

Date Palm Primary Computing Curriculum: Progression of Skills, Knowledge & Understanding

	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Online Communication	Phones - Explore how to use telephones and mobile phones - Walkie talkies	Phones - Explore how to use telephones and mobile phones. - Walkie talkies			Email - Discuss the benefits and disadvantages of email as a form of communication; - Identify an email that may be unsafe to open, explaining why; - Write a clear email, explaining why an address and subject is important; - Know how to safely send and receive emails;		- Identify spam emails and what to do with them. - Publish a webpage. - Understand how networks operate.	N/A
Computer Skills	Laptop - Use keyboard - Use trackpad	- Use basic computer skills using inputs and outputs.	Y1 computer skills - Use a computer mouse. - Switch on and shutdown a computer. - Launch an application and manipulate windows. - Save a file. - Drag objects.					
Office Applications	Word Processor	Word Processor	Word Processor - Type on a keyboard. - Type symbols and save files. - Edit text. - Use a keyboard. - Select and format text. - Format the font.	Presentation Skills - Use basic computer skills. - Organise ideas for a presentation. - Create a simple presentation with text. - Add and format an image. - Reorder slides and present a presentation. - Search for information.	Presentation Skills - Plan a branching story. - Create slide templates and organise slides with hyperlinks. - Add theme, transitions and animation to a presentation. - Use action settings. - Insert audio and video. - Evaluate slide layout and make improvements. Drawing & Desktop Publishing - Draw with different shapes and lines.	Word Processing - Format images for a purpose. - Use formatting tools to create an effective layout. - Use the spellcheck tool. - Insert and format a table in a word processing document. - Change a page layout for a purpose. - Create hyperlinks within a word document.	N/A	Spreadsheets - Enter data and formulae into a spreadsheet. - Order and present data based on calculations. - Add, edit and calculate data. - Use a spreadsheet to solve problems. - Plan and calculate a spending budget. - Design a spreadsheet for a specific purpose.

					<ul style="list-style-type: none"> - Order and group objects. - Manipulate shapes and lines. - Recognise effective layout. - Combine text and images. - Lay out objects effectively. 			
Drawing & Painting Skills	Paint - Explore paint	- Draw artwork on a computer.	<ul style="list-style-type: none"> - Paint with different colours. - Paint with different brushes. - Create shapes and fill areas. - Make changes to improve my work. - Add text to a painting. - Use a computer program to make a poster. 	<ul style="list-style-type: none"> - Create computer art. - Use a range of tools in a computer program to reproduce a style of art. - Make and edit shapes to create a piece of art. - Change the shade of a colour for effect. - Retrieve a file to edit in a computer program. - Use a range of skills to create a piece of art. 	Art curriculum – Pop Art - Create digital pop art		3D Modelling: SketchUp <ul style="list-style-type: none"> - Draw 3D shapes. - Add detail to 3D drawings. - Add and manipulate 3D models. - Create a complex 3D model using own design. Art curriculum – Patterns - Create digital Islamic geometric patterns	DT curriculum – Funky Furnishings - Create Islamic geometric patterns to print on cushion
Programming	Everyday technology <ul style="list-style-type: none"> - Automatic doors - ATM - Pelican crossing - Hand drier - Self checkout/ shopping tills (barcode, debit cards) - Library scanning - Torch - Calculator - Metal detector Programming - ‘programming’ friends by telling them how to move around like a robot.	Junior Explorers <ul style="list-style-type: none"> - Children to become familiar with directional language (the terms ‘forwards, backwards, left and right’). - Encourage children to recognise, use and understand directional language. - Ensure children can recognise and match the words with the symbol. - Introduce the concept of sequencing. - Program a floor robot. 	Programming Toys <ul style="list-style-type: none"> - Create instructions using pictures. - Understand why it is important to be precise when writing an algorithm. - Write instructions to program a person like a computer. - Program a Robot Mouse to move. - Debug a bot. - Program a sequence to make a bot move. ScratchJr	Scratch - Dialogue <ul style="list-style-type: none"> - Understand the concept of sequence through everyday examples. - Extend the concept of sequence through role play. - Understand the idea, algorithm and finished code. - Plan their own short dialogue around a theme using the say and wait commands. - Turn their algorithmic planning into their own programmed dialogue. 	Scratch – Shapes – Exploring Loops <ul style="list-style-type: none"> - Understand the concept of count-controlled loops through everyday examples. - Extend understanding of loops using role play. - Predict the code from a pre-created shapes program using input, count-controlled loops and the pen function - Run the code checking if predictions were accurate. 	Scratch - Shapes – Basic Procedures <ul style="list-style-type: none"> - Understand the concept of basic procedures through everyday examples. - Extend understanding of nested loops using role play. - Predict the code from a pre-created shapes program using input, count-controlled loops and basic procedures. - Run the code checking if predictions were accurate. 	Scratch - Shapes – Nested Loops with Procedures <ul style="list-style-type: none"> - Understand the concept of nested loops through everyday examples. - Predict the code from a pre-created shapes program using nested loops, count-controlled loops and basic procedures. - Run the code checking if predictions were accurate. - Investigate aspects of the code. 	Scratch – Crab Maze Game <ul style="list-style-type: none"> - Understand the concept of loops and basic procedures through everyday examples. - Predict the code from a pre-created game using the switch background command, count-controlled loops, variables and conditions that start actions - Run the game code checking if predictions were accurate.

	<ul style="list-style-type: none"> - Make a sandwich. - Control mouse bots: move bot around 	<ul style="list-style-type: none"> - Ensure that children recognise that a set of 'step by step' instructions creates a program. - Program a bot unaided and annotate a simple program using symbols. 	<ul style="list-style-type: none"> - Describe and use instructions to program a character. - Program a character to grow and shrink. - Use instructions to make characters move at different speeds and distance. - Use a repeat instruction to make a sequence of instructions run more than once. - Create programs that play a sound. - Create programs with a sequence of linked instructions. 	<p>Scratch - Animation</p> <p>Animation</p> <ul style="list-style-type: none"> - Understand the concept of repetition through everyday examples. - Extend the concept of repetition through role play. - Use an example idea, algorithm and code using loops and switching costumes. - Modify an example idea. - Learn about all the different animation techniques and how they were created. - Plan their own animations to go with a previously designed and created dialogue. - Code their stage directions, music & background changes. - Code animations. - Test and refine their creations. 	<ul style="list-style-type: none"> - Investigate aspects of the code. - Modify parts of the code. - Plan their own shapes program using count-controlled loops - Code their program. - Test and refine their creations. <p>Scratch - Ladybug Munch</p> <ul style="list-style-type: none"> - Understand the concept of sequence and input through everyday examples. - Extend the concept of input through role play. - Predict the code from a pre-created game using say command, changing of costumes and setting the size of costumes. - Run the game code checking if predictions were accurate. - Investigate aspects of the game code. - Modify parts of the code. - Plan their own game using sequence and input. - Code their game. - Test and refine their creations. 	<ul style="list-style-type: none"> - Investigate aspects of the code. - Modify parts of the code. - Plan their own shapes program using basic procedures. - Code their program. - Test and refine their creations. <p>Scratch – Diving Beetle Game</p> <ul style="list-style-type: none"> - Understand the concept of conditions that start actions through everyday examples. - Predict the code from a pre-created game using indefinite loops and conditions that start actions - Run the game code checking if predictions were accurate. - Investigate aspects of the game code. - Modify parts of the code. - Plan their own game using conditions that start actions. - Code their game. - Test and refine their creations. 	<ul style="list-style-type: none"> - Modify parts of the code. - Plan their own shapes program using nested loops - Code their program. - Test and refine their creations. <p>Scratch – Cheese Crush Game</p> <ul style="list-style-type: none"> - Understand the concept of conditions that switch between actions through everyday examples. - Predict the code from a pre-created game using the switch background command, indefinite loops, variables and conditions that switch between actions - Run the game code checking if predictions were accurate. - Investigate aspects of the game code. - Modify parts of the code. - Plan their own game using conditions that switch between actions. - Code their game. - Test and refine their creations. 	<ul style="list-style-type: none"> - Investigate aspects of the game code. - Modify parts of the code. - Plan their own game using basic procedures. - Code their game. - Test and refine their creations. <p>Crumble Traffic Lights</p> <ul style="list-style-type: none"> - Create a traffic lights algorithm. - Set up crumble and traffic light crumb correctly. - Program crumble to simulate traffic lights. <p>Crumble Buggy</p> <ul style="list-style-type: none"> - Create a manoeuvring algorithm. - Set up crumble and geared motors correctly. - Program a crumble to move and steer buggy. - Program a crumble to draw shapes.
<p>Animation</p>	<ul style="list-style-type: none"> - Capture still and moving images. - Record sounds. - Play back their captured recordings. - Use karaoke machines. 			<p>Scratch Animation</p> <ul style="list-style-type: none"> - Learn about all the different animation techniques and how they were created. - Plan their own animations to go with a previously designed and created dialogue. - Code animations. 		<p>Animation</p> <ul style="list-style-type: none"> - Describe early forms of animation before computers and how computers have made a difference. - Create a short computer animation using one or more moving stick figures. - Create a short computer animation involving a number of 		<p>Lego Stop Motion</p> <ul style="list-style-type: none"> - Plan action using a storyboard - Learn animation techniques - Create an animation film - Use a green screen to change the background - Add credits, title and sound effects.

						<p>moving characters on a background.</p> <ul style="list-style-type: none"> - Structure specific timing of animations. - Analyse and evaluate software. 		
E-Safety	<ul style="list-style-type: none"> - Talk about online world 	<ul style="list-style-type: none"> - Identify and name trusted adults they can approach. - Demonstrate an understanding of what personal information is and can explain why they should not share details. - Understand basic online safety rules. - Distinguish between safe and unsafe online content and know to seek help from a trusted adult if they encounter anything inappropriate. - Recognise the need for balanced screen time, showing an understanding of why it's important to take breaks from screens and engage in other activities 	<ul style="list-style-type: none"> - Create, name and date my digital creative work. - Understand how to communicate safely online. - Understand what personal information I need to keep safe. 	<ul style="list-style-type: none"> - Explain what 'digital footprint' means; - Know how people can use the information they put online; - Know that a digital footprint contains information about a person; - Identify unkind online behaviour; - Know the course of action to take if they think someone is being unkind to them online; <p>PSHCE curriculum - Safety First</p> <ul style="list-style-type: none"> - Explain what to do if they feel unsafe online; 	<ul style="list-style-type: none"> - Recognise and define cyberbullying; - Identify safe people to report cyberbullying to; - Know how cyberbullying can happen via a range of devices; 	<ul style="list-style-type: none"> - Identify how a message can hurt someone's feelings. - Say how I should respond to a hurtful message online. - Understand the term 'plagiarism' and how to avoid it. - Create a safe online profile. <p>PSHCE curriculum - Safety First</p> <ul style="list-style-type: none"> - Know how to use mobile devices and the Internet responsibly; - Understand why certain information should never be shared online; - Identify behaviour that constitutes cyberbullying. <p>PSHCE curriculum – It's My Body</p> <ul style="list-style-type: none"> - Understand that many images seen in the media are artificially enhanced; 	<ul style="list-style-type: none"> - Identify spam emails and what to do with them. - Create strong passwords. - Recognise when, why and how photographs we see online may have been edited. - Create a comic strip about the consequences of not following online safety rules 	<ul style="list-style-type: none"> - Find similarities and differences between in-person and cyberbullying; identify good strategies to deal with cyberbullying. - Identify secure websites by identifying privacy seals of approval. - Understand the benefits and pitfalls of online relationships; identify information that I should never share. - Understand how to send emails safely. <p>PSHCE curriculum - Safety First</p> <ul style="list-style-type: none"> - Know how to use mobile devices and the Internet responsibly; - Understand why certain information should never be shared online; - Explain what the right to privacy means; - Explain what CEOP is and how to use it to report online abuse or concerns about the way someone has communicated with them online; - Identify behaviour that constitutes cyberbullying.

Internet	<ul style="list-style-type: none"> - Use online books to retell stories - View videos - Use learning websites 	<ul style="list-style-type: none"> - Use online books to retell stories - View videos - Use learning websites 	<ul style="list-style-type: none"> - Safely search for images online. 	<ul style="list-style-type: none"> - Search the Internet using one word. - Search the Internet to find results suitable for children. - Search for information safely online. - Follow links to another web page. 	<ul style="list-style-type: none"> - Identify how word order affects search results. - Explain how searches return results. - Save and share webpages. - Identify a range of targeted online adverts; - Explain how companies use websites to promote products; 	<ul style="list-style-type: none"> - Use a search engine accurately. 	<ul style="list-style-type: none"> - Write citations for the websites used for research. - Evaluate webpages. - Create a webpage layout. - Add text to a webpage. - Add images to a webpage. - Add hyperlinks into a webpage - Publish webpage. - Know what computer networking is; understand the advantages and disadvantages of a computer network. - Understand what malware is and how this can affect a computer network; identify ways of minimising risks of cybersecurity threats. 	
Other	<p>Understanding technology (understanding technology encountered at home and school)</p> <ul style="list-style-type: none"> - Microwave - Photocopier - Lamps - Dismantling old phones and laptops <p>- Understanding how technology has changed over time</p>	<p>Understanding technology (understanding technology encountered at home and school)</p> <ul style="list-style-type: none"> - Microwave - Photocopier - Lamps - Dismantling old phones and laptops <p>- Understanding how technology has changed over time</p>						