John Bunyan Computing Overview

	Autumn		Spring		Summer	
EYFS	Not currently used in EYFS					
Year 1	**Technology around us.** How is technology all around us and how can we use it safely, responsibility and with good mouse and keyboard skills? NC – KS1 - 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.	**Digital Painting** How can we create our own digital paintings inspired by different artists using colour, shape and imagination. NC – KS1 - recognise common uses of information technology beyond school	**Moving a robot** Can we become a robot programmer by creating simple algorithms for a Bee-Bot? NC – KS1 - use logical reasoning to predict the behaviour of simple programs.	**Grouping Data** What can we learn when we organise and label information carefully? NC – KS1 - use technology purposefully to create, organise, store, manipulate and retrieve digital content.	**Digital writing** What are differences between using a computer and writing on paper to create text? NC – KS1 - use technology purposefully to create, organise, store, manipulate and retrieve digital content.	**Program animations.** How do we use simple instructions to create a program in ScratchJr. NC – KS1 - 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

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Year 2	**Digital photography** How can you take a photo and transform it into something amazing? NC – KS1 - use technology purposefully to create, organise, store, manipulate and retrieve digital content	**IT Around Us** How can technology help us learn, work and have fun safely. NC – KS1 - 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. recognise common uses of information technology beyond school	**Power Point** What slide features can you use to make your presentation clear and fun? NC – KS1 - use technology purposefully to create, organise, store, manipulate and retrieve digital content	**Robot Algorithms** How can we plan a route, turn it into step-by-step instructions for a robot making sure we fix mistakes? NC – KS1 -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.	**Pictograms** How can we collect data, turn it into clear and simple pictures and charts which help us to understand information? NC – KS1 - use technology purposefully to create, organise, store, manipulate and retrieve digital content. recognise common uses of information technology beyond school	**Digital music** How can we use rhythms, tunes & patterns to create our own digital and non-digital music? NC – KS1 - use technology purposefully to create, organise, store, manipulate and retrieve digital content. recognise common uses of information technology beyond school

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Year 3	**Creating Media – desktop publishing.** What choices help up to make our work clear and eye-catching in desktop publishing. NC- KS2 - elect, 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.	**Computer systems** What is a computer network and how do devices connect and share information. NC – KS2 - 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	**We are bug fixers.** How can we become problem-solving programmers who fix and improve code? NC – KS2 - use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.	**Creating media - animation** How can we use stop-frame animation to tell a simple story? NC – KS2 - elect, 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	**We are communicators.** How can we stay safe and kind when connecting with others online? NC – KS2 - use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	**Programming A – sequencing sounds.** How can we use sequences of motion, sound and event blocks to program and create a digital piano? NC – KS2 - 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.

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Year 4	**Word & Power Point skills.** How can we design our own digital page using words, colours, and pictures to teach others something new online? NC – KS2 - 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.	**We are Authors** How can we become experts and share our knowledge with the world? NC – KS2 - use technology safely, respectfully and responsibly. use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs.	**Computer networks.** How do computer networks work and how do we decide whether online is reliable and trustworthy? NC – KS2 - 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	**Creating media** How can we use devices to produce an effective radio advert or podcast? NC – KS2 - design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.	**We are toy developers** How can we design and program an educational toy that uses repetition and variables—and how can we improve it through testing and debugging? NC – KS2 - use sequence, selection, and repetition in programs; work with variables and various forms of input and output	**We are software developers.** What makes an educational computer game successful, and how can we design, build, and improve our own for a specific audience? NC – KS2 - design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.

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Year 5	**Computer systems and networks** Imagine you are a search engine —how would you take someone's question (input), find the best answers (process), and show them clearly on the screen (output)? NC – KS2 - 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	**Selection in Physical computing** How can we program a microcontroller to use conditions (if/else) to control output devices and solve a real-world problem? NC – KS2 - design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.	**We are artists** How can we use geometry and coding to create digital art, and how can we improve and evaluate our designs like real digital artists? NC – KS2 - design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.	**We are architects** How can we design and build a future-ready space using digital tools like CAD, inspired by real architects, designers, and engineers? NC – KS2 - elect, 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	**Programming B – selection** How can we use *if, then, else* statements to help our programs make smart choices and respond differently to different situations? NC – KS2 - 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	**We are bloggers** How can we create a powerful series of blog posts with multimedia that informs others—and how can we tell if media we see online is trustworthy? NC – KS2 - 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

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Year 6	**Online safety** How can we become smart digital citizens who can tell if a website is secure, decide what information to trust, and avoid being misled by fake news? NC – KS2 - use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	**Creating media -3D modelling** How can we plan, develop, and evaluate a 3D model using placeholders and objects, applying skills such as moving, resizing, duplicating, and grouping to create something imaginative and useful? NC – KS2 - elect, 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	**Programming – sensing movement** How can we design a program that follows steps (sequence), repeats actions, makes decisions, and uses variables to change and improve what it does? NC – KS2 - use sequence, selection, and repetition in programs; work with variables and various forms of input and output	**Creating media – webpage creation** How can we design and create a website using tools like Google Sites that is visually appealing, easy to navigate, and uses images and content responsibly through copyright and fair use? NC – KS2 - 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	**Data & information – spreadsheets.** How can we become event planners using spreadsheets to organise information, calculate costs, and present our ideas clearly with charts? NC – KS2 - elect, 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.	**Using the Micro-Bit** How can we turn a Micro:Bit into a smart device by programming it to follow steps, repeat actions, make decisions, and use variables to adapt and improve? NC – KS2 - use sequence, selection, and repetition in programs; work with variables and various forms of input and output