Computing Progression

Strand	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
E-Safety *To be taught throughout each unit alongside the objs.*	40-60+ months emotional and social Understands that own actions affect other people, for example, becomes upset or tries to comfort another child when they realise they have upset them. Early Learning Goal Children recognise that a range of technology is used in places such as homes and schools. They select and use technology for particular purposes.	KS1 obj *-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.*		KS2 obj - *use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.*			
		Children will understand where to go for help and support when they have a worry about something on the internet.	Children will develop their understanding of how to use technology safely and keep personal information private.	Children will increase their understanding of how to use technology safely and respectfully, keeping information private through the use of passwords. Children will recognise acceptable and unacceptable behaviours online.	Children will now show an understanding of where to go for help when they have a concern. Children will increase their use technology responsibly and understand that communication may be seen by others online.	Children will understand the importance to only select age appropriate content through social media, online gaming and videos.	Children will use previous learning to identify a range of ways to report concerns about content and contact in and out of school.
Coding	Children will experience using BeeBots to program a simple movement algorithm. Early Learning Goal Children recognise that a range of technology is used in places such as homes and schools. Exceeding descriptor Children find out about and use a range of everyday technology, used in the library.	KS1 Obj *- 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*		KS2 obj *-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*			
		Children will develop their understanding of an algorithm by programming movements using ScratchJr and programmable toys (Beebots)	Children will now have a strong understanding of movement in algorithms and will now begin to create and debug (editing) their own simple programs	Children will continue to develop their understanding of algorithms by adding 'if … then…' statements. E.G If an object hits another then it will move back to its starting position. Children will link their programs to virtual events.	Children will show an understanding of how using multiple inputs can effect subsequent change in other objects (if/then) and will now begin to add variables. Children will begin to use their own creativity to influence their programs e.g. importing their own photos, sound and/or creating their own sprite.	Children will continue to write and debug their programs making their algorithms increasingly more complex. Children will begin to use loops within their programs and understand how these are used within many computer programs in which they use regularly.	Children will develop their understanding of the use of programs within a range of technology. Children will use previous learning to test algorithms, identify potential bugs and correct them. Children create programs which use variables.
Communication	Children will explore a range of programs that will allow them to show information digitally. This could be done through text, images or photos.	KS1 Obj *- use technology purposefully to create, organise, store, manipulate and retrieve digital content* *- recognise common uses of information technology beyond school*		KS2 Obj *-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*			
		Children will develop their understanding of how we can type write information digitally by changing text on word.	Children will begin to use programs such as Word to allow them to introduce images and drawings alongside their increasing ability type using a keyboard. (BBC dance mat typing) They will also begin to explore different media such as the use of digital cameras an video recorders.	Children explore a range of new applications including PowerPoint and publisher and will learn how to edit images and add images alongside text to communicate an idea. Children will continue to increase their fluency of typing. (BBC dance mat typing) Children will begin to evaluate their work using success criteria's generated by the class.	Children will begin to select, use and combine a variety of software to accomplish a given goal. Children continue to grow in confidence when evaluating their work using success criteria's generated by the class.	Children will now show an understanding of how to use text, images, photos and videos to communicate an idea, piece of work, research or creativity.	Children will be able to use the skills they have learnt in image and video manipulation alongside work done in their 'coding' strand.
Data collection		KS1 objs *-use technology purposefully to create, organise, store, manipulate and retrieve digital content*		KS2 objs *-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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	Children to tally or count using a digital application.	Children will begin to record information using numbers to create a chart. 2simple – 2 calculate	Children to use the internet to find information to create bar charts. (2calcuate)	Children should be shown how to create frequency charts/ bar charts using word, alongside their data collection.	Children should be able to pick and choose how to represent data using the Office suite. Alongside their data collection.	Children should be able to record and present data using Microsoft word and PowerPoint Begin to use spreadsheets to present data	Children to continue to develop their understanding of data by increasing their understanding of spreadsheets.
Networks	Children to be exposed to the possibilities of learning that the internet can provide.		Children will how computer networks enable the sharing of data and information and how the internet is a large network enabling data and information to be shared between computers.		Children will increase their understanding of large computer networks and how servers provides services to networks.	Children will begin to use internet services to share and transfer data to a third party by attaching files to an email.	Children will develop their understanding of how networks enable computers to share, communicate and collaborate.