



Computing Skills Progression in Westfield – KS1

	Foundation Stage ELGs	Key Stage 1	
Curriculum Statements	<p>Communication & Language Development</p> <ul style="list-style-type: none"> - Understanding follow instructions with several ideas or actions <p>Physical Development</p> <ul style="list-style-type: none"> - Moving and handling <p>Mathematics Development</p> <ul style="list-style-type: none"> - Solving problems <p>Making Relationships</p> <ul style="list-style-type: none"> - Play cooperatively taking turns <p>Understanding the world (Technology)</p> <ul style="list-style-type: none"> - Recognise that a range of technology is used in places such as homes and schools - Select and use technology for particular purposes <p>Expressive arts & design</p> <ul style="list-style-type: none"> - Exploring & using media and materials - Being imaginative 	<p>Computer Science</p> <ul style="list-style-type: none"> - 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 <p>Information Technology</p> <ul style="list-style-type: none"> - Use technology purposefully to create, organise, store, manipulate and retrieve digital content <p>Digital Literacy</p> <ul style="list-style-type: none"> - 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. 	
	By the end of EYFS	By the end of Year 1	By the end of Year 2
Computer Science	<ul style="list-style-type: none"> - Identify some of the steps needed to achieve a simple task (e.g. brushing teeth) - Understand that people and computers follow instructions - Can follow instructions and correct mistakes - Know that devices and objects on a screen can be controlled - Recognise that a printer is connected to computers and devices 	<ul style="list-style-type: none"> - Read a set of instructions and usually predict the correct outcome - Produce a set of instructions that others can usually follow - Give simple instructions to make things happen and understand that this is called an algorithm - Make changes to instructions if they are wrong - Plan a simple animated story - Know that programmes (e.g. Scratch Jr) can be given commands to produce specific effects on screen - Execute short a sequence of commands that results in a planned effect - Program a simple animated story - Test and debug an animation 	<ul style="list-style-type: none"> - Execute short a sequence of commands that results in an effect - Move a sprite in one direction on screen using steps - Program and test a simple program - Know that that stop-motion animations are created by capturing images with small movements in between each image - Understand that showing images rapidly with small changes in between simulates motion - Plan a short animated scene using a basic storyboard - Create a simple script based on a storyboard - Create an short stop-motion animated scene using digital tools
	By the end of EYFS	By the end of Year 1	By the end of Year 2

<p>Digital Literacy</p>	<ul style="list-style-type: none"> - Understand that a password protects a device from someone else using it - Understand that an adult should be present when they access online material - Know who to go to for help if they need it when using the internet - Understand to take turns when using technology - Know that care is needed when using equipment - Understand that the internet can be used to play and learn - Know that the things they create digitally can be shared with others - Recognise purposes for using technology at home and in school (e.g. TV for watching movies; interactive whiteboard for showing work in school) 	<ul style="list-style-type: none"> - Understand that various information is personal (e.g. hobbies) - Can usually identify characteristics of trustworthy people - Know that personal information should only be given to trusted people - Can give examples of when it may and may not be appropriate to share pictures - Knows that people can bully and be bullied online 	<ul style="list-style-type: none"> - Understand that various information is personal (e.g. hobbies) - Can usually identify characteristics of trustworthy people - Know that personal information should only be given to trusted people - Understand the importance of keeping passwords and personal information private when online - Be respectful online - Know they should not speak to strangers online - Understand they should not open or reply to emails without permission
<p>Information Technology</p>	<ul style="list-style-type: none"> - Know that Information Technology (incl. online tools) can help them do things - Can use a mouse to move objects - Can use a keyboard for basic activities - Can use a camera, sound recorder or mobile device to collect photographs and/or sound - Recognises and can use the common icons for save and print 	<ul style="list-style-type: none"> - Confidently use a mouse to point, click and drag objects around a screen - Make choices, explore alternatives and discuss those made - Navigate a selection of related pages - Add simple labels to images - Print work - Type simple sentences using a keyboard - Use a word bank to construct meaningful sentences - Open, save and print documents 	<ul style="list-style-type: none"> - Write simple blog posts on a given topic - Respond appropriately to a blog and keep on topic - Edit blog posts and/or responses to posts to communicate meaning (e.g. use spaces between words, adding new lines) - Compose and send a simple email - Read and reply to an email - Send an email with an attachment - Talk about why and when they think email would be useful - Combine, text, images and audio to provide information on a topic - Edit to improve, including using text styling and adding appropriate images - Publish eBooks - Use a link to find a website - Confidently navigate a website - Select information in a website - Find answers to questions using a website



Computing Skills Progression in Westfield – KS2

	By the end of Year 3	By the end of Year 4	By the end of Year 5	By the end of Year 6
Computer Science	<p>Computer Science</p> <ul style="list-style-type: none"> - 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 - 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 - Appreciate how (search) results are selected and ranked 			
	<ul style="list-style-type: none"> - Execute a sequence of commands that results in a planned effect - Move a sprite around a screen using turns and repetition - Program and test a simple program 	<ul style="list-style-type: none"> - Use instructions/change commands and parameters to make a sprite (e.g. a turtle or shape) make turns or change shape or size - Use repeat commands - Predict the outcome of a given algorithm or program - Write, test and amend computer programs and correct any errors - Recognise patterns of commands and program simple procedures that are repeated - know that animations consist of a number of different images that are played rapidly - plan a simple animated scene and a basic storyboard - create an animated scene using digital tools - understand that 3D effects can add depth to an animation - test and debug an animation 	<ul style="list-style-type: none"> - Write and amend computer programs - Program a number of algorithms that achieve a specific outcome - Use repetition, variables and conditional statements in computer programs - Test computer programs and correct any errors - Write and amend more complex computer programs to create a variety of outcomes - Use iteration (repeats and loops), variables and conditional statements (e.g. when...do) in computer programs - Test computer programs and correct most errors 	<ul style="list-style-type: none"> - Analyse the impact of mobile technology and apps on modern culture - Write and amend more complex computer programs to create a variety of outcomes - Use iteration (repeats and loops), variables and conditional statements (e.g. if...then) in computer programs - Test computer programs and correct most errors
Digital Literacy	<p>Digital Literacy</p> <ul style="list-style-type: none"> - Be discerning in evaluating digital content - Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. - Understand the opportunities (networks) offer for communication and collaboration 			

<ul style="list-style-type: none"> - Know some of the ways people can be influenced online - Understand that some online content may be advertising - Identify some of the risks of communicating and collaborating online and act to minimise them - Know ways technology can be used positively and what is appropriate to share online - Demonstrate the use of basic safety measures when using technology and working online - Know the need to use secure passwords and to keep them private - Know that a computer network consists of a number of computers and devices that are connected - Suggest a range of activities you can do using the internet, including web browsing - Find information by navigating around a number of websites using hyperlinks and buttons - Confidently enter URLs into the address bar of a browser - Question the credibility of information given on websites - Know that internet search engines give a list of websites based on key words - Cross-check information provided on one website against that provided on another - Demonstrate that a network is two or more devices connected - Can identify different devices within a network 	<ul style="list-style-type: none"> - Use technology to communicate and collaborate, identify some of the risks and act to minimise them - Demonstrate the use of basic safety measures when using technology and working online - Know the need to use secure passwords and to keep them private - talk about some of the risks associated with using email - communicate safely and respectfully using email 	<ul style="list-style-type: none"> - Identify risks and benefits of forms of communication - Understand the concept of personal and private information - Understand and relay the SMART rules - Understand the difference between communicating online and face-to-face, and some of the dangers associated in communicating online - Consider whether they trust the content of websites - Make judgments about the validity and suitability of websites - Identify a number of rules that apply to online chatting - Understand the definition of bullying and cyber bullying, exploring the differences and similarities - Identify some types of cyber bullying - Understand that the school rules about bullying also apply to online activity - understand that messages can be encrypted using a range of methods - know that privacy online is maintained using encryption and decryption - suggest a range of scenarios where it is important to secure data using encryption methods - use simple encryption methods to encode and decode messages with a key - know that codes can be broken by identifying patterns in letters and words - Can discuss opportunities for communication and collaboration online 	<ul style="list-style-type: none"> - Identify risks and benefits of forms of communication - Understand the concept of personal and private information - Understand that privacy matters and how it relates to online security - Understand what types of situations call for getting help or talking things out with a trusted adult - Can talk about when and why to report online abuse - Understand the definition of bullying and cyber bullying, exploring the differences and similarities - Identify some types of cyber bullying - Know what positive behaviour looks like online and offline - Know that the internet is an example of a Wide Area Network - Can communicate and collaborate online - Understand that the World Wide Web is one of a number of services provided by the internet - Understand that special devices and services are required to connect to the internet - Can explain how internet search results are ranked
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	<ul style="list-style-type: none"> - Understand that connections can be wired or wireless - Know that each device on a network has its own address - Model how information travels through a network using switches and router 			
Information Technology	<p>Information Technology</p> <ul style="list-style-type: none"> - Use search technologies effectively - 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 			
	<ul style="list-style-type: none"> - Know that databases and graphs are used for different purposes - Collect data from the Internet (or electronic source) to enter in to a database - Enter data in the appropriate fields using keywords or keyboard - Enter information into the database and save - Use search tool to find answers to specific questions 	<ul style="list-style-type: none"> - Use email to work on a shared project - Know the computer can be used to help search for specific information and answer specific questions - Use search criteria to find relevant information online - Collect data, enter into a database and save - Use the search facility in a database to find the answer to questions - Carry out searches involving more than one condition to find answers to a variety of questions 	<ul style="list-style-type: none"> - Use search technology to find things out - Know that the World Wide Web consists of many websites and that web pages can be accessed using the internet. - Know that web pages are formatted using a type of 'code' - Know that you can change what is displayed on a web page - Understand that you can change how content on a web page looks 	<ul style="list-style-type: none"> - Enter text and numbers in a spreadsheet - Enter a formula to perform a calculation - Use SUM function - Change some of the data and discuss effect on results - Create a graph from the data entered and explain results - Know that spreadsheets can be used for mathematical calculations and that recalculations with different values can be done quickly - Discuss the advantages and disadvantages of using spreadsheets for calculations against the use of manual methods - Use search technology and clear search terms to view web pages and obtain data