

Branton St Wilfrid's C of E Primary School Whole School Computing Progression Map

Intent:

At our primary school, our intent for teaching computing is to provide a high-quality, relevant and engaging curriculum that develops pupils' computational thinking and digital literacy skills. We want to equip our pupils with the knowledge and skills to use technology confidently and safely, and to be creative and innovative in their use of digital tools. Our computing curriculum is designed to provide our pupils with the skills and knowledge to use technology confidently and safely, as well as to develop their creativity, innovation, and problem-solving skills. Our aim is to equip our pupils with the digital literacy skills they need to thrive in a rapidly changing digital world, and to enable them to use technology in positive and meaningful ways.

Core Themes:

- Computing systems and networks
- Creating media
- Programming

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Computer Systems and networks	<p><u>Technology around us</u></p> <p>-Can name, understand and use different technology -Children can name an ipad, laptop, camera and computer -Children can name the parts of a laptop -Children can use a mouse on a laptop on their own account. -Children can name an ipad,</p>	<p><u>Technology around us</u></p> <p>-To identify technology -To identify a computer and its main parts -To use a mouse in different ways -To use a keyboard to type on a computer -To use the keyboard to edit text -To create rules for using technology responsibly</p>	<p><u>IT around us</u></p> <p>-To recognise the uses and features of information technology -To identify the uses of information technology in the school -To identify information technology beyond school -To explain how information technology helps us -To explain how to use</p>	<p><u>Connecting computers</u></p> <p>-To explain how digital devices function -To identify input and output devices -To recognise how digital devices can change the way we work -To explain how a computer network can be used to share information -To explore how digital devices can be</p>	<p><u>The internet</u></p> <p>-To describe how networks physically connect to other networks -To recognise how networked devices make up the internet -To outline how websites can be shared via the World Wide Web (WWW) -To describe how content can be added and accessed on the World Wide Web</p>	<p><u>System and searching</u></p> <p>-To explain that computers can be connected together to form systems -To recognise the role of computer systems in our lives -To experiment with search engines -To describe how search engines select results -To explain how search results</p>	<p><u>Communication and collaboration</u></p> <p>-To explain the importance of internet addresses -To recognise how data is transferred across the internet -To explain how sharing information online can help people to work together -To evaluate different ways of working</p>

	<p>laptop, camera and computer</p> <ul style="list-style-type: none"> -Children can name the parts of a laptop -Children can switch an ipad on and off -Children can take photos on the camera on an ipad -Children can record videos on the camera on an ipad -Children can edit photos on an ipad -Erases content and understands how to charge the ipads 		<p>information technology safely</p> <ul style="list-style-type: none"> -To recognise that choices are made when using information technology 	<p>connected</p> <ul style="list-style-type: none"> -To recognise the physical components of a network 	<p>(WWW)</p> <ul style="list-style-type: none"> -To recognise how the content of the WWW is created by people -To evaluate the consequences of unreliable content 	<p>are ranked</p> <ul style="list-style-type: none"> -To recognise why the order of results is important, and to whom 	<p>together online</p> <ul style="list-style-type: none"> -To recognise how we communicate using technology -To evaluate different methods of online communication
Vocabulary	<p>technology, computer, mouse, keyboard, screen, typing</p>	<p>technology, computer, mouse, trackpad, keyboard, screen, double-click, typing</p>	<p>Information technology (IT), computer, barcode, scanner/scan</p>	<p>digital device, input, process, output, program, digital, non-digital, connection, network, switch, server, wireless access point, cables, sockets</p>	<p>internet, network, router, security, switch, server, wireless access point (WAP), website, web page, web address, routing, web browser, World Wide Web, content, links,</p>	<p>system, connection, digital, input, process, storage, output, search, search engine, refine, index, bot, ordering, links, algorithm, search engine optimisation (SEO), web</p>	<p>communication, protocol, data, address, Internet Protocol (IP), Domain Name Server (DNS), packet, header, data payload, chat, explore, slide deck, reuse, remix, collaboration,</p>

					files, use, download, sharing, ownership, permission, information, accurate, honest, content, adverts	crawler, content creator, selection, ranking.	internet, public, private, oneway, two-way, one-to-one, one-to-many.
Creating media	<p><u>Digital Painting</u></p> <ul style="list-style-type: none"> -Mark make on paint software on the Interactive Whiteboard -Select brushes, colours and rubbers when drawing on paint software on the IWB -Use various tools such as brush, pens, stamps, erasers and shapes with support on paint software on the IWB 	<p><u>Digital Painting</u></p> <ul style="list-style-type: none"> -To describe what different freehand tools do -To use the shape tool and the line tools -To make careful choices when painting a digital picture -To explain why I chose the tools I used -To use a computer on my own to paint a picture -To compare painting a picture on a computer and on paper 	<p><u>Digital Photography</u></p> <ul style="list-style-type: none"> To use a digital device to take a photograph To make choices when taking a photograph To describe what makes a good photograph To decide how photographs can be improved To use tools to change an image To recognise that photos can be changed 	<p><u>Stop-motion animation</u></p> <ul style="list-style-type: none"> -To explain that animation is a sequence of drawings or photographs -To relate animated movement with a sequence of images -To plan an animation -To identify the need to work consistently and carefully -To review and improve an animation -To evaluate the impact of adding other media to an animation 	<p><u>Audio Production</u></p> <ul style="list-style-type: none"> To identify that sound can be recorded To explain that audio recordings can be edited To recognise the different parts of creating a podcast project To apply audio editing skills independently To combine audio to enhance my podcast project To evaluate the effective use of audio 	<p><u>Video production</u></p> <ul style="list-style-type: none"> -To explain what makes a video effective -To identify digital devices that can record video -To capture video using a range of techniques -To create a storyboard -To identify that video can be improved through reshooting and editing -To consider the impact of the choices made 	<p><u>Web page creation</u></p> <ul style="list-style-type: none"> To review an existing website and consider its structure To plan the features of a web page To consider the ownership and use of images (copyright) To recognise the need to preview pages To outline the need for a navigation path To recognise the implications of linking to

						when making and sharing a video	content owned by other people
Vocabulary	Whiteboard, brush, paint, Erasers, tools	device, camera, photograph, capture, image, digital, landscape, portrait, framing, subject, compose, light sources, flash, focus, background, editing, filter, format, framing, lighting	device, camera, photograph, capture, image, digital, landscape, portrait, framing, subject, compose, light sources, flash, focus, background, editing, filter, format, framing, lighting	animation, flip book, stopframe, frame, sequence, image, photograph, setting, character, events, onion skinning, consistency, evaluation, delete, media, import, transition	audio, microphone, speaker, headphones, input device, output device, sound, podcast, edit, trim, align, layer, import, record, playback, selection, load, save, export, MP3, evaluate, feedback.	video, audio, camera, talking head, panning, close up, video camera, microphone, lens, mid-range, long shot, moving subject, side by side, angle (high, low, normal), static, zoom, pan, tilt, storyboard, filming, review, import, split, trim, clip, edit, reshoot, delete, reorder, export, evaluate, share	website, web page, browser, media, Hypertext Markup Language (HTML), logo, layout, header, media, purpose, copyright, fair use, home page, preview, evaluate, device, Google Sites, breadcrumb trail, navigation, hyperlink, subpage, evaluate, implication, external link, embed.
Programming	Moving a robot -Can programme simple instructions for the beebot using the arrows	Moving a robot To explain what a given command will do	Robot algorithms To describe a series of instructions as a sequence	Sequencing sounds To explore a new programming environment	Repetition in shapes To identify that accuracy in programming is important	Selection in physical To control a simple circuit connected to a computer	Variables in games To define a 'variable' as something that is changeable

	<p>-Can debug instructions when using the beebot</p>	<p>To act out a given word To combine 'forwards' and 'backwards' commands to make a sequence To combine four direction commands to make sequences To plan a simple program To find more than one solution to a problem</p> <p>Programming animations</p> <p>To choose a command for a given purpose To show that a series of commands can be joined together To identify the effect of changing a value</p>	<p>To explain what happens when we change the order of instructions To use logical reasoning to predict the outcome of a program To explain that programming projects can have code and artwork To design an algorithm To create and debug a program that I have written</p> <p>Programming Quizzes</p> <p>To explain that a sequence of commands has a start To explain that a sequence of commands has an outcome</p>	<p>To identify that commands have an outcome To explain that a program has a start To recognise that a sequence of commands can have an order To change the appearance of my project To create a project from a task description</p> <p>Events and actions in programs</p> <p>To explain how a sprite moves in an existing project To create a program to move a sprite in four directions</p>	<p>To create a program in a text-based language To explain what 'repeat' means To modify a count-controlled loop to produce a given outcome To decompose a task into small steps To create a program that uses count-controlled loops to produce a given outcome</p> <p>Repetition in games</p> <p>To develop the use of count-controlled loops in a different programming environment To explain that in programming there are infinite</p>	<p>To write a program that includes count-controlled loops To explain that a loop can stop when a condition is met To explain that a loop can be used to repeatedly check whether a condition has been met To design a physical project that includes selection To create a program that controls a physical computing project</p> <p>computing Selection in quizzes</p> <p>To explain how selection is used in computer programs</p>	<p>To explain why a variable is used in a program To choose how to improve a game by using variables To design a project that builds on a given example To use my design to create a project To evaluate my project</p> <p>Sensing movement</p> <p>To create a program to run on a controllable device To explain that selection can control the flow of a program To update a variable with a user input To use an conditional statement to</p>
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		<p>To explain that each sprite has its own instructions</p> <p>To design the parts of a project</p> <p>To use my algorithm to create a program</p>	<p>To create a program using a given design</p> <p>To change a given design</p> <p>To create a program using my own design</p> <p>To decide how my project can be improved</p>	<p>To adapt a program to a new context</p> <p>To develop my program by adding features</p> <p>To identify and fix bugs in a program</p> <p>To design and create a maze-based challenge</p>	<p>loops and count-controlled loops</p> <p>To develop a design that includes two or more loops which run at the same time</p> <p>To modify an infinite loop in a given program</p> <p>To design a project that includes repetition</p> <p>To create a project that includes repetition</p>	<p>To relate that a conditional statement connects a condition to an outcome</p> <p>To explain how selection directs the flow of a program</p> <p>To design a program that uses selection</p> <p>To create a program that uses selection</p> <p>To evaluate my program</p>	<p>compare a variable to a value</p> <p>To design a project that uses inputs and outputs on a controllable device</p> <p>To develop a program to use inputs and outputs on a controllable device</p>
Vocabulary	Bee-Bot, forwards, backwards, turn, clear, go, commands, instructions, directions, left, right, route,	Bee-Bot, forwards, backwards, turn, clear, go, commands, instructions, directions, left, right, route, plan, algorithm, program. ScratchJr, command, sprite, compare,	instruction, sequence, clear, unambiguous, algorithm, program, order, prediction, artwork, design, route, mat, debugging, decomposition sequence, command, program, run,	Scratch, programming, blocks, commands, code, sprite, costume, stage, backdrop, motion, turn, point in direction, go to, glide, sequence, event, task, design, run the	Logo (programming environment), program, turtle, commands, code snippet, algorithm, design, debug, pattern, repeat, repetition, count-controlled loop, value, trace,	microcontroller, USB, components, connection, infinite loop, output component, motor, repetition, count-controlled loop, Crumble controller, switch, LED,	Variable, change, name, value, set, design, event, algorithm, code, task, artwork, program, project, code, test, debug, improve, evaluate, share, assign, declare

		<p>programming, area, block, joining, start, run, program, background, delete, reset, algorithm, predict, effect, change, value, instructions, design</p>	<p>start, outcome, predict, blocks, design, actions, sprite, project, modify, change, algorithm, build, match, compare, debug, features, evaluate, decomposition, code.</p>	<p>code, order, note, chord, algorithm, bug, debug, code. motion, event, sprite, algorithm, logic, move, resize, extension block, pen up, set up, pen, design, action, debugging, errors, setup, code, test, debug, actions</p>	<p>decompose, procedure Scratch, programming, sprite, blocks, code, loop, repeat, value, infinite loop, count-controlled loop, costume, repetition, forever, animate, event block, duplicate, modify, design, algorithm, debug, refine, evaluate.</p>	<p>Sparkle, crocodile clips, connect, battery box, program, condition, Input, output, selection, action, debug, circuit, power, cell, buzzer Selection, condition, true, false, count-controlled loop, outcomes, conditional statement, algorithm, program, debug, question, answer, task, design, input, implement, test, run, setup, operator</p>	<p>Micro:bit, MakeCode, input, process, output, flashing, USB, trace, selection, condition, if then else, variable, random, sensing, accelerometer, value, compass, direction, navigation, design, task, algorithm, step counter, plan, create, code, test, debug.</p>
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