KS2 Computing Curriculum Map

Highlighted words are words that have been taught in previous Computing lessons.

	Autumn	Spring	Summer
Year 3	**Computer networks- connecting computers** Children will develop their understanding of digital devices with a focus on inputs, processes and outputs. They will compare digital and non-digital devices. Children will be introduced to computer networks and their infrastructure and they will be able to describe the benefits of a network.	**Programming- Events and Actions** Children will consolidate their prior learning about algorithms. Children will be designing their own algorithms to control a sprite. Children will design and code their own maze- tracing program.	**Data and Information- Branching Databases** Children will develop their understanding of what a branching database is. Children will use yes or no questions to sort groups of objects. Children will use different software to create and test their own branching database.
Key Vocabulary	digital, device, input, process, output, program, non-digital, connection, network, network switch, server, wireless access point	motion, event, sprite, algorithm, logic, move, resize, extension, block, design, action, debugging, errors, code	attribute, value, questions, table, objects, branching database, even, equal, separate, compare, order
Year 4	**Computer networks The Internet** Children will apply their knowledge and understanding of networks to understand the internet as a network. Children will explore the World Wide Web to learn about who owns content and what they can access, add and create. They will evaluate online content to decide how honest, accurate or reliable it is.	**Programming- repetition in games** Children will explore the concept of repetition in programming using Scratch. Children will look at the difference between count controlled and infinite loops and use their knowledge to modify existing animations and games. They will design and create a game which uses repetition.	**Creating media- Photo editing** Children will develop their understanding of how digital images can be changed and edited, and how they can be resaved and reused. They will consider the impact that editing images can have and evaluate the effectiveness of their choices.

Key Vocabulary	Internet, network router, network security, network switch, wireless access point, server, website, web page, web address, web browser, World Wide Web (WWW) content, internet, sharing, ownership, permission	scratch, programming, sprite, blocks, code, loop, repeat, value, forever, infinite, modify, design, count-controlled loop, animate, costume, duplicate, algorithm, debug, evaluate	image, edit, digital, crop, rotate, undo, save, adjustments, effects, colour, hue, saturation sepia, vignette, retouch, clone, copy, paste, combine, composite, background
Year 5	**Computing Systems – Sharing Information** Children will develop their understanding of computer systems and how information is transferred between systems and devices. Children will be able to explain how information is found on the World Wide Web and learn how search engines work (including how they select and rank results)	**Programming- MicroBit** Children will be working with MicroBit and they will be able to upload programmes and use their prior knowledge to set up forever loops within the program. Children will be able to design, create and edit their own design that will appear on the MicroBit. Children will create their own step counter using the MicroBit.	**Creating media- Video editing** Children will learn to create short videos. Children will work in small groups to plan, capture and edit short videos. Children will have the opportunity to reflect on and assess their progress in creating a video.
Key Vocabulary	system, connection, digital, input, output, process, search, search engine, refine, index, crawler, bot, ordering, ranking, links, algorithm, optimisation	MicroBit, edge, connector, LEDs, Bluetooth, compass, accelerometer, JavaScript, Scratch, program, download, animation, instructions, algorithm, code	Video, audio, camera, talking, panning, close up, microphone, lens, high angle, low angle, moving subject, static camera, pan, zoom, tolt, review, import, split, trim, clip, edit, reshoot
Year 6	**Computing Systems- Communication** Children will learn how data is transferred over the internet. Children will learn about the structure of data packets and how these support communication across networks. Children will work on a shared project together, working responsibly by considering what	**Programming- Variables in games** Children will explore the concept of variables in programming through games in Scratch. Children will create a simulation of a scoreboard using the Use- Modify- Create model. Children will apply their knowledge of variables and design to improve their game in Scratch.	**Data and Information- Spreadsheets** Children will be supported in organising data into column and rows to create their own data set. Children will be taught how to format their data to support with calculations. Children will apply formulas with their data set. Children will use a spreadsheet to plan an event.

	should and should not be shared on the internet.		
Key Vocabulary	Communication, protocol, data, address, Internet Protocol (IP) address, Domain Name Server (DNS), packet, header, data payload, chat, explore, reuse, remix, collaboration, internet, public, private	variable, name, change, value, design, event, algorithm, code, artwork, program, test, debug, improve, evaluate, share	Data, collecting, table, structure, spreadsheet, cell, cell reference, format, formula, calculation, data, spreadsheet, input, output, calculation, formula, duplicate, stigma, chart, evaluate, software, tools