Computing progression document

	3-4 Year olds	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Computing systems and networks	Know that the internet can be Know how tod to communicate information in a friendly way. Know how to use a range of tech toys and make things happen e.g. play, stop, pause and control volume. Know about and discuss stories with morals and stranger danger. Know how to play a simple game on the IWB with support. Know how to find their initial letter on a keyboard and press with adult support. Know how to take a photo with help	Know common uses of information technology. Know how to use to a touch screen. Know that care is needed when using technology. Know that a keyboard can be used write words. Know when and how to use to the SPACE BAR. Know where some keys are on the keyboard. Know what to do when a command box opens, or	Know what is meant by the term technology. Know what a computer is and its main parts. Know how to use a mouse in different ways. Know how to use a keyboard to type on a computer. Know how to use the keyboard to edit text. Know rules for using technology responsibly.	Know the uses and features of information technology. Know about the uses of information technology in the school. Know about information technology beyond school. Know how information technology helps us. Know how to use information technology safely. Know that choices are made when	Know how digital devices function. Know what input and output devices are. Know how digital devices can change the way we work. Know how a computer network can be used to share information. Know how digital devices can be connected. Know the physical components	Know how networks physically connect to other networks. Know how networked devices make up the internet. Know how websites can be shared via the World Wide Web (WWW). Know how content can be added and accessed on the World Wide Web (WWW.) Know how the content of the WWW is	Know how that computers can be connected together to form systems. Know the role of computer systems in our lives. Know how information is transferred over the internet. Know how sharing information online lets people in different places work together.	Know how to use a search engine. Know how search engines select results. Know how h search results are ranked. Know why the order of results is important, and to whom. Know how we communicate using technology. Know how to valuate different methods of online communication.

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	using an iPad. Know how things work	the page changes unexpectedly (turn monitor off – then tell an adult) Know what is safe to share on the school website: first names, photographs of work etc.		using information technology	of a network.	created by people. Know how to evaluate the consequences of unreliable content.	Know how to contribute to a shared project online. Know how to evaluate different ways of working together online.	
	3-4 Year olds	**Reception**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Creating media	Know how to use paint tools and brushes with help. .	Know how to explore paint tools and brushes within an app. Know how to take a photo with an iPad.	Know what different freehand tools do. Know how to use the shape tool and the line tools. Know how to make careful choices when painting a digital picture. Know how and	Know how to use a digital device to take a photograph. Make choices when taking a photograph. Know what makes a good photograph. Decide how photographs can be improved. Know how to tools to change an	Know how that animation is a sequence of drawings or photographs. Know how to relate animated movement with a sequence of images. Know how to plan an animation.	Know that sound can be digitally recorded. Know how to use a digital device to record sound. Know how that a digital recording is stored as a file. Know how that audio can be changed through editing.	Know that drawing tools can be Know how tod to produce different outcomes. Create a vector drawing by combining shapes. Know how to tools to achieve a desired effect.	Know how to use a computer to create and manipulate three dimensional (3D) digital objects. Compare working digitally with 2D and 3D graphics. Construct a digital 3D model of a physical object.

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			why I chose the tools I used. Know how to use a computer on my own to paint a picture. Know how to compare painting a picture on a computer and on paper. Know how to use a computer to write. Know how to add and remove text on a computer. Know that the look of text can be	image. Know that photos can be changed. Know that there are patterns in music. Know how music is made from a series of notes. Know how to create music for a purpose. Know how to review and refine our computer work.	Know how to review and improve an animation. Know how to evaluate the impact of adding other media to an animation. Know how text and images convey information. Know that text and layout can be edited. Know how to choose appropriate page settings Know how to add content to a desktop publishing publication.	Know that different types of audio can be combined and played together. Know how to evaluate editing choices made. Know how digital images can be changed to change the composition of an image. Know how images can be changed for different uses. Know how to make good choices when selecting different	Know that vector drawings consist of layers. Know how to group objects to make them easier to work with. Know how to evaluate my vector drawing. Know what makes a video effective. Know digital devices that can record video. Know how to capture video using a range of	Know that physical objects can be broken down into a collection of 3D shapes. Design a digital model by combining 3D objects. Develop and improve a digital 3D model. Review an existing website and consider its structure. Plan the features of a web page. Consider the ownership and Know how to of images (copyright. Know the need to preview pages. Outline the need for a

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			changed on a computer. Make careful choices when changing text. Know how why I Know how tod the tools that I chose. Compare typing on a computer to writing on paper.		Know how different layouts can suit different purposes. Know the benefits of desktop publishing.	tools. Know that not all images are real. Know how to evaluate how changes can improve an image.	techniques. Know how to create a storyboard. Know that video can be improved through reshooting and editing. Know about the impact of the choices made when making and sharing a video.	navigation path. Know the implications of linking to content owned by other people.
	3-4 Year olds	**Reception**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Data and information	Know how to complete a simple program. Know how cause and effect toys work. Know how to use a	Know that data can be entered into a pictogram and use it to find answers to simple questions (on whiteboard). Know how to use	Know how to label objects. Know that objects can be counted. Know how to describe	Know that we can count and compare objects using tally charts. Know that objects can be	Know how to create questions with yes/no answers. Know the object attributes	Know how that data gathered over time can be used to answer questions. Know how use	Know how to use a form to record information. Know how to compare paper and computer	Know which questions which can be answered using data. Know how objects can be described

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	simple website to access content. Know how to create a pictogram practically.	a cause and effect toy. Know that google images can be used as a search tool (with adult support). Know how to use google earth / google maps and street view to look at a journey with adult support.	objects in different ways. Know how to count objects with the same properties. Know how to compare groups of objects. Know how to answer questions about groups of objects.	represented as pictures. Know how to create a pictogram. Know how to select objects by attribute and make comparisons. Know that people can be described by attributes. Know how we can present information using a computer.	needed to collect relevant data. Know how to create a branching database. Know how and why it is helpful for a database to be well structured. Know how to identify objects using a branching database. Know how to compare the information shown in a pictogram with a branching database.	to a digital device to collect data automatically. Know how a data logger collects 'data points' from sensors over time. Know how to use data collected over a long duration to find information. Know what data is needed to answer questions. Know how to collected data to answer questions.	based databases. Know how to outline how grouping and then sorting data allows us to answer questions. Know that tools can be used to select specific data. Know that computer programs can be used to compare data visually. Know how to apply my knowledge of a database to ask and	using data. Know how formulas can be used to produce calculated data. Know how to apply formulas to data, including duplicating. Know how to create a spreadsheet to plan an event. Know how to choose suitable ways to present data.

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							answer real-world questions.	
	3-4 Year olds	**Reception**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Programming	Know how to correctly sequence three items. Know how to follow instructions to navigate a simple game.	Know how to access and explore a simple adventure game. Know how to input instructions such as forwards, backwards and turn. Know how to explore the outcome of a set of instructions and discuss the results. Know instructions such as forwards, backwards, turn, left, right.	Know how what a given command will do. Know how to Know how to act out a given word. Know how to combine forwards and backwards commands to make a sequence. Know how to combine four direction commands to make sequences. Know how to plan a simple program.	Know a series of instructions is a sequence. Know how what happens when we change the order of instructions. Know how to logical reasoning to predict the outcome of a program (series of commands). Know how programming projects can have code and artwork. Know how to	Know how to create a programming environment. Know that commands have an outcome. Know how that a program has a start. Know that a sequence of commands can have an order. Know how to change the appearance of my project. Know how to create a	Know that accuracy in programming is important. Know how to create a program in a text-based language. Know what 'repeat' means. Know how to modify a count controlled loop to produce a given outcome. Know how to decompose a task into small steps.	Know how to control a simple circuit connected to a computer. Know how to write a program that includes count controlled loops. Know that a loop can stop when a condition is met. Know that a loop can be used to repeatedly check	Know that a 'variable' is something that is changeable. Know why a variable is used in a program. Know how to improve a game by using variables. Know how to design a project that builds on a given example. Know how to use my design to create a project. Know how to evaluate my project.

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		Know how to use simple equipment. (beebots, child friendly phones, microscopes).	Know how to find more than one solution to a problem. Know how to choose a command for a given purpose. Know that a series of commands can be joined together. Know the effect of changing a value. Know that each sprite has its own instructions. Know how to design the parts of a project.	design an algorithm to create and debug a program that I have written. Know that a sequence of commands has a start. Know that a sequence of commands has an outcome. Know how to create a program using a given design. Know how to change a given design. Know how to create a program using my own	project from a task description. Know how a sprite moves in an existing project. Know how to create a program to move a sprite in four directions. Know how to adapt a program to a new context. Know how to develop my program by adding features. Know how to fix bugs in a program. Know how to	Know how to create a programme uses count controlled loops to produce a given outcome. Know how to develop the use of count controlled loops in a different programming environment. Know that in programming there are infinite loops and count controlled loops. Know how to develop a design that includes two or more loops	whether a condition has been met. Know how to design a physical project that includes selection. Know how to create a program that controls a physical computing project. Know how selection is used in computer programs. Know that a conditional statement connects a condition to	Know how to create a program to run on a controllable device. Know how selection can control the flow of a program. Know how to update a variable' . Know how to use a conditional statement to compare a variable to a value. Know how to design a project that uses inputs and outputs on a controllable device.

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			Know how use an algorithm to create a program.	design. Know how to decide how my project can be improved.	design and create a maze based challenge.	which run at the same time. Know how to modify an infinite loop in a given program. Know how to create a project that includes repetition.	an outcome. Know how selection directs the flow of a program. Know how to design a program which uses selection. Know how to create a program which uses selection. Know how to evaluate my program.	Know how to develop a program to use inputs and outputs on a controllable device.
	3-4 Year olds	**Reception**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
E-safety	Know that I can say no to somebody if they are making me sad. Know some ways in which the internet	Know what is meant by online or offline. Know that I can say 'no' - 'please stop' - 'I'll tell' - 'I'll ask' to	Know that the internet is many devices connected to one another. Know that	Know the difference between online and offline. Know what information I	Know that not everything on the internet is true: people share facts, beliefs and opinions online.	Know some of the methods used to encourage people to buy things online. Know that	Know different ways we can communicate online. Know how online	Know that a 'digital footprint' means the information that exists on the internet as a result of a

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	can be used to communicate. Know what it means to be kind and unkind. Know about keeping safe and being healthy. Know some information about myself (name, age, where I live)	somebody who makes them feel sad, uncomfortable, embarrassed or upset. Know some different ways I could use technology to communicate with people I know. Know about different ways that I can put information on the internet. Know ways that some people can be unkind online and how this can make others feel. Know how to use the internet as a way of finding information	you should tell a trusted adult if you feel unsafe or worried online. Know that people you do not know on the internet (online) are strangers and are not always who they say they are. Know that to stay safe online it is important to keep personal information safe. Know that 'sharing online means giving something specific to	should not post online. Know what the techniques are for creating a strong password. Know that you should ask permission from others before sharing about them online and that they have the right to say 'no.' Know that not everything I see or read online is true.	Know how the internet can affect your moods and feelings. Know that privacy settings limit who can access your important personal information such as your name, age, gender etc. Know what social media is and that age restrictions apply.	technology can be designed to act like or impersonate living things. Know that technology can be a distraction and identify when someone might need to limit the amount of time spent using technology. Know what behaviours are appropriate in order to stay safe and be respectful online.	information can be used to form judgements. Know some ways to deal with online bullying. Know that apps require permission to access private information and that you can alter the permissions. Know where I can go for support if I am being bullied online or feel that my health is being affected by time online.	person's online activity. Know what steps are required to capture bullying content as evidence. Know that it is important to manage personal passwords effectively. Know what it means to have a positive online reputation. Know some common online scams

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		online Know there are rules that help keep us safe and healthy in and beyond the home when using technology. Know what is meant by personal information (e.g. name, address, birthday, age, location) and who I can share this information with.	someone else via the internet and 'posting' online means placing information on the internet.					