



Computing Long Term Plan – St Mary's CE Primary School

<u>Year Group</u>	<u>Autumn Term</u>		<u>Spring Term</u>		<u>Summer Term</u>
Reception	<p>E Safety Can they talk about what they are doing on a computer? Can they say if something they find on the internet makes them feel bad? Can they speak to an adult about what they have seen? Can I follow the school's safer internet rules?</p> <p>Algorithms and Programs Begin to explore Bee Bots and control a toy.</p>	<p>Communicating / Presentation. Can they use a digital device to take a photograph? Can they understand the purpose of and experiment with hardware such as cameras, computers, iPads.</p>	<p>Communicating / Presentation Can they write their name using a keyboard on different devices? Can they use the caps lock for the initial sound in their name? Can they use the space bar, backspace and return key?</p>	<p>Communicating / Presentation. Can they use a simple paint programme with increasing mouse control? Can they create an image relating to a topic covered in class and add a title? Draw a self-portrait or character. Use the fill tool to fill a picture. Draw a symmetrical picture using 2simple. Write a simple sentence</p>	<p>Communicating / Presentation. Draw a symmetrical picture using 2simple.</p> <p>Algorithms and Programs Can they use a range of control toys and devices? Look at controlling a car around a track, cause and effect of pressing buttons. Use the buttons to make the bee bots move across a map or course.</p>
	E Safety – revisit and reinforce at the start of each term.				
	<p>Using technology – reinforce across the curriculum. Can I recognise a range of technology that is used in places such as homes and schools? Can I select and use technology for a particular purpose? Can I access and use simple activities using touch technology with increasing control? Can I begin to logon/unlock a digital device? (e.g. digital camera, iPads etc)</p>				
Year 1	E Safety	Using technology	Algorithms and programs	Communicating and presentation	



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	<p>Check it's for real and protect yourself</p> <p>Think before you share and respect each other</p> <p>How to act if find inappropriate content</p>	<p>Use keyboard skills to type in simple usernames and passwords.</p> <p>Launch appropriate programme to task.</p> <p>Open and close a piece of equipment safely.</p>	<p>Plan a journey for a programmable toy</p> <p>Create a series of instructions to move around a course</p> <p>Know that commands affect algorithms.</p> <p>Create and debug a simple program.</p>	<p>The difference between e-books and story books.</p> <p>Add animation.</p> <p>Add sound.</p> <p>Background through copying and pasting and share ebooks with class.</p>	
	E Safety – revisit and reinforce at the start of each term.				
	<p>Using technology – reinforce across the curriculum.</p> <p>Explore technology in a range of jobs and look at the purposes of their uses and why they are needed for a variety of roles.</p>				
Year 2	<p>E Safety to include emails</p> <p>Check it's for real</p> <p>Send and receive class emails and understand email conduct</p> <p>Think before you share, protect yourself and be brave</p> <p>Can I identify kind and unkind behaviour online?</p>	<p>Data retrieving and organising</p> <p>Create graphs from data collected</p>	<p>Algorithms and programs</p> <p>Use floor turtles to explore $\frac{1}{4}$, $\frac{1}{2}$ and full turn and sequencing of instructions</p> <p>Explore screen turtle to input sequences and draw shapes</p> <p>Understand the screen turtle can be directed through the use of text.</p> <p>Use repeat and timer commands.</p> <p>Debug a program.</p>	<p>Data retrieving and organising</p> <p>Use a branching database and use search tools</p>	<p>Communicating and presentation</p> <p>Know digital content can be represented in many forms.</p> <p>Add clip art.</p> <p>Add photos.</p> <p>Structure information in a table.</p> <p>Manipulate and present digital content and information.</p>



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	E Safety – revisit and reinforce at the start of each term.					
	Using technology – reinforce across the curriculum. Save work to a folder and retrieve it when needed. Understand how to edit and copy information. Capture a digital image, retrieve and manipulate.					
	Explore technology in a range of jobs and look at the purposes of their uses and why they are needed for a variety of roles.					
Year 3	E Safety to include emails Think before you share and Respect Understand once an online message has been sent it can't be taken back How to respond if being asked for personal information Use email address book Open and send an attachment Can I create strong passwords and understand privacy settings?	Data retrieving and organising Create a graph from a database Create simple branching database, identify objects, question to classify data	Algorithms and Programs Plan complex series of instructions for screen and floor turtles and test and amend instructions for purpose	Algorithms and Programs Create basic applications, investigating how different variables can be changed Explore simulations and discuss benefits Use simulations to make and test predictions	Communicating and Presentation Create a publishing tool to create a poster or a leaflet Create presentation using powerpoint Changes layout of slides and adding images and sounds	Communicating and Presentation Sequence short pieces of music using pre-recorded sounds
E Safety – revisit and reinforce at the start of each term.						
Using technology – reinforce across the curriculum.						



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	<p>Use technology to suit a particular purpose. Navigate the internet. Find relevant information by browsing a menu. Search by keyword, using a child friendly search engine. Bookmark a page into favourites</p>				
<p>Year 4</p>	<p>E Safety to include emails Social networking sites and gaming sites carry risks. Benefits of a nickname for online use. Behave appropriately online. Cyber bullying and reporting.</p> <p>Identify when attachments may not be safe. Use cc and bcc. Send work to the class teacher.</p>	<p>Data retrieving and organising Explain what a spreadsheet is. Use terms colon, cells, rows and columns. Enter data to create a graph.</p>	<p>Algorithms and Programs Design/write a program to achieve a specific goal. Create variables and If/Else statements. Debug a program. Make a control simulation. To understand decomposition and abstraction.</p> <p>Explore some simulations and evaluate them.</p>	<p>Communicating and Presentation Create a presentation using powerpoint. Adding transitions. Insert sound recordings. Choose and insert images.</p>	<p>Communicating and Presentation Animation frames. Onion skin tool. Add backgrounds and sounds. Stop Motion animation.</p> <p>Create an extended piece of music using a pre-recorded sample for a specific audience and evaluate.</p>
	<p>E Safety – revisit and reinforce at the start of each term.</p>				
	<p>Using technology – reinforce across the curriculum. Do they know what a browser is and use it to navigate a variety of programs? Use tabbed browsing to open 2 or more web pages at the same time. Can they open a variety of links and use them? Can they use a range of digital devices and combine a variety of software? Can they use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content?</p>				



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Year 5	E Safety	Spreadsheets	Algorithms and Programs	3d Modelling	Algorithms and Programs	Communicating and Presentation
	<p>Understand privacy settings on social media sites.</p> <p>Dangers of communicating on devices such as x-box, PSP, phones.</p> <p>Can they verify information they have researched using more than one site.</p> <p>Discuss positive and negative impacts of using IT.</p> <p>Understand they should not publish other people’s pictures or tag them on the internet.</p> <p>Do they know content put online is extremely difficult to remove?</p> <p>Create a strong password and realise they need to be regularly updated.</p> <p>Know where they can access support regarding online incidents.</p>	<p>Use a spreadsheet to:</p> <p>Convert unit of measurements; model a real life problem; plan a cake sale; use the count tool to answer hypotheses; create simple formulae.</p>	<p>Design/write a program to achieve a specific goal.</p> <p>Simulate a physical system.</p> <p>Introduce variables.</p> <p>Create and improve a game.</p>	<p>Design a building for a purpose.</p> <p>Print a design as a 2D net.</p> <p>Explore possibilities of 3D printing.</p>	<p>Plan a game.</p> <p>Create a game environment and quest.</p> <p>Evaluate own and others' games.</p> <p>Design a program which interacts with external controllers.</p>	<p>Plan a storyboard for a video or animation.</p> <p>Create, edit and refine.</p> <p>Incorporate filming techniques, sound effects, music.</p> <p><i>Create a film for school website on a topical subject.</i></p>
	E Safety – revisit and reinforce at the start of each term.					
<p>Using technology – reinforce across the curriculum.</p> <p>Download a document and save it to a computer or given device.</p> <p>Decide which sections are appropriate to copy and paste from a variety of web pages.</p>						



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<p>Year 6</p>	<p>E-Safety Use and amend own privacy settings to keep themselves safe.</p> <p>Can they understand that some malicious adults may use various techniques to make contact and elicit personal information? Understand dangers of chatting/meeting up with online 'friend'. Can they understand the term peer pressure and how powerful the emotion of 'feeling left out' can be? Can they explain why people may publish content on the internet that is not accurate? Can they identify and recognise the potential risks of scamming and phishing?</p> <p>Do they understand the concept of being a good digital citizen?</p>	<p>Data retrieving and organising Use spreadsheets in a real life situation to investigate probability, calculate discounts/final e.g. prices in a sale, plan how to spend pocket money, plan a school charity day.</p>	<p>Algorithms and Programs Understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration Design and write a more complex program. Introduce functions. Introduce variables. Use flow charts to test and debug a program. Create and improve a game.</p>	<p>Communicating / Presentation Create a non-linear presentation. Make quizzes with different question types. Make a quiz that requires a player to search a database.</p>	<p>Communicating / Presentation Create a multimedia presentation. Confidently use text formatting tools. Explore menu bar and experiment with images. Presentation to include: Sound, animation, video, buttons to navigate. Consider design principles, make independent choices about the best media to use considering needs of the audience and the impact the presentation will have.</p>
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	Can they access support surrounding incidents online?				
	E Safety – revisit and reinforce at the start of each term.				
	Using technology – reinforce across the curriculum. Use tabs to make a comparison of a website.				