PROGRESSION IN COMPUTING

	EYFS		National Curriculum Subject Content	KS1	
TOPICS	Year A Me, my toys and my hero's Day and Night Terrific Transport Pets, bugs and spiders Glorious Growing Making Magical Memories Year B All about me Dark and Night On the farm Marvellous minibeasts Bloom and Grow Getting ready for…			Year A Reduce, Re-use, Recycle Dinosaurs Amazing Africa Commotion in the Ocean Into the Woods Land Ahoy! Year B Belonging to Britain Master Builders Out 'n' about with Paddington Bear Perfect penguins and polar bears Roots, shoots and magic seeds Into Space	
				CYCLE A	CYCLE B
EYFS Strand **The World / People and Communities**	In the Foundation Stage, Computing comes in the strand of Understanding of the World under Technology It is essential for our children to learn about technology and its role in the world in which we live. The children have access to a variety of resources such as digital cameras, iPads, tills, CD players, walkie-talkies, Beebots, Code-a-pillars and many more. They also use a variety of apps to enhance their learning, which they use independently as they reach their early learning goals. In addition, children are taught how technology is used in homes e.g. microwaves, washing machines etc		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	Internet safety and responsibility are built into all units of computing. Log in safely. Understand the importance of logging out. Learn how to use the search menu Learn how to open and save work. Understand the importance of keeping their username and password private. Use the Search tool to find information. To understand the terminology associated with searching. To gain a better understanding of searching on the Internet	Internet safety and responsibility are built into all units of computing. Log in safely. Understand the importance of logging out. Save work with an appropriate name. Children take ownership of work and save this in their own private space such as their My Work folder on Purple Mash. Continue to understand the importance of keeping their username and password private. Use the Search tool to find information.
			Recognise common uses of information technology beyond school	Develop keyboard skills Search for topics within purple mash. To create a leaflet to help someone search for information on the Internet	Develop keyboard skills Search for topics within purple mash Understand what is meant by technology and identify examples both in and out of school. Make a distinction between objects that use modern technology and those that do not. technology Make a quiz about a story or class topic. Make a fact file/presentation on a non-fiction topic.

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			Use technology purposefully to create, organise, store, manipulate and retrieve digital content	Develop keyboard skills. Use the Search tool to find information. Save work with an appropriate file name. Create a painting using 2paint. Edit and improve work. Become familiar with 'undo and 'redo'. Understand the sorts of tasks that a spreadsheet program could be used for. Enter data into spreadsheet cells. Use 2Calculate to calculate operations. Use 2Calculate to collect data and produce a graph.	Develop keyboard skills Save and retrieve work Edit and improve work. Understand and develop the use of multimedia to create an e-book. Use a range of media including pictures, text, sound and animation. Begin to think logically about the steps of a process. Sort items using a range of criteria Use 2Question to answer questions. To use a database to answer more complex search questions. Explore how a story can be presented in different ways. Make music digitally using 2Sequence. Explore, edit and combine sounds using 2Sequence. Edit and refine composed music. Use the Search tool to find information.
			Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions	Develop an understanding of how computers use code to make a program run. Use code to make a computer program. Begin to understand what backgrounds, objects and actions are. Understand what an algorithm is. Create a computer program using an algorithm. Understand the function of buttons in a program.	Compare the effects of adhering strictly to instructions to completing tasks without complete instructions. To follow and create simple instructions on the computer. To understand the functionality of the direction keys. To use the additional direction keys as part of an algorithm. To understand how to change and extend the algorithm list.

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			Create and debug simple programs	Begin to understand how code executes when a program is run. To plan and make a computer program. Create a computer program using an algorithm. To create a program using a given design. Understand and debug simple programs. Design an algorithm that follows a timed sequence	To create a longer algorithm for an activity. Calculate what is wrong with a simple algorithm when the sequence is out of order. Consider how the order of instructions affects the result. To understand how to create and debug a set of instructions (algorithm).
			Use logical reasoning to predict the behaviour of simple programs	Understand what instructions are and predict what might happen when they are followed. Understand the collision detection event. Understand that algorithms follow a sequence.	Analyse how the order of instructions affects the result. Compare the effects of adhering strictly to instructions to completing tasks without complete instructions.

Foundation Stage Statements & Early Learning Goal	Completes a simple program on a computer. Uses ICT hardware to interact with age-appropriate computer software. Select and use technology [safely] for particular purposes. Select and use technology for different purposes. Recognise that a range of technology is used in places such as homes and schools.
Foundation Stage Outcome	Our Staff in The Foundation Stage provide equipment to support and extend the skills children develop as they become familiar with simple equipment, such as twisting or turning a knob. Children are taught to safely use the touchscreens, IPads, programmable toys, Code-a-Pillars that they see with adult supervision. They are encouraged to use software through clicking different icons so that they learn that by doing this something happens to the computer. In addition, the children know that if they want to use the internet they have to use it with an adult. If they suddenly see something that worries them then they know that they have to tell an adult. Through exploring simple programmable toys, they learn that they can make programmable toys move, through pressing buttons they make choices of where it moves and that it has simple software. Children can listen to music on devices, can take pictures on cameras and staff discuss about microwaves, washing machines so children know about the technology used in homes. With adult support children are encouraged to go to the photocopier to photocopy their work for their learning journeys.

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	Computer Science Statements			Information Technology Statement	Digital Literacy Statement	
1 And 2 NC Objectives	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
Year 1 outcome	Children understand that an algorithm is a set of instructions used to solve a problem or achieve an objective. They know that an algorithm written for a computer is called a program	Children can work out what is wrong with a simple algorithm when the steps are out of order Begin to write own simple algorithm. Children know that an unexpected outcome is due to the code they have created and can make logical attempts to fix the code.	When looking at a program, children can read code one line at a time and make good attempts to envision the bigger picture of the overall effect of the program. Children can interpret where the turtle in 2Go will end up at the end of the program.	Children are able to sort, collate, edit and store simple digital content e.g. children can name, save and retrieve their work and follow simple instructions. Children are beginning to use a range of different media including text, animation and sound.	Children understand what is meant by technology and can identify a variety of examples both in and out of school. They can make a distinction between objects that use modern technology and those that do not e.g. a microwave vs. a chair.	Children understand the importance of keeping information, such as their usernames and passwords, private and actively demonstrate this in lessons. Children take ownership of their work and save this in their own private space such as their My Work folder on Purple Mash.
Year 2 outcome	Children can explain that an algorithm is a set of instructions to complete a task. When designing simple programs, children show an awareness of the need to be precise with their algorithms so that they can be successfully converted into a code	Children can create a simple program that achieves a specific purpose. They can also identify and correct some errors. Children's program designs display a growing awareness of the need for logical, programmable steps.	Children can identify the parts of a program that respond to specific events and initiate specific actions. For example, they can write a cause and effect sentence of what will happen in a program.	Children demonstrate an ability to organise data using, for example, a database such as 2Investigate and can retrieve specific data for conducting simple searches. Children are able to edit more complex digital data such as music compositions within 2Sequence. Children are confident when creating, naming, saving and retrieving content. Children use a range of media in their digital content including text, animation and sound.	Children can effectively retrieve relevant, purposeful digital content using a search engine. They can apply their learning of effective searching beyond the classroom. They can share this knowledge. Children make links between technology they see around them, coding and multimedia work they do in school e.g. animations, interactive code and programs.	Children know the implications of inappropriate online searches. Children begin to understand how things are shared electronically such as posting work to the Purple Mash display board. They develop an understanding of using email safely by using 2Respond activities on Purple Mash and know ways of reporting inappropriate behaviours and content to a trusted adult.

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