



Computing Curriculum Sequence of Knowledge and Skills

Autumn Term					
EYFS	Knowledge	<ul style="list-style-type: none"> Know that technology that is used at home, outside and in the world around us. Know how to use a computer mouse effectively That computers/iPads can be used to play games. 			
	Skills	Develop 'computational thinking' through: <ul style="list-style-type: none"> Tinkering Creating Collaboration Persevering Pattern <ul style="list-style-type: none"> Hold a computer mouse correctly, finger on the correct buttons. Use a mouse to make the cursor move around the computer screen. Click the correct mouse button to play games on the computer. 			
	Key Vocabulary	Mouse Computer Control Click			
Year 1	Topic	Online safety (1.1)	Grouping and Sorting (1.2)	Pictograms (1.3)	Lego builders (1.4)
	Links to Prior Learning	eSafety (EYFS)			Grouping and Sorting (1.2) <i>Concept of computers following given instructions.</i>
	Knowledge	<ul style="list-style-type: none"> To log in and out safely. Navigate a document area where saved work by child can be found. Use 'search' to locate applications or resources on a platform such as Purple Mash. Knows how to add text and images to work. Knows how to open, save and print work. Knows the importance of logging out of an account The importance of staying safe online 	<ul style="list-style-type: none"> To group and sort items using a range of criteria. Begin to think logically about the steps of a process. Begin to understand the term algorithm. 	<ul style="list-style-type: none"> Understand that data can be represented in picture format e.g. pictogram. Contribute to a class pictogram and use a software such as 2Count to record results of an experiment into a pictogram format. 	<ul style="list-style-type: none"> Compare the effects of adhering strictly to instructions to completing tasks without complete instructions. To consider how the order of instructions affects the result. Know that an algorithm is a precise, step-by-step set of instructions used to solve a problem or achieve an object.



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	Skills	<ul style="list-style-type: none"> • Mouse control • Navigate mouse trackpad • Know how to log in/out • Access saved work • ‘Search’ Purple Mash • Add pictures and text to work • Open, save and print work. 	<ul style="list-style-type: none"> • Sort items on a computer • Use software for grouping items such as tools within Purple Mash. 	<ul style="list-style-type: none"> • Gather facts and information. • Record results of an experiment on a pictogram using 2Count. • Compare what is the same and what is different. 	<ul style="list-style-type: none"> • How to follow and create simple instructions on the computer. • Notice when the order of instructions hasn’t worked.
	Key Vocabulary	Device Log in/ Log out Username Password Avatar Save	Sort Criteria Groups Algorithm	Pictogram Data Collect Compare Record Results Title	Instruction Algorithm Computer Program Debug Code
Year 2	Topic	Online safety (2.2)	Creating pictures (2.6)	Questioning (2.4)	
	Links to Prior Learning	Online safety (1.1)	Colour magic (EYFS) 2Paint (EYFS) Vincent Scarpace (Year1)	Grouping and sorting (1.2) Pictograms (1.3)	
	Knowledge	<ul style="list-style-type: none"> • Knowledge and understanding about sharing content at a local and global scale • Understand that Email is a communication tool • Understand how we should talk to others in an online situation • Understand that the information put online leaves a digital footprint or trail <ul style="list-style-type: none"> • Identify the steps that can be taken to keep personal data and hardware secure 	<ul style="list-style-type: none"> • Features of the Impressionist style of art (Monet, Degas, Renoir) • The work of Piet Mondrian and William Morris An understanding of Pointillism and the work of artists such as Seurat 	<ul style="list-style-type: none"> • Know that data handling tools can give more information that pictograms 	
	Skills	<ul style="list-style-type: none"> • How to refine searches using the search tool • How to use digital technology to share work on Purple Mash and connect with others locally • How to use 2Respond as a communication tool • How to open and send simple online communication in the form of an email 	<ul style="list-style-type: none"> • How to use the functions of the 2Paint a Picture tool • How to recreate the impressionist style of art • How to recreate Pointillist art • How to recreate Mondrian’s work using the lines template How to recreate the work of William Morris using the patterns template 	<ul style="list-style-type: none"> • How to use yes/no (closed) questions to separate information • How to construct a binary tree to identify items • How to use 2Questions (binary tree database) to answer questions How to use a database to answer more complex search questions 	
	Key Vocabulary	Search Internet Sharing	Impressionism Pointillism Surrealism	Pictogram Question Data	



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		Email Attachment Digital Footprint	Palette Share Template	Collate Binary Tree Avatar Database
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Spring Term			
EYFS	Knowledge	<ul style="list-style-type: none"> Understand computer technologies and be given instructions (algorithm) That computers/iPads can be used to draw What to do if something pops up onscreen that they don't like 	
	Skills	Develop ' computational thinking ' through: <ul style="list-style-type: none"> Tinkering Collaboration Algorithms Logical reasoning Decomposition <ul style="list-style-type: none"> Select colours when painting on the computer Draw on a computer using a mouse. Use the erase button to clear unwanted drawings. Use the interactive whiteboard/touchscreen device purposefully Make a floor robot move by giving it instructions Control the forwards, backwards and rotation of a floor robot one step at a time. Plan and program a 3-step route for a floor robot. 	
	Key Vocabulary	Draw Erase Forwards Backwards Route	
Year 1			
	Topic	Maze Explorers (1.5)	Animated story books (1.6)
	Links to Prior Learning	Lego Builders (1.4) Beebots (EYFS)	Actual story books EYFS and Y1 Mechanisms D&T Year 1 – explore books with levers and sliders.
	Knowledge	<ul style="list-style-type: none"> Understand the functionality of the <u>direction</u> keys Understand what an <u>algorithm</u> is Understand what it means to <u>debug</u> a program and why it might need debugging 	<ul style="list-style-type: none"> Know that an eBook is a book that can be read on the computer or on a tablet. Know how to add animation and sound to create a story on 2Create.
	Skills	<ul style="list-style-type: none"> Create and debug a set of instructions (algorithm) Use the additional direction keys as part of an algorithm Know how to change and extend the algorithm list How to access peer challenges set by the teacher as 2Dos 	<ul style="list-style-type: none"> Use the 2Create a Story tool Add animation to a story Add sound to a story. Begin to work on a more complex story, including adding backgrounds and copying and pasting pages
	Key Vocabulary	Algorithm Debug Direction Challenge Instruction Undo	Animation eBook Sound Effect Text Font Background



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		Unit Command Left/Right Route	
Year 2	Topic	Effective searching (2.5)	Coding (2.1)
	Links to Prior Learning	Online safety (1.1 & 2.2)	Lego builders (1.4)
	Knowledge	<ul style="list-style-type: none"> Understand the terminology associated with searching Gain a better understanding of searching on the internet 	<ul style="list-style-type: none"> Understand what an algorithm is understand that algorithms follow a sequence. understand that different objects have different properties understand what different events do in code. To understand the function of buttons in a program. To understand and debug simple programs
	Skills	<ul style="list-style-type: none"> Use the internet for research Create a leaflet 	<ul style="list-style-type: none"> Design algorithms and then code them Use the repeat command Use the timer command Debug programs
	Key Vocabulary	Internet Search Search Engine	Action Algorithm Background Button Collision detection Debug Design Mode Event Key Pressed Nesting Object Predict Properties Run Scale Scene Sequence Sound Test Text Timer When clicked/swiped



Summer Term				
EYFS	Knowledge	<ul style="list-style-type: none"> Identify the technology used around me (computer, ipad, smartboard etc) Know who can help me when I am feeling worried about something on the computer Explain how my work on the computer belongs to me and other people's work belongs to them. use a mouse accurately to click and drag objects on the screen. use the mouse roller to scroll up and down a page. use a laptop touchpad Find all the letters of the alphabet on a keyboard 		
	Skills	Develop 'computational thinking' through: <ul style="list-style-type: none"> Creating Decomposition Persevering Abstraction <ul style="list-style-type: none"> Explain who can help you stay safe when using technology Know what to do when you see something you don't like Use the mouse accurately with purpose Use the keyboard to login to the computer 		
	Key Vocabulary	Technology Pop-ups Mouse Keyboard Touchpad		
Year 1	Topic	Coding (1.7)	Spreadsheets (1.8)	Technology outside school (1.9)
	Links to Prior Learning	Lego builders (1.4) Maze Explorers (1.5)	Grouping and Sorting (1.2) Pictograms (1.3)	Technology in the classroom (EYFS)
	Knowledge	<ul style="list-style-type: none"> To understand what coding means To use code to make a computer program. To understand what object and actions are. To understand what an event is. To use an event to control an object. 	<ul style="list-style-type: none"> To know what a spreadsheet program looks like. Know what rows and columns are. Know that spreadsheets represent information on a computer. 	Examples of technology outside school
	Skills	<ul style="list-style-type: none"> How to use design mode to set up a scene How to add characters How to use code blocks to make the character perform actions How to use collision detection From the properties menu, select right, left, up or down. 	<ul style="list-style-type: none"> To locate 2Calculate in Purple Mash. How to enter data into spreadsheet cells How to use 2Calculate image tools to add clipart to cells How to use 2Calculate control tools: lock, move cell, speak and count 	<ul style="list-style-type: none"> Find examples of where technology is used Record Examples of technology outside of school



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		<ul style="list-style-type: none"> •How to save and share work 		
	Key Vocabulary	Instruction Plan Object Programmer Run Output Properties	Clip-art Data Cell Column Delete Spreadsheet Image Row Value	Computer Technology
Year 2	Topic	Spreadsheets (2.3)	Making Music (2.7)	Presenting ideas (2.8)
	Links to Prior Learning	Spreadsheets (1.8)	Non-digital music (EYFS and KS1)	Animated Story books (1.6)
	Knowledge	<ul style="list-style-type: none"> • Know that a spreadsheet can help with calculations 	<ul style="list-style-type: none"> • Think about how music can be used to express feelings and create tunes which depict feelings • Know that music can be made digitally • Know that you can change how digital music sounds 	Know that a story can be presented in different ways
	Skills	<ul style="list-style-type: none"> • How to use 2Calculate image, lock, move cell, speak and count tools to make a counting machine • How to copy and paste in 2Calculate • How to use the totalling tools • How to use a spreadsheet for money calculations • How to use the 2Calculate equals tool to check calculations • How to use 2Calculate to collect data and produce a graph 	<ul style="list-style-type: none"> • How to make music digitally using 2Sequence • How to explore, edit and combine sounds using 2Sequence • How to edit and refine composed music • How to upload a sound from a bank of sounds into the sounds section • How to record and upload environmental sounds into Purple Mash • How to use these sounds to create tunes in 2Sequence 	<ul style="list-style-type: none"> • Make a quiz about a story or class topic • Make a fact file on a non-fiction topic <ul style="list-style-type: none"> • Make a presentation to the class
	Key Vocabulary	Spreadsheet Cells Columns Rows Copy and Paste Count Tool Delete Key Equals tool Image toolbox Lock tool Move cell tool Speak tool	BPM Composition Digitally Instrument Music Sounds effects (SFX) Soundtrack Tempo Volume	Concept map (Mind Map) Node Animated Quiz Non-fiction Presentation Narrative Audience