



## DARWEN ST JAMES' C OF E PRIMARY ACADEMY COMPUTING LONG TERM PLAN



	AUTUMN 1	AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
<b>NURSERY</b>	<ul style="list-style-type: none"> <li>- Use sound jigsaws, torches and role play kettles and toasters etc as part of their daily play.</li> <li>- Control action on an electronic device.</li> <li>- Beginning to show an interest in light boxes, placing items on top and looking at patterns.</li> </ul>		<ul style="list-style-type: none"> <li>- Shows an interest in toys with buttons, flaps and simple mechanisms and begins to learn how to operate them.</li> <li>- Anticipates repeated sounds, sights and actions.</li> </ul>		<ul style="list-style-type: none"> <li>- Operates mechanical toys (pulls back on a friction car etc)</li> <li>- Uses a toy telephone to communicate with their friends within play.</li> <li>- Uses devices to record their voices and play the recording to others.</li> </ul>	
<b>PRE-SCHOOL</b>	<ul style="list-style-type: none"> <li>- Complete simple games on an electronic device, controlling actions on the screen correctly.</li> <li>- Use the home button to find the menu and select a new game to play.</li> <li>- Begin to understand that we can learn new things through using the internet by an adult modelling how to search using the internet.</li> </ul>		<ul style="list-style-type: none"> <li>- Take photos using cameras and tablets.</li> <li>- Listen to stories about staying safe using technology such as mobile phones, tablets and the internet.</li> <li>- Know that technology can be used to communicate with others and talk about text messages, video calls and other ways of communicating which they may see friends and family using.</li> <li>- Investigate light and dark - using light boxes, investigate colour changes using paddles, cellophane and blocks.</li> </ul>		<ul style="list-style-type: none"> <li>- Know what to do if something upsets them or if they see something they don't like when using technology.</li> <li>- Program a small robot with adult support so that it moves in the direction they want it to.</li> <li>- Use devices to record their voices and play the recording to others.</li> <li>- With support begin to use technology to explore other areas of learning.</li> </ul>	
<b>RECEPTION</b>	<ul style="list-style-type: none"> <li>- Complete simple games on an electronic device, controlling actions on the screen correctly.</li> <li>- Think of things they can find out using internet search engines.</li> <li>- Use technology to show that learning has taken place.</li> <li>- Program a small robot or simple coding program independently so that it moves in the way they have planned.</li> </ul>		<ul style="list-style-type: none"> <li>- Learn to display on a screen/print photographs and photocopy examples of their work.</li> <li>- Use rules given by a trusted adult when using technology.</li> <li>- Only use safe parts of the internet to play and learn.</li> <li>- Find out about new ways to communicate online which may not be familiar to them.</li> </ul>		<ul style="list-style-type: none"> <li>- Carry out investigations using digital microscopes, cameras and magnifiers.</li> <li>- Use devices to record their voices and play the recordings to others.</li> <li>- Know that technology can be used to communicate with others and talk about text messages, video calls and other ways of communicating which they may see friends and family using.</li> <li>- Use technology to support other areas of learning.</li> </ul>	
	Children are continuously taught to identify and understand risks when learning about technology. As they advance through the EYFS we expect them to talk about these risks with others. Safer Internet Day is explored throughout the whole school including the children in EYFS.					
<b>YEAR 1</b>	<b>ONLINE SAFETY &amp; EXPLORING PURPLE MASH</b> Safe logins; My work area; Purple Mash topics; Purple Mash tools.	<b>GROUPING &amp; SORTING</b> Sorting away from the computer; Sorting on the computer. <b>PICTOGRAMS</b> Data in pictures; Class pictogram; Recording results.	<b>LEGO BUILDERS</b> Following instructions; Following & creating simple instructions on the computer; Considering how the order of instructions affects the result. <b>TECH OUTSIDE SCHOOL</b> What is technology? Technology outside school.	<b>MAZE EXPLORERS</b> Challenges 1 and 2; Challenges 3 and 4; Challenges 5 and 6; Setting more challenges.	<b>CODING</b> Instructions, Objects & actions; Events; When code executes; Setting the scene; Using a plan. .	<b>ANIMATED STORY BOOKS</b> Drawing & creating; Animation; Sounds & more; Making a story; Copy & paste
<b>YEAR 2</b>	<b>ONLINE SAFETY</b> Searching & sharing; Email using 2Respond; Digital footprint. <b>CREATING PICTURES</b> Introduction & impressionism; Pointillist art; Piet Mondrian; William Morris and pattern; Surrealism and eCollage.	<b>SPREADSHEETS</b> Reviewing the use of spreadsheets; Copying, cutting & pasting totals; Using a spreadsheet to add amounts; Creating a table & block graph.	<b>QUESTIONING</b> Using and creating pictograms; Asking yes/no questions; Binary trees; Using 2Question; Using 2Investigate: a non-binary database.	<b>CODING</b> Algorithms; Collision detection; Using a timer; Different object types; Buttons; 'Smelly Code' debugging.	<b>PRESENTING IDEAS</b> Presenting a story three ways; Presenting ideas as a quiz; Making a non-fiction fact file; Making a presentation.	<b>EFFECTIVE SEARCHING</b> Understanding the internet & searching; Searching the internet; Sharing knowledge of the internet & effective searching.

‘LET US NOT LOVE WITH WORDS OR SPEECH ALONE BUT WITH ACTIONS AND TRUTH’ JOHN 3:18  
NURTURING AMBITION THROUGH A LIVING FAITH



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Y E A R 3	<b>ONLINE SAFETY</b> Safety in numbers; Fact or fiction? Appropriate content & ratings	<b>CODING</b> Using flowcharts; Using timers; Using repeat; Code, test and debug; Design and make interactive scene (2)	<b>TOUCH TYPING</b> Home, top & bottom row keys; Home, top & bottom row keys consolidation; Left keys; Right keys	<b>GRAPHING</b> Introducing 2Graph; Using 2Graph in an investigation	<b>EMAIL</b> Communication; Composing emails; Using email Safely: Part 1 & 2; Attachments; Email simulations	<b>BRANCHING DATABASES</b> Introducing databases; Branching databases; Creating a branching database on the computer
	<b>SPREADSHEETS</b> Creating pie charts & bar graphs; Using more than & spin button tools; Advanced mode & cell addresses			<b>MICRO:BITS</b> Learning how to program a micro:bit device.		
	<b>ONLINE SAFETY</b> Going phishing; Beware malware; Plagiarism; Healthy screen-time	<b>LOGO</b> Introduction to 2Logo; Creating letters using logo; Using the 'repeat' command in 2Logo; Using procedures	<b>ARTIFICIAL INTELLIGENCE</b> Understand what is meant by artificial intelligence and consider ways it can help us in our lives. Through discussion they will consider the future of AI.	<b>CODING</b> Design, code, test and debug; IF statements; Co-ordinates; Using repeat, until and 'if/else' statements; Number variables; Making a playable game	<b>MICRO:BITS</b> Learning how to program a micro:bit device.	<b>EFFECTIVE SEARCHING</b> Using a search engine; Use search effectively to answer questions; Reliable information sources
	<b>ANIMATION</b> Animating an object; 2Animate tools; Stop motion animation	<b>HARDWARE INVESTIGATORS</b> Hardware; Parts of a computer				
Y E A R 5	<b>ONLINE SAFETY</b> Responsibilities online; Protecting privacy; Citing sources; Reliability	<b>GAME CREATOR</b> Children will plan out a 3D game and consider the features that will make it effective. After completing the game, they share it online and use this as an opportunity to make it better.	<b>ARTIFICIAL INTELLIGENCE</b> Understand what is meant by artificial intelligence and consider ways it can help us in our lives. Through discussion they will consider the future of AI.	<b>CODING</b> Coding efficiently; Simulating a physical system; Decomposition and abstraction; Friction and functions; Introducing strings; Text variable/concatenation	<b>DATABASES</b> Searching a database; Creating a class Database; Creating a topic database; Creating a topic database	<b>MICRO:BITS</b> Learning how to program a micro:bit device.
	<b>3D MODELLING</b> Introducing 2Design & make; Moving points; Designing for a purpose; Printing & making					
Y E A R 6	<b>ONLINE SAFETY</b> Message in a game; Online behaviour; Screen time	<b>CODING</b> Designing and making a more complex program (2); Using functions; Flowcharts & control simulations; User input; Using text-based adventures	<b>NETWORKS</b> The world wide web & the internet; Our school network & accessing the internet; Research	<b>QUIZZING</b> Introducing 2DIY; Using 2Quiz; Exploring grammar quizzes; Database quiz; Are you smarter than a 10 - (or 11) year-old?	<b>TEXT ADVENTURES</b> What is a text adventure? Planning a story adventure; Making a story-based adventure game; Coding comprehension of text adventure game; Debugging and improving a text adventure	<b>SPREADSHEETS</b> What is a spreadsheet?; Basic calculations; Modelling; Organising data; Advanced formulae and big data; Charts and graphics; Using a spreadsheet to plan a cake sale; Using a spreadsheet to solve problems
	<b>BLOGGING</b> What is a blog? Planning a blog; Writing a blog; Sharing posts & commenting					