

Computing Medium Term Plan

	Autumn	Spring	Summer
EYFS	Personal, Social and Emotional Development: • Be confident to try new activities and show independence, resilience and perseverance in the face of challenge. • Explain the reasons for rules, know right from wrong and try to behave accordingly. Physical Development: • Develop our small motor skills so that we can use a range of tools competently, safely and confidently. • Know and talk about the different factors that support our overall health and wellbeing: sensible amounts of 'screen time'. Understanding the World: • Explore how things work. Expressive Arts and Design: • Explore, use and refine a variety of artistic effects to express our ideas and feelings. • Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.		

Year 1	Digital Citizenship	Digital Literacy	Computer Science		Information Technology	
	<i>Opportunity to intertwine these two strands where appropriate</i>		<i>Focus: Algorithm - a set of instructions in everyday language</i>			
	- Recognise warning signs while online and know how to get help - Access the internet in an age-appropriate way - Know what information should be kept private - Know how to behave appropriately online - Know the rules for keeping safe online	- Logging in - Typing using 2Type - Keyboard skill using up and down arrows and enter. - Simple data handling - Explore the creation of a simple music track	Consolidation - Development of directional language - Debugging BeeBot activities when things go wrong - Problem solving - Following instructions - Discuss and plan a simple algorithm	New Learning - Plan a simple algorithm - Create a simple algorithm - Predict the outcome of a simple algorithm - Debug a simple algorithm - Instructional (algorithm) writing	- Logging in - Typing skills - The introduction of the microchip and how it has changed our lives - research Jack Kilby & Robert Noyce - Search using digital tech and key words - Know why we use passwords - Understand that people own work online	- Produce a finished piece of work demonstrating the application of digital literacy skills taught throughout the year Project ideas: - Personal presentation All About me Profile of Information Technology Pioneer

Year 2	Digital Citizenship	Digital Literacy	Computer Science		Information Technology	
	<i>Opportunity to intertwine these two strands where appropriate</i>		<i>Focus: Program - a set of precise instructions in for a computer</i>			
	- Understand that people might behave and communicate differently online - Know that it is OK to say “no” - Think carefully before adding information about myself online - Recognise bullying behaviour - Explain how we can stay safe online in different situations and get help if we need it	- Consolidate logging in - Typing using 2Type focusing on hand placement. - Keyboard skills using shortcuts. - Introduction to word processing - Introduction to creative multimedia – sound, pictures and film - Introduction to simple graphs and charts - Introduction to branching databases	- Consolidation of algorithms - Development of directional language introducing turns - Debugging more complex BeeBot activities when things go wrong - More complex problem solving - Following more complex instructions - Discuss and plan simple algorithms	- Introduction to programs and events - Plan a simple program - Create a simple program - Predict the outcome of a simple program - Debug a simple program - Recording algorithms (instructions)	- Logging in - Typing - Keyboard skills - Searching on/using the WWW and understanding if information is real or imaginary - Research Tim Berners Lee: how did he develop technology? - Understand how computers communicate with each other using the internet and local networks	- Produce a finished piece of work demonstrating the application of digital literacy skills taught throughout the year Project ideas: - Literacy – create a story using PurpleMash 2Publish/2Create a story to combine sound, image and video - Science – create a branching database linked to your topic e.g. living things and their habitats using Purple Mash 2Question

Year 3	Digital Citizenship	Digital Literacy	Computer Science		Information Technology	
	<i>Opportunity to intertwine these two strands where appropriate</i>		<i>Focus: Sequence – The order that a set of instructions are carried out</i>			
	• Talk about digital footprint and what it means • Recognise that online identities can be different to real world identities • Understand the concepts of trust, likes and feelings while online • Know that people can overshare information that should be kept private • Recognise the impact of people being unkind online • Develop a healthy balance between online and real-life activity	• Typing using Word in full sentences • Keyboard skills, e.g. space bar • Develop word processing skills • Develop use of creative multimedia – sound, pictures and film • Develop use of simple graphs and charts • Develop use of branching databases	• Consolidation of algorithms and program • Know the different between an algorithm and a program • Plan an algorithm and then create the program • Predict the outcome of a simple program • Debug a simple program • Record algorithms (instructions)	• Introduction to sequence • Plan a simple sequence • Create a program using a sequence • Predict the outcome of a sequence and the implications of reordering the sequence • Debug a sequence • Transfer skills between different software	• Logging in • Typing skills • Research Ada Lovelace and Charles Babbage; how did they develop technology? • How do search engines help us find information? • Importance of strong passwords and how to share information safely • Know how to save work to a specific location	• Produce a finished piece of work demonstrating the application of digital literacy skills taught throughout the year Project ideas: • Literacy - create a multimedia presentation/eBook, with a title page, incorporating images, sounds and text • Literacy - create an animated story using 2Create a story to combine sound, image and video • Science - create a branching database linked to your topic e.g. plants

Year 4	Digital Citizenship	Digital Literacy	Computer Science		Information Technology	
	<i>Opportunity to intertwine these two strands where appropriate</i>		<i>Focus: Repeat / Loop - Parts of the program that are to be repeated</i>			
	• Discuss digital footprint and online vs real life identity • Respect others while online and be aware of how online behaviour and content can impact on others • Know that anyone can search online profiles for information • Focus on online bullying and how it may affect others • Discuss positives and negatives to using technology	• Typing at length • Continue to develop word processing skills • Introduction to spreadsheets and graphing • Representing data • Animation	• Consolidation of algorithms, program and sequences • Plan an algorithm and then create the sequence • Predict the outcome of a sequence • Debug a sequence • Transfer skills between different software	• Introduction to repeat / loop • Plan a program using a repeat command • Create a program using a repeat command • Predict the outcome of repeat and the implications of reordering the repeat • Debug coding when the outcome is not as expected • Transfer skills between different software	• Logging in • Typing skills • Research Hedy Lemarr and Radia Perlman; how did they develop technology • Search engines, safe searching and copyright • Find, save and import images and information from the internet • How searching works and how to evaluate a website – 5 W's	• Produce a finished piece of work demonstrating the application of digital literacy skills taught throughout the year Project ideas: • Literacy - animation linked to pioneer • Science - animation linked to living things and habitats • History - animation linked to Tudors

Year 5	Digital Citizenship	Digital Literacy	Computer Science		Information Technology	
	<i>Opportunity to intertwine these two strands where appropriate</i>		<i>Focus: Selection / Conditional - using an 'if' statement in a computer program</i>			
	• Make responsible choices when sharing online and understand how this could be used by others • Know when and how to get help • Differentiate between types of bullying • Promote health and well-being with regards to using technology	• Further develop word processing skills • Introduction to databases and graphing • Continue to represent data • Review, edit and discuss why changes have been made to work • Creating work appropriate to audience Computer Aided Design (CAD) • Website evaluation	• Consolidation of algorithms, program, sequences and repeat • Plan a program using a repeat command • Create a program using a repeat command • Predict the outcome of repeat and the implications of reordering the repeat • Debug code when the outcome is not as expected • Continue to transfer skills between different software	• Introduction to Selection / Conditional • Plan a program for a quiz using selection • Create a program for a quiz using selection • To develop an awareness of abstraction when programming • Predict the outcome of the program and the implications of reordering the code • Debug code when the outcome is not as expected • Continue to transfer skills between different software	• Research Grace Hopper, Bill Gates and Steve Wozniak; how did they develop technology • Revisit search engines, safe searching and copyright • Continue to find, save and import images and information from the internet • Reinforce the basics of using technology in our everyday lives. • What the internal parts of a computer are and how they work	• Produce a finished piece of work demonstrating the application of digital literacy skills taught throughout the year Project ideas: • DT - create a new vehicle using CAD design • Science - create an eco-house using CAD design • Literacy/History - create a diorama scene with 3D figures using CAD

Year 6	Digital Citizenship	Digital Literacy	Computer Science		Information Technology	
	<i>Opportunity to intertwine these two strands where appropriate</i>		<i>Focus: Variable - part of a program that can change</i>			
	• Make responsible choices when sharing online • Know when and how to get help • Critically evaluate and reject inappropriate representations online • Be kind and respect others online • Protect digital personality • Know how to capture evidence of online bullying • Common systems that regulate age-related content • Promote health and well-being with regards to using technology	• Be independent when choosing appropriate software to create content • Create work appropriate to audience • Use video editing software	• Consolidation of algorithms, program, sequences, repeat and selection / conditional • To plan and program using a repeat • To plan and program a quiz using selection • Predict the outcome of the program and the implications of reordering the code • Debug code when the outcome is not as expected • to have an awareness of abstraction when programming • Transfer skills between different software	• Introduction to Variable • Plan a program for a quiz using a variable • Create a program for a quiz using variable • To have an awareness of abstraction when programming • Predict the outcome of the program and the implications of reordering the code • Debug code when the outcome is not as expected • To plan and program a game which includes repeat, selection/conditional and a variable for a younger audience • Transfer skills between different software	• Research: Alan Turing: how did he develop technology? Elon Musk - how he is developing technology? • How to evaluate a website – 5 W's • Understand copyright and how to cite references • Maintaining privacy and updating app permissions • What will technology look like in the future?	• Produce a finished piece of work demonstrating the application of digital literacy skills taught throughout the year Project ideas: • Literacy - create a short film about end of Primary school • Science - time elapse video about decomposition • Computer Science - game creation including writing instructions and marketing materials