

Computing Progression Map 2023



A Year Autumn Spring Summer

	Reception	Year 1 and 2 (KS1)	Year 3 and 4 (LKS2)	Year 5 and 6 (UKS2)
	Use of IWB and Ipads for various educational games.	<u>Computing systems and networks - Technology around us</u> -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	<u>Computing systems and networks - Connecting computers</u> -To explain how digital devices function -To identify input and output devices -To recognise how digital devices can change the way that we work -To explain how a computer network can be used to share information -To explore how digital devices can be connected -To recognise the physical components of a network	<u>Computer Systems and networks - systems and searching</u> - To explain that computers can be connected together to form systems - To recognise the role of computer systems in our lives - To identify how to use a search engine - To describe how search engines select results - To explain how search results are ranked - To recognise why the order of results is important, and to whom
		<u>Computing systems and networks - Technology around us</u> -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	<u>Creating Media - stop frame animation</u> -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	<u>Creating Media - Video production</u> - To explain what makes a video effective - To use a digital device to 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 when making and sharing a video

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		-To explain how to use information technology safely -To recognise that choices are made when using information technology		
	To programme beebots Audio stories E-safety	<u>Creating media - Digital painting</u> -To create rules for using technology responsibly -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	<u>Programming A - Sequencing Sounds</u> -To explore a new programming environment -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	<u>Programming A - Selection in physical computing</u> - To control a simple circuit connected to a computer - 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

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		<u>Creating media - Digital photography</u> -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	<u>Data and Information - Branching Databases</u> -To create questions with yes/no answers -To identify the attributes needed to collect data about an object -To create a branching database -To explain why it is helpful for a database to be well structured -To plan the structure of a branching database -To independently create an identification tool	<u>Data and Information - Flat file databases</u> - To use a form to record information - To compare paper and computer-based databases - To outline how you can answer questions by grouping and then sorting data - To explain that tools can be used to select specific data - To explain that computer programs can be used to compare data visually - To use a real-world database to answer questions
	<u>Use of cameras</u>	<u>Programming A - Moving a robot</u> -To explain what a given command will do -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	<u>Creating Media - Desktop Publishing</u> -To recognise how text and images convey information -To recognise that text and layout can be edited -To choose appropriate page settings -To add content to a desktop publishing publication -To consider how different layouts can suit different purposes -To consider the benefits of desktop publishing	<u>Creating Media - Introduction to vector graphics</u> - To identify that drawing tools can be used to produce different outcomes - To create a vector drawing by combining shapes - To use tools to achieve a desired effect - To recognise that vector drawings consist of layers - To group objects to make them easier to work with - To apply what I have learned about vector drawings

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		<u>Programming A – Robot algorithms</u> -To describe a series of instructions as a sequence -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	<u>Programming B – Events and Actions in Programming</u> -To explain how a sprite moves in an existing project -To create a program to move a sprite in four directions -To adapt a program to a new context -To develop my program by adding features -To identify and fix bugs in a program -To design and create a maze-based challenge	<u>Programming B – Selection in Quizzes</u> - To explain how selection is used in computer programs - To relate that a conditional statement connects a condition to an outcome - To explain how selection directs the flow of a program - To design a program that uses selection - To create a program that uses selection - To evaluate my program
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B Year Autumn Spring Summer

	Reception	Year 1 and 2 (KS1)	Year 3 and 4 (LKS2)	Year 5 and 6 (UKS2)
Making choices	<u>Use of IWB and Ipads for various educational games.</u>	<u>Data and information – Grouping data</u> -To find more than one solution to a problem -To label objects -To identify the objects can be counted -To describe objects in different ways -To count objects with the same properties -To compare groups of objects -To answer questions about groups of objects	<u>Computing Systems and Networks: The Internet</u> - 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 (WWW)	<u>Computer Systems and Networks: Communication and collaboration</u> - 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 together online

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			- To recognise how the content of the WWW is created by people - To evaluate the consequences of unreliable content	- To recognise how we communicate using technology - To evaluate different methods of online communication
		<u>Data and information - Pictograms</u> -To recognise that we can count and compare objects using tally charts -To recognise that objects can be represented as pictures -To create a pictogram -To select objects by attribute and make comparisons -To recognise that people can be described by attributes -To explain that we can present information using a computer	<u>Creating Media - Audio production</u> - 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	<u>Creating Media - Web page creation</u> - 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 content owned by other people

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	To programme beebots Audio stories E-safety	<u>Creating media - Digital writing</u> -To use a computer to write -To add and remove text on a computer -To identify that the look of text can be changed on a computer -To make careful choices when changing text -To explain why I used the tools that I chose -To compare typing on a computer to writing on paper	<u>Programming A - Repetition in shapes</u> - To identify that accuracy in programming is important - 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	<u>Programming A - Variables in games</u> - To define a 'variable' as something that is changeable - 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
		<u>Creating media - Digital music</u> -To say how music can make us feel -To identify that there are patterns in music -To experiment with sound using a computer -To use a computer to create a musical pattern -To create music for a purpose -To review and refine our computer work	<u>Data and Information: Data Logging</u> - To explain that data gathered over time can be used to answer questions - To use a digital device to collect data automatically - To explain that a data logger collects 'data points' from sensors over time - To recognise how a computer can help us analyse data - To identify the data needed to answer questions - To use data from sensors to answer questions	<u>Data and Information: Introduction to Spreadsheets</u> - To create a data set in a spreadsheet - To build a data set in a spreadsheet - To explain that formulas can be used to produce calculated data - To apply formulas to data - To create a spreadsheet to plan an event - To choose suitable ways to present data

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	Use of cameras	<u>Programming B - Programming animations</u> -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 -To explain that each sprite has its own instructions -To design the parts of a project -To use my algorithm to create a program	<u>Creating Media - Photo Editing</u> -To explain that the composition of digital images can be changed - To explain that colours can be changed in digital images - To explain how cloning can be used in photo editing - To explain that images can be combined - To combine images for a purpose - To evaluate how changes can improve an image	<u>Creating Media - 3D modelling</u> - To recognise that you can work in three dimensions on a computer - To identify that digital 3D objects can be modified - To recognise that objects can be combined in a 3D model - To create a 3D model for a given purpose - To plan my own 3D model - To create my own digital 3D model
		<u>Programming B - Programming quizzes</u> -To explain that a sequence of commands has a start -To explain that a sequence of commands has an outcome -To create a program using a given design -To change a given design -To create a program using my own design -To decide how my project can be improved	<u>Programming B - Repetition in games</u> - To develop the use of count-controlled loops in a different programming environment - To explain that in programming there are infinite loops and count-controlled loops - To develop a design that includes two or more loops which run at the same time - To modify an infinite loop in a given program - To design a project that includes repetition - To create a project that includes repetition	<u>Programming B - Sensing Movement</u> - 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 compare a variable to a value - To design a project that uses inputs and outputs on a controllable device - To develop a program to use inputs and outputs on a controllable device