Woodfield and St. George's Junior School

Computing Progression Grid

Computing	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Computer Science (Programming)	**Programmable toys** **Beebot** • I can follow instructions to play a group game (unplugged) • I can use simple directional language to direct myself and others around (unplugged) • I can input a series of commands to control a toy e.g. toys, beebots. • I can make choices about which command to use • I can program and programmable toy to move forwards and backwards •	**Plugged and unplugged** **Beebots** **Kodable** I can tell you something I do every day that needs to be done in order • I can follow instructions • I can make a set of instructions for others to follow • I can change instructions, if they are wrong • I can read instructions and usually tell you what I think will happen • I can tell you what an algorithm is • I can make a programmable toy go where I want it to go • I can draw instructions that would move a toy • I can tell you what I think a toy would do if it followed a set of instructions	**Scratch Jr** • I can sequence a set of instructions for completing an everyday task • I can create a sequence of instructions • I can use repeat instruction • I can draw my own sprite using software • I can create a simple animation • I can program two sprites to talk to each other • I can create a simple animation that has a background and two sprites moving and talking	**(Scratch- Actions and events)** **Plugged and Unplugged** • I can understand that a problem can be broken into smaller parts • I can create an algorithm to make something happen successfully and to be able to talk about it • I can explain the relationship between an event and an action • I can choose which keys to use for actions and explain my choices I can identify a way to improve a program • I can choose an appropriate character for my project • I can choose a suitable size for a character in a maze • I can program movement • I can use a programming extension • I can consider the real world when making design choices	**(Chatbot & Repetition in games - Scratch)** • I can recognise an error in a program and debug it so that it works • I can understand that algorithms will help me to solve problems. • I can test and retest a program whilst it is being developed (using my prediction skills of what MIGHT work) • I can understand that programs can follow more than one route (eg IF THEN statements) • I can use IF THEN ELSE commands to control what happens. • I can develop the use of count-controlled loops in a different programming environment • I can list an everyday task as a set of instructions including repetition • I can predict the outcome of a snippet of code	**(Paint & Boat Race- Scratch)** • I can use a range of sensing tools (eg within programs such as Scratch) to control what happens (eg based on the position of the sprite, mouse position or inputs such as sound level) • I can recognise an error in a program, debug the program and explain the changes I have made. • I can recognise the need to test and retest whilst a program is being developed • I can understand that variables can be used to make a game more realistic (eg a timer or a score) • I can use variables in my own programs • I can use broadcasts to control a sprite in scratch • I can use operators to compare numbers in Scratch • I can use code to detect when a sprite is touching a colour in Scratch • I can apply understanding of loops	**Crumble and Lego Workshop** • I can write programs to do what I want them to do, testing and debugging when required • I can broadcast information to trigger another event (eg in Scratch) • I can create or use a simulation of a real (physical) system (such as a robot, spacecraft, machine or production line) • I can control a physical system using a range of commands (eg Lego & Crumble) • I can understand that any system requires input devices and output devices and that the system processes the data

				• I can choose blocks to set up my program • I can identify additional features (from a given set of blocks) • I can choose suitable keys to turn on additional features • I can build more sequences of commands to make my design work • I can test a program against a given design • I can match a piece of code to an outcome • I can modify a program using a design	• I can modify a snippet of code to create a given outcome • I can explain that in programming there are infinite loops and count-controlled loops • I can modify loops to produce a given outcome • I can choose when to use a count-controlled and an infinite loop • I can recognise that some programming languages enable more than one process to be run at once • I can develop a design that includes two or more loops which run at the same time • I can choose which action will be repeated for each object • I can explain what the outcome of the repeated action should be • I can evaluate the effectiveness of the repeated sequences used in my program	to improve the elements in a game	

					• I can explain the effect of my changes • I can re-use existing code snippets on new sprites • I can design a project that includes repetition • I can evaluate the use of repetition in a project • I can select key parts of a given project to use in my own design • I can develop my own design explaining what my project will do • I create a project that includes repetition • I can refine the algorithm in my design • I can build a program that follows my design • I can evaluate the steps I followed when building my project		

Computer Science (Internet and Web Research)	**Internet:** • I can use a touch screen, selecting intended options.	**Internet:** • I can move around a website using buttons and picture links • I can find answers to questions using a website	**Internet:** • I can make a mind map about the world wide web • I can create a timeline of events in computing history • I can find and move around a website • I can use information from a website to answer a question • I can order things using information found online	**Web research**: • I can make one word searches on a child friendly search engine • I can bookmark a web page by creating a favourite • I can use the word kids in a search • I can use multiple word searches on a standard search engine • I can copy text from an internet page to an office document • I can get typed text read to me	**Web research:** • I can open multiple web pages without leaving the search • I can create synonym search • I can search dictionary definitions • I can search using a – (minus) to exclude – words • I can search words of equal value using OR • I can check a website's plausibility and usefulness for the intended audience	**Web research:** • I can use the advanced search options in Google • I can use a subject directory search • I can explain that some results are sponsored • I can copy images from an internet page and understanding what copyright means.	**Web research:** • I can identify how to use a search engine • I can describe how search engines select results • I can explain how search results are ranked • I can recognise why the order of results is important, and to whom
Computer Systems & Networks	• I can identify technology around us • I can explain that technology is something which can help us	• I can explain how examples of technology can help us • I can recognise that a computer is a type of technology • I can choose a piece of technology to do a job • I can recognise that some technology can be used in different ways	• I can identify the main parts of the computer • I can recognise that choices are made when using technology • I can explain why rules are needed when using a computing	• I can explain how digital devices function • I can identify input and output devices • I can recognise how digital devices can change the way we work • I can explain how a computer network can be used to share information • I can explore how digital devices can be connected • I can recognise the physical components of a network	• I can describe how networks physically connect to other networks • I can recognise how networked devices make up the internet • I can outline how websites can be shared via the World Wide Web I can describe how content can be added and accessed on the World Wide Web • I can recognise how the content of the	• I can explain that computers can be connected together to form systems • I can recognise the role of computer systems in our lives • I can recognise how information is transferred over the internet • I can explain how sharing information online lets people in different places work together • I can contribute to a shared project online • I can evaluate different	• I can recognise how we communicate using technology • I can evaluate different methods of online communication

					WWW is created by people • I can evaluate the consequences of unreliable content	ways of working together online	
Digital Media & Information Technology	General IT Skills: • I can use a touch screen game with increasing confidence. • I can type letters with increasing confidence using a tablet. • I can take a photograph using a tablet. • I can use a camera/tablet to record I short piece of video • I can use a paint application to create patterns **Databases (unplugged):** • I can sort objects • I can talk about what is the same and different about objects	**General IT skills:** • I can turn a computer and ipad on / off • I can log on with a username and password • I can open applications with help • I can save and print work • I can use a mouse pad • I can tell you why I used a computer to do something **Digital art:** • I can explore simple digital art making tools • I can use a shape and fill tool • I can use an image to create an ebook **Word processing:** • I can use a keyboard • I can write a simple sentence using a keyboard • I know how to print my work	**Blogging:** • I can use a username and password to access a blog • I can write sentences that build on things others have written • I can post a comment on the class blog and respond to a post or comment • I can use a blog to express my opinions • I can review posts I have made and choose examples of good posts	**General IT skills – Microsoft Office** • I can switch Computers on and off • I can log On and Off • I can save my work • I can resize Windows • I can retrieve saved work • I can create a new document **Word Processing – Word** • I can type using capitals and lowercase text. • I can understand how to change the case using caps lock or temporarily change it using shift. • I can understand that symbols on the top of a key can be accessed by holding down shift • I can delete both ways using the backspace and delete keys • I can change the font size and colour of text • I can use bold, underline and italic • I can undo and redo **Databases**	**General ICT skills – Microsoft Office** • I can create and adapt Folders • I can print • I can take Screen Shots and use the Snipping Tool • I can resize Digital Images **Word Processing - Word** • I can move a word or section of text within the document by cutting and pasting • I can check spelling and grammar • I can orient the page view and page size and print on different size paper • I can indent manually or within a list and know when to use these skills • I can insert a picture, Word Art or clipart understanding that in a word processor text is primary (This is covered in a more	**Photo Editing** • I can explain that digital images can be changed • I can change the composition of an image • I can describe how images can be changed for different uses • I can make good choices when selecting different tools • I can recognise that not all images are real • I can evaluate how changes can improve an image **Presentation Media – PowerPoint/Spark Video** • I can understand that the office tools are similar across the different packages (word/publisher/ppt) I can add new slides and slide transitions • I can change the back ground colour of slides • I can select the appropriate formatting of slides • I can begin to understand how the	**Spreadsheets** • I can identify questions which can be answered using data • I can explain that objects can be described using data • I can explain that formulas can be used to produce calculated data • I can apply formulas to data, including duplicating • I can create a spreadsheet to plan an event • I can choose suitable ways to present data **Building a webpage** • I can review an existing website and consider its structure • I can plan the features of a web page • I can consider the ownership

		• I can open a document and write a story using a word bank • I can save my work • I can tell you about why and when it is useful to use a word processor Databases • I can make a pictogram • I can use a pictogram to answer questions • I can sort objects into an order • I can make a graph • I can tell you what I have learnt from graphs		• To create questions with yes/no answers • I can investigate questions with yes/no answers • I can make up a yes/no question about a collection of objects • I can create two groups of objects separated by one attribute • To identify the object attributes needed to collect relevant data • I can select an attribute to separate objects into groups • I can create a group of objects within an existing group • I can arrange objects into a tree structure • To create a branching database • I can select objects to arrange in a branching database • I can group objects using my own yes/no questions • I can prove my branching database works • To explain why it is helpful for a database to be well structured • I can create yes/no questions using given attributes	detailed way in Desktop Publishing) • I can insert a table and adjust its formatting adding new columns or rows and merging cells • I can apply a new style to a document • Knows how to bring full menus up if using MS Word • I can copy and paste from the Internet into MS Word removing web formatting • I can save a copy of the document as a pdf file **Desktop Publishing – Publisher/Adobe** • I can recognise how text and images convey information • I can explain the difference between text and images • I can recognise that text and images can communicate messages clearly • I can identify the advantages and disadvantages of using text and images	slides facilitate a presentation. • I can animate objects and images • I can add sound to slides • I can add video to slides • I can add hyperlinks to slides • I can present confidently in front of their peers	and use of images (copyright) • I can recognise the need to preview pages • I can outline the need for a navigation path • recognise the implications of linking to content owned by other people To apply information technology to real life situations: Publisher- art • I can group and un-group objects • I can select, copy and paste objects or groups of objects • I can layer objects • I can insert pictures from a file Tinkercad: • I can add 3D shapes to a project • I can view 3D shapes from

				• I can explain that questions need to be ordered carefully to split objects into similarly sized groups • I can compare two branching database structures • To identify objects using a branching database • I can select a theme and choose a variety of objects • I can create questions and apply them to a tree structure • I can use my branching database to answer questions • To compare the information shown in a pictogram with a branching database • I can explain what a pictogram tells me • I can explain what a branching database tells me • I can compare two ways of presenting information	• I can recognise that text and layout can be edited • I can change font style, size, and colours for a given purpose • I can edit text • I can explain that text can be changed to communicate more clearly • I can choose appropriate page settings • I can define the term 'page orientation' • I can recognise placeholders and say why they are important • I can create a template for a particular purpose • I can add content to a desktop publishing publication • I can choose the best locations for my content • I can paste text and images to create a magazine cover • I can make changes to content after I've added it • I can consider how different layouts		different perspectives • I can move 3D shapes relative to one another • I can resize an object in three dimensions • I can lift/lower 3D objects • I can recolour a 3D object • I can rotate objects in three dimensions • I can duplicate 3D objects • I can group 3D objects • I can accurately size 3D objects • I can show that placeholders can create holes in 3D objects • I can combine a number of 3D objects • I can analyse a 3D model • I can choose objects to use in a 3D model

					can suit different purposes • I can identify different layouts • I can match a layout to a purpose • I can choose a suitable layout for a given purpose • I can consider the benefits of desktop publishing • I can identify the uses of desktop publishing in the real world • I can say why desktop publishing might be helpful • I can compare work made on desktop publishing to work created by hand		• I can combine objects in a design • I can construct a 3D model based on a design • I can explain how my 3D model could be improved • I can modify my 3D model to improve it Spreadsheets- science & maths • I create a tale of results and use this table to calculate the average. • I can turn a data set into an appropriate graph. • I can use a spreadsheet to budget- calculating profit and loss • I can use the data in a spreadsheet to make predictions about future profit