COMPUTING	Long Term Plan

Computing Intent
Within our curriculum, pupils learn the principles of information and computation, explore how digital systems work, and apply this knowledge through programming in applications such as Scratch Jr and Scratch. Building on these foundations, they go on to create programs on microcontrollers such as the BBC micro:bit, developing both technical understanding and practical problem-solving. Computing also ensures that all pupils become digitally literate – able to use technology confidently, creatively, and responsibly. In doing so, they are equipped not only for the future workplace, but also to participate as active, thoughtful citizens in a digital world.

EYFS Statement relating to Computing
In the Early Years Foundation Stage, our young digital citizens develop their Understanding of the World by noticing and exploring the technology around them, both at home and in school. Through playful experimentation with equipment such as iPads, computers, cameras, microphones, and mechanical toys, children begin to ask questions about why things happen and how they work. They also have opportunities to interact with age-appropriate software, laying the foundations for confident and creative use of technology as they grow.

	KS1		KS2			
Progression and themes	Year 1	Year 2	Year3	Year 4	Year 5	Year 6
Digital Literacy	Online Safety	Online Safety	Online Safety	Online Safety	Online Safety	Online Safety
	Name different forms of technology and understand what the term technology means. Give examples of how	Put key words into a search engine and retrieve digital content.	Know different ways to report unacceptable content and contact. Know what information is	Identify comments online that may be hurtful to others. Edit messages to make sure they are kind.	Secure knowledge of common online safety rules and apply this to real life scenarios.	Find and describe ways the media can shape ideas about gender and society.

	technology is used in and out of school. Identify personal information (e.g. name, address). Identify ways and places that people can be unkind online. Create a list of rules that help keep people safe in and out of school when using technology.	Know the implications of inappropriate searches. Discuss whether a website is appropriate for children. Give opinions about a website. Identify the age restrictions for some games and apps. Know how to report anything that makes them feel uncomfortable online.	sensible to share and what is not. Identify an advert online and discuss who it is targeted at. Explore how companies use websites to promote products. Create and use a strong password.	Create a safe online profile, explaining ways in which we could change our identity online to stay safe (e.g., using an avatar when gaming/ social media). Understand how word order in a search engine effects the results. Understand how search engine results are ranked.	Identify how online identity can be copied, shared, modified or altered. Alter a photograph.	Explain how an online reputation is developed and how it can impact on future life. Identify who owns information found online and what can/cannot be used. Focus on online activity that is popular. Identify the pros and cons of these services. Identify ways to stay safe when using these popular technologies.
					Email	
					Identify an email that we should not open and what to do with spam email.	

Computer Science	Bee-bot	Scratch Jr	Scratch – Programming	Scratch- Questions and Quizzes	Scratch- Game creator	BBC Microbit
	Understand the term algorithm. Follow and give instructions. Make a Bee-bot move. Create a set of instructions to get the bee-bot to move from one place to another. Plan and create a simple algorithm for both the floor Bee-bots and IPad Bee-bot program. Debug simple mistakes. Read code one line at a time and predict what will happen.	Explain that an algorithm is a set of instructions to complete a task and that computers need precise instructions. Use Scratch Jr to create a simple program that achieves a specific purpose. Identify and correct errors in an algorithm. Plan an algorithm for a specific outcome.	Explain what will happen next in a program. Solve problems by breaking them down into smaller parts. Use and edit an algorithm to achieve a specific outcome. Predict how a change in a sequence may impact on the outcome of a program. Use repetition in programs. Explain what a variable is. Debug simple programs.	Debug your own and others programs. Use a timer to achieve repetition effects. Understand 'if' statements and begin to combine these in your programming. Designs show that they are thinking of the structure of a program in logical, achievable steps.	Use a given success criteria to review and analyse what makes a successful computer game. Consider the end of the game by designing appropriate settings and characters to maintain a user's interest. Review and evaluate a range of completed games. Apply knowledge of coding to create a game around a theme. Design, plan and achieve your own algorithm design. Debug your own program.	Apply coding skills to create programs that control physical systems like lights, sounds, sensors, and motors. Use inputs (buttons, sensors) and outputs (LEDs, sounds, movement) to design interactive projects. Write, test, and debug programs using selection, repetition, and variables. Break complex problems into manageable steps, explain each part, evaluate program effectiveness, and improve based on feedback. Understand how hardware and software interact in microcontroller systems.
					Understanding Networks	
					Understand networks, how they work (including the	

					internet) and how they provide multiple services.	
Information Technology	Computing Skills	Computing Skills	Computing Skills	Computing Skills	Computing Skills	Computing Skills
	Name the different parts of a computer (mouse, screen, and keyboard). Log on and off a laptop. Move the mouse with control to point and click, click and drag, open packages.	Use the mouse pad on the laptop. Name, save and retrieve work appropriately.	Use simple searches to retrieve digital content and share with others. Use Word to create a poster/fact sheet about a given subject, to include text and pictures selected form the internet. Insert text and pictures using copy and paste. Format text and pictures. Arrange appropriately. Change the size, font and colour when appropriate.	Use power point to create a presentation to be delivered to an audience. Experiment with the features of PowerPoint then select appropriately to create a presentation.	Enter text and numbers into a spreadsheet. Identify and refer to cells as rows and columns. Use the SUM formulae. Edit data and the effect on the results. Create a graph from data entered. Design and create a spreadsheet for purpose.	Storyboard a short animation – what will happen and when. Plan for an animation and use purposefully. Take a series of pictures to form an animation. Move items within an animation to create movement on playback. Save images at stages to compare work and talk about changes.
	2Simple	Publisher	Word	PowerPoint	Spreadsheet	Animation- 2Animate
	Use simple tools in a paint package (e.g. different sized brushes, paint palette). Use the	Access appropriate online resources for research.	Open and navigate Microsoft Word to type, edit, and organise text. Change	Open and navigate Microsoft PowerPoint to create a multi-slide presentation on a	Navigate a spreadsheet program to enter, edit, and format data in cells.	Plan and storyboard a short animation. They will create sequences of frames using

	keyboard to write a sentence about a picture. Be able to write names using a keyboard. Name, save and retrieve work.	Use Publisher to create a poster/fact sheet about a given subject, to include text and pictures that have been provided. Insert text, picture. Change font – style, size and colour. Change size pictures. Arrange information appropriately.	font style, size, and colour, and use bold, italics, and underline for emphasis. Insert, resize, and position images, combining text and images to create a simple document, such as a letter or report.	given topic. Add and format text with different font styles, sizes, and colours, and insert and resize images, shapes, and backgrounds. Sequence and arrange slides logically and apply basic transitions and animations to enhance the presentation.	Use basic formulas, such as sum and average, to perform calculations and create simple charts to display data visually. Organise information using rows, columns, and headings and interpret data to answer questions and draw simple conclusions.	drawings or imported images and use tools to edit and move objects. Add text, speech, or sound to enhance the animation and review and refine their work based on feedback.

Subject content	**Key stage 1** Pupils should be taught to: • 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; • use technology purposefully to create, organise, store, manipulate and retrieve digital content; • recognise common uses of information technology beyond school; • use technology safely and respectfully, keeping personal information private; identify where to go for help and	**Key stage 2** Pupils should be taught to: • 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; • use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs; • 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; • use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content;

	support when they have concerns about content or contact on the internet or other online technologies.	• 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; • use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.