing Y4 (CM ET)	Events and Actions in programs Y3 (PG DD)	Repetition in games Y4 (PG DD)
Y5/6	A	Sharing Information Y5 (NW ET)	Internet Communication Y6 (NW ET)	Video Editing Y5 (CM DD)	Webpage Creation (CM DD)	Selection in Physical Computing Y5 (PG CS)	Variables in Games Y6 (PG DD)
	B	Flat file databases Y5 (DE ET)	Introduction to spreadsheets Y6 (ET DI)	Vector Drawing Y5 (ET CM)	3d Modelling Y6 (ET CM)	Selection in quizzes Y6 (AL PG)	Sensing Y6 (PG CS)

Concept	EYFS	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
<b>Computing systems and networks</b>	<b>Introduction to Technology</b>	<b>Technology around us</b> Recognising technology in school and using it responsibly.	<b>IT around us</b> Identifying IT and how its responsible use improves our world in school and beyond.	<b>Connecting computers</b> Identifying that digital devices have inputs, processes, and outputs, and how devices can be connected to make networks	<b>The Internet</b> Recognising the internet as a network of networks including the WWW, and why we should evaluate online content.	<b>Systems and Searching</b> Understanding computer systems and how information is transferred between systems and devices.	<b>Communication and collaboration</b> To explore how data is transferred over the internet.
<b>Why here/Why now</b>		To teach children that there is lots of useful technology. in the world they grow up in.	It builds on the knowledge and uses of technology in the wider world started in EYFS and Year 1.	To learn more about computers building on prior understanding of KS1 curriculum by learning about other devices that can be used for inputs and outputs.	To begin to understand how the WWW is a network before progressing to UKS2 where they learn more about collaborative working via the internet.	To further build on pupils understanding of inputs and outputs and to take part in a collaborative project online	Extends Yr5 unit on collaborative working and further extends understanding of the internet by learning about data packets.
<b>Key Vocabulary</b>		Technology, help, support, desk, computer mouse/trackpad, keyboard, screen, click, drag, double click, input, device, shift, space bar, capital letter, full stop, safely, responsibly, computer, technology.	Information technology (IT), computer, barcode, scanner/scan.	Digital device, input, output, process, program, connection, network, network switch, server, WAP wire access point	Internet, network, router, network security, network switch, server, WAP wire access point, Website, web page, web address, router, routing, route tracing, browser, World Wide, , content, links, files, content, download, sharing, ownership,	Collaboration input, output, real-world system, physical and electronic connections, search engine, result, refine, specific, web crawler, ranking, limitations	System, connection, digital, input, process, output, protocol, address, packet, chat, explore, slide,

					permission, Information, accurate, honest, adverts		
<b>Creating media</b>	Ipads-using the camera to take own pictures of work or things that we have an interest in.	<b>Digital Painting</b> Choosing appropriate tools in a program to create art, and making comparisons with working non-digitally	<b>Digital photography</b> Capturing and changing digital photographs for different purposes.	<b>Stop-Frame Animation</b> Capturing and editing digital still images to produce a stop-frame animation that tells a story.	<b>Audio Production</b> Capturing and editing audio to produce a podcast, ensuring that copyright is considered	<b>Video Production</b> Planning, capturing, and editing video to produce a short film.	<b>Web Page Creation</b> Introduces learners to the creation of websites for a chosen purpose.
<b>Why here/Why now</b>	To introduce using the iPads for a purpose, making sure they get the object in the picture.	To build upon knowledge learned in EYFS about technology having different uses. Build on knowledge learned in EYFS	It builds the understanding that we can use photography in different ways to capture objects started in EYFS.	Develops children's understanding of photography from Yr 1 and 2 and extends this to creating animations using stop-frame on tablets/ iPads and incorporating text and music	Expands on Digital music and recording skills learned in Yr 2 and 3. Pupils extend their knowledge of input and output devices and learn about ownership of digital audio and copyright.	To expand on previous knowledge of photography and podcasts and develop the skills of capturing, editing, and manipulating video, extending subject specific vocabulary.	This unit extends pupil's knowledge of copyright, building on this to explore fair use of media, the aesthetics of the site, and navigation paths.
<b>Key Vocabulary</b>	Image, object, button, see, frame	paint program, tool, paintbrush, erase, fill, undo, Piet Mondrian, primary colours, shape tools, line tool, fill tool, undo tool, Henri Matisse, shape tool, fill tool, Wassily Kandinsky, tools, feelings, colour, brush style,	Device, camera, photograph, capture, image, digital, Landscape, portrait, horizontal, vertical, field of view, narrow, wide, format, framing, focal point, subject matter, compose, natural lighting,	Animation, flip book, stop-frame animation, frame, sequence, image, photograph, setting, character, events, stop frame animation, onion skinning, consistency, delete, frame, evaluating, media, import, transition.	Audio, record, playback, microphone, speaker, headphones, input, output, audio, sound, record, playback, start, pause, stop, podcast, save, file, selection, open, save, mixing, time shift, export, MP3,	Video, audio, recording, storyboard, script, soundtrack, dialogue, recording, capture, zoom, storage, digital, tape, AV (audio-visual), save, videographer Video techniques: Zoom, pan, tilt, angle, Video,	Reviews, explore, HTML, fair use, copyright, copyright-free images, preview, own web page/home page, navigation path, hyperlinks,

		Georges Seurat, Pointillism, brush size, p, painting, computers.	artificial lighting, flash, focus, background, editing, tools, colour, filter,		audio, editing, evaluate, feedback.	lighting, setting, YouTuber, content, light, audio/sound, camera angle, colour, export, computer,	
	Laptops – logon to laptop using Teams password. Use paint to create	<b>Digital Writing</b> Using a computer to create and format text, before comparing to writing non-digitally.	<b>Digital music</b> Using a computer as a tool to explore rhythms and melodies, before creating a musical composition.	<b>Desktop publishing</b> Creating documents by modifying text, images, and page layouts for a specified purpose.	<b>Photo editing</b> Using a text-based programming language to explore count-controlled loops when drawing shapes.	<b>Introduction to Vector Graphics</b> Creating images in a drawing program by using layers and groups of objects.	<b>3D Modelling</b> Producing 3D models, working in a 3D space, moving, resizing, and duplicating objects.
<b>Why here/Why now</b>	Introduction to laptops as they will frequently need to use these as they progress through the year groups.	To build on knowledge learned in EYFS and understand that we can input information into iPads, laptops and other devices.	It builds on the children's knowledge and skills using a computer. Linking to their previous music knowledge of instruments and sounds.	To build on keyboard skills taught in KS1 and learn how to modify documents.	To build on photographic skills learned in Yr2 and Yr3 and extend to how to edit images by learning how to recolour, crop, rotate, clone and combine images.	Introduction to new content where pupils create own images/ objects in readiness for 3D modelling work in Yr6.	Introduction to 3D modelling following on from the Year 5 unit on vector graphics.
<b>Key Vocabulary</b>	Laptop, on, button, switch, letters, numbers, user, password, initials, date of birth, paint, brush, colour, copy, create, new, open.	Word processor, keyboard, keys, letters, Microsoft Word, Google Docs, Teams, account, numbers, space, backspace, text cursor, capital letters, toolbar, bold, italic, underline, mouse, cursor, select, font, undo.	Music, planets, Mars, Venus, war, peace, quiet, loud, feelings, emotions, pattern, rhythm, pulse, Neptune, pitch, tempo, rhythm, notes, instrument, create, emotion, pulse/beat, open, edit	Text, images, advantages, disadvantages, communicate, font, font style, communicate, template, landscape, portrait, orientation, placeholder, desktop publishing, copy, paste, layout,	Image, edit, arrange, select, digital, crop, undo, copyright, composition, edit, save, pixels, crop, rotate, flip, image, adjustments, effects, colours, hue/saturation, sepia, save, version, illustrator, vignette, retouch, clone, recolour,	Vector, drawing tools, shapes, object, icons, toolbar, move, resize, colour, rotate, duplicate/copy, organise, zoom, select, rotate, object, alignment grid, resize, handles, consistency, modify, layers,	2D, 3D, Project, relative, dimension, modelling, combine, construct, evaluate, view, resize, recolour, Perspective, select, modify, handles, lift, lower, rotate, duplicate, hollow



				purpose, desktop publishing, benefits	magic wand, select, adjust, sharpen, brighten, fake, real, composite, cut, copy, paste, alter, background, foreground, publication, elements, original, font style, shapes, border, layer.	object, front, back, order, Copy, paste, group, ungroup, duplicate, object, vector drawing, reuse, Improvement, evaluate, alternatives.	
<b>Programming A</b>	Make an animal costume for Beebot – explore how to use a Beebot.	<b>Moving a robot</b> Writing short algorithms and programs for floor robots, and predicting program outcomes.	<b>Robot algorithms</b> Creating and debugging programs, and using logical reasoning to make predictions.	<b>Sequencing Sounds</b> Creating sequences in a block-based programming language to make music.	<b>Repetition in shapes</b> Manipulating digital images, and reflecting on the impact of changes and whether the required purpose is fulfilled.	<b>Selection in physical computing</b> Exploring conditions and selection using programmable microcontroller.	<b>Variables in games</b> Introduction of 'variables' in Scratch
<b>Why here/Why now</b>	Introducing that things only move if they are given instructions in a program.	To begin learning about algorithms and programming objects building on understanding of Beebots introduced in EYFS.	To develop learners' understanding of instructions in sequences, logical reasoning and debugging.	Continuing the use of computers to make media and introduces can link their programming skills to create this.	To extend pupils understanding of programming by learning about repetition and loops.	To combine the elements previously taught and progress to add more age appropriate content.	Pupils continue to develop programming skills by experimenting with variables in an existing project, then modifying them, before they create their own projects.
<b>Key Vocabulary</b>	Image, object, button, see, beebot, move, forward, backward, on, off	Scratch Jr, Bee-Bot, command, sprite, compare, programming, programming area, Block, joining, command,	Instruction, sequence, clear, unambiguous, algorithm, program, order, commands, artwork, design,	Scratch, programming, blocks, commands, code, sprite, costume, stage, backdrop, programming	Code snippet, program, turtle , commands, algorithm, design, logo, debug, Pattern, repeat, repetition, count	Microcontroller, Crumble controller, components, LED, sparkle, crocodile clips, connect, battery box,	Project, modify, variable, define, letter-string, algorithm, artwork, role, code, task, design



		start block, run, program, background, delete, reset, algorithm, predict, effect, change, value, Instructions, appropriate, design.	route, mat, debugging.	blocks, motion, turn, point in direction, go to, glide, sequence, event, task, design, code, run the code, sequence, order, note, chord, algorithm, bug, debug.	controlled loop, algorithm, value, repeat, repetition, count-controlled loop, trace, value, repeat, count controlled loop, decompose, procedure,	program, repetition, infinite loop, count controlled loop, condition, true, false, input, output devices, selection, condition, action, Task, design,	
<b>Programming B</b>	Beebot APP	<b>Introduction to animation</b> Designing and programming the movement of a character on screen to tell stories.	<b>Introduction to quizzes</b> Designing algorithms and programs that use events to trigger sequences of code to make an interactive quiz.	<b>Events and actions</b> Writing algorithms and programs that use a range of events to trigger sequences of actions.	<b>Repetition in games</b> Using a block-based programming language to explore count-controlled and infinite loops when creating a game.	<b>Selection in quizzes</b> Exploring selection in programming to design and code an interactive quiz.	<b>Sensing movement</b> Introduction to Micro:bits.
		To start to understand that we can program things to move objects such as Sprites.	Continues to develop on the Year 1 Scratch Junior unit 'Programming B - Programming animations'. To begin to understand sequences of commands have outcomes and make better predictions.	To continuing to develop their programming skills and become familiar with the technical vocabulary used on Scratch.	This unit extends pupil's understanding of sequences and repetition	This unit combines the elements previously taught and progresses to develop pupil's knowledge of selection by revisiting how conditions can be used in programs and then learning how the If... Then... Else structure can be used to select different outcomes depending on	This is the final unit of programming where pupils will revisit and and bring together elements of all the four programming constructs: sequence from Year 3, repetition from Year 4, selection from Year 5, and variables (introduced in Year 6 – 'Programming

						whether a condition is true or false.	A') to overlearn and help keep these in their long term memory.
		Forwards, backwards, turn, clear, go, commands, Instructions, directions, Left, right, turn, plan, algorithm, program, route.	Sequence, command, program, run, program, start, outcome, predict, blocks, sprite, algorithm, blocks, design, sequence, actions, sprite, blocks, design, modify, change, match, compare, design, debug, program, features, evaluate.	Motion, event, sprite, algorithm, logic, resize, algorithm, move, extension block, pen up, set up, event, action, debugging, errors, setup, design, code, set up, test, debug.	Scratch, programming, sprite, blocks, code, loop, repeat, value, block, repeat, forever, infinite loop, countcontrolled loop, costume, repetition, animate, costume, event block, duplicate, block, modify, design, sprite, algorithm, debug, refine, evaluate	Selection, condition, true, false, count controlled loop, outcomes, conditional statement algorithm, program, debug, input, program, implement, design, test, run, program, setup, selection, share, evaluate, constructive.	Sensing, Micro:bit, step counter, transfer, environment, selection, determine, sense, controllable device, algorithm, bug, emulator, USB, interactive, project, conditions.
<b>Data and information</b>		<b>Grouping Data</b> Exploring object labels, then using them to sort and group objects by properties.	<b>Pictograms</b> Collecting data in tally charts and using attributes to organise and present data on a computer.	<b>Branching databases</b> Building and using branching databases to group objects using yes/no questions.	<b>Data logging</b> Recognising how and why data is collected over time, before using data loggers to carry out an investigation.	<b>Flat file databases</b> Using a database to order data and create charts to answer questions.	<b>Introduction to Spreadsheets</b> Using Spreadsheets to organise data.
<b>Why here/Why now</b>		To build on knowledge learned in EYFS to understand what data is and how it can be represented in many forms.	To begin to understand how we collect and analyse data. Linking to their previous maths activities such as voting for books	It allows pupils to develop their understanding of what a branching database is and create one. They will use yes/no questions to gain an understanding	To grow on pupils understanding of data and extend this to consider how and why data is collected over time. To collect data using input	Progression from earlier year group content using different types of data and learning more about fields.	Progresses on pupil's knowledge and understanding of data from Yr4 and 5 and teaches them how to organise and modify data within spreadsheets.

			and the daily register.	of attributes databases.	devices called sensors.		Introduces spreadsheets in readiness for KS3 curriculum
Key Vocabulary		Object, label, group, search, image, property, colour, size, shape, data set, value, more, less, most, fewest, the same.	More than, less than, most, least, organise, data, object, tally chart, votes, total, pictogram, enter, data, tally chart, compare, count, explain, more, less, most, least, more common, least common, attribute, group, same, different, most popular, least popular, conclusion,	Attribute, value, questions, table, objects, branching database, database, attribute, value, questions, objects, equal, even, separate, compare, organise, order, j2data, selecting, pictogram, decision tree.	Data, table (layout), input device, sensor, data logger, logging, data point, interval, data set, import, export, analyse, logged, collection, review, conclusion.	Database, data, information, record, field, sort, order, group, search, value, criteria, graph, chart, axis, compare, filter, presentation.	Data, format, rows, column, formula, charts, evaluate, duplicate, cell, structure, spreadsheet, cell-reference, operation, multiple cells, calculate, tool, application, table