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.

					- 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.	- 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.	- 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** - 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** - 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** - 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** - 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** - 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** - 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** - 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** - 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** - 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.

	- Make a sandwich. - Control mouse bots: move bot around	- 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**.	- 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.	**Scratch - Animation** Animation - 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.	- 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. **Scratch - Ladybug Munch** - 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.	- 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. **Scratch – Diving Beetle Game** - 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.	- Modify parts of the code. - Plan their own shapes program using **nested loops** - Code their program. - Test and refine their creations. **Scratch – Cheese Crush Game** - 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.	- 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. **Crumble Traffic Lights** - Create a traffic lights algorithm. - Set up crumble and traffic light crumb correctly. - Program crumble to simulate traffic lights. **Crumble Buggy** - 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.
Animation	- Capture still and moving images. - Record sounds. - Play back their captured recordings. - Use karaoke machines.			**Scratch Animation** - 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.		**Animation** - 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		**Lego Stop Motion** - 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.

						moving characters on a background. - Structure specific timing of animations. - Analyse and evaluate software.		
E-Safety	- Talk about online world	- 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	- Create, name and date my digital creative work. - Understand how to communicate safely online. - Understand what personal information I need to keep safe.	- 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; **PSHCE curriculum - Safety First** - Explain what to do if they feel unsafe online;	- Recognise and define cyberbullying; - Identify safe people to report cyberbullying to; - Know how cyberbullying can happen via a range of devices;	- 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. - Identify personal information that should be kept private. - Explain how privacy and location settings can help keep us safe online. **PSHCE curriculum - Safety First** - Know how to use mobile devices and the Internet responsibly; - Understand why certain information should never be shared online; - Identify behaviour that constitutes cyberbullying. **PSHCE curriculum – It's My Body** - Understand that many images seen in the media are artificially enhanced;	- Identify a dangerous spam email; - Create multiple strong passwords for use across different platforms; - Spot citations online; - Alter a photograph. - Apply online safety rules to real-life scenarios. - Recognise how games encourage players to spend money or keep playing. - Explain how to make safe choices when gaming online. - Explain what Artificial Intelligence (AI) is and describe how to use AI tools safely and responsibly in everyday life.	- 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. - Identify personal data that websites and apps may collect. - Explain how to make safe choices when sharing personal information online. **PSHCE curriculum - Safety First** - 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	- Use online books to retell stories - View videos - Use learning websites	- Use online books to retell stories - View videos - Use learning websites	- Safely search for images online.	- 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.	- 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;	- Use a search engine accurately.	- 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	**Understanding technology** (understanding technology encountered at home and school) - Microwave - Photocopier - Lamps - Dismantling old phones and laptops - Understanding how technology has changed over time	**Understanding technology** (understanding technology encountered at home and school) - Microwave - Photocopier - Lamps - Dismantling old phones and laptops - Understanding how technology has changed over time						