COMPUTING	Long Term Plan

Computing Intent
Within our curriculum pupils are taught the principles of information and computation, how digital systems work, and how to put this knowledge to use through programming in applications such as Scratch Jr and Scratch. Building on this knowledge and understanding, pupils are equipped to use information technology to create programs on microprocessors such as Crumble. Computing also ensures that pupils become digitally literate – able to use, and express themselves and develop their ideas through information and communication technology – at a level suitable for the future workplace and as active and responsible participants in a digital world.

EYFS Statement relating to Computing
In the Early Years Foundation Stage, our young digital citizens develop a greater Understanding of the World by recognising a range of technology that is used in their homes and school. Through experimenting with a range of different equipment such as iPads, computers, cameras, microphones and mechanical toys, the children will begin to speculate on why things happen or how things work and interact with age appropriate computer software.

	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 technology is used in and out of school.	Put key words into a search engine and retrieve digital content. Know the implications of inappropriate searches. Discuss	Know different ways to report unacceptable content and contact. Know what information is sensible to share and what is not. Identify	Identify comments online that may be hurtful to others. Edit messages to make sure they are kind. Create a safe online profile, explaining	Secure knowledge of common online safety rules and apply this to real life scenarios. Identify how online identity can be	Find and describe ways the media can shape ideas about gender and society. Explain how an online reputation is developed and how it

	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.	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.	an advert online and discuss who it is targeted at. Explore how companies use websites to promote products. Create and use a strong password.	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.	copied, shared, modified or altered. Alter a photograph.	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	Email	
				Identify ways to communicate online. Explain the importance of staying safe when using email. Open, create and attach a file to an email.	Identify an email that we should not open and what to do with spam email.	
Computer Science	Bee-bot	Scratch Jr	code.org	Scratch- Questions and Quizzes	Scratch- Game creator	Crumble
	Understand the term algorithm. Follow and give instructions. Make a Bee-bot move.	Explain that an algorithm is a set of instructions to complete a task and that computers need	Explain what will happen next in a program.	Debug your own and others programs. Use a timer to achieve repetition effects.	Use a given success criteria to review and analyse what makes a successful computer game. Consider the	Evaluate the effectiveness of programming. Confidently use programming

	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.	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.	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.	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.	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.	language. Read code and make predictions. Coding displays an understanding of outputs such as sound and movement and inputs from the user of the program such as button clicks. Put separate parts of a complex algorithm together and explain the program as a whole.
					Understanding Networks	
					Understand networks, how they work (including the internet) and how they provide multiple services.	
Information Technology	Computing Skills	Computing Skills	Word	PowerPoint	Spreadsheet	Animation- 2Animate
	Name the different parts of a computer (mouse, screen, and keyboard). Log on and off a laptop.	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 power point to create a presentation to be delivered to an audience.	Enter text and numbers into a spreadsheet. Identify and refer to cells as rows and columns.	Storyboard a short animation – what will happen and when. Plan for an animation and use purposefully.

	Move the mouse with control to point and click, click and drag, open packages.		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.	Experiment with the features of PowerPoint then select appropriately to create a presentation.	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.	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				
	Use simple tools in a paint package (e.g. different sized brushes, paint palette). Use the keyboard to write a sentence about a picture. Be able to write names using a keyboard. Name, save and retrieve work.	Access appropriate online resources for research. 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.				

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 support when they have concerns about content or contact on the internet or other online technologies.	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; • 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.