



St Monica's RC Primary School: Computing Curriculum Progression and End Points

Domains/ Themes/ Areas	End of EYFS	End of KS1	End of LKS2	End of UKS2
<p>Online Safety</p>	<p>To know that personal information can be shared online and that it is important to talk to an adult if you are unhappy with something that you experience online.</p> <p>To know that you can make good and bad choices in your online behaviour.</p>	<p>Children know the implications of inappropriate online searches.</p> <p>Children begin to understand how things are shared electronically such as posting work to the Purple Mash display board.</p> <p>They develop an understanding of using email safely by using 2Respond activities on Purple Mash and know ways of reporting inappropriate behaviours and content.</p>	<p>Pupils know that security symbols such as a padlock protect their identity online.</p> <p>Pupils understand what makes a good password for use on the Internet.</p> <p>Pupils are beginning to realise the outcomes of not keeping passwords safe.</p> <p>Pupils know the meaning of the term 'phishing' and are aware of the existence of scam websites.</p> <p>Pupils can explain what a digital footprint is and how it relates to identity theft.</p> <p>Pupils can give examples of things that they would not want to be in their digital footprint.</p> <p>Pupils relate cyberbullying to bullying in the real world and have strategies for dealing with online bullying including screenshot and reporting.</p> <p>Pupils understand that some information held on websites may not be accurate or true.</p> <p>Pupils are beginning to understand how to search the Internet and how to think critically about the results that are returned.</p> <p>Pupils know that malware is software that is specifically designed to disrupt, damage, or gain access to a computer.</p> <p>Pupils know what a computer virus is.</p> <p>Pupils can determine whether activities that they undertake online, infringe another's' copyright. They know the difference between researching and using information and copying it.</p>	<p>Pupils think critically about what they share online, even when asked by a usually reliable person to share something.</p> <p>Pupils have clear ideas about good passwords.</p> <p>Pupils can see how they can use images and digital technology to create effects not possible without technology.</p> <p>Pupils have experienced how image manipulation could be used to upset them or others even using simple, freely available tools and little specialist knowledge.</p> <p>Pupils can cite all sources when researching and explain the importance of this.</p> <p>Pupils select keywords and search techniques to find relevant information and increase reliability.</p> <p>Pupils show an understanding of the advantages and disadvantages of different forms of communication and when it is appropriate to use each.</p> <p>Identify benefits and risks of mobile devices broadcasting the location of the user/device, e.g. apps accessing location.</p> <p>Identify secure sites by looking for privacy seals of approval, e.g. https, padlock icon.</p> <p>Pupils understand how what they share impacts upon themselves and upon others in the long term.</p> <p>Pupils know about the consequences of promoting inappropriate content online and how to put a stop to such behaviour when they experience it or witness it as a bystander</p>

			<p>Pupils know about citing sources that they have used.</p>	<p>To understand the importance of balancing game and screen time with other parts of their lives, e.g. explore the reasons why they may be tempted to spend more time playing games or find it difficult to stop playing and the effect this has on their health.</p>
<p>Computer Science</p>	<p>To know that a computer will respond to a user's input.</p>	<p>Children can explain that an algorithm is a set of instructions to complete a task. When designing simple programs, children show an awareness of the need to be precise with their algorithms so that they can be successfully converted into code.</p> <p>Children can create a simple program that achieves a specific purpose. They can also identify and correct some errors, e.g. Debug Challenges: Chimp. Children's program designs display a growing awareness of the need for logical, programmable steps.</p> <p>Children can identify the parts of a program that respond to specific events and initiate specific actions. For example, they can write a cause and effect sentence of what will happen in a program.</p>	<p>When turning a real-life situation into an algorithm, the children's design shows that they are thinking of the required task and how to accomplish this in code using coding structures for selection and repetition. Children make more intuitive attempts to debug their own programs</p> <p>Children's use of timers to achieve repetition effects are becoming more logical and are integrated into their program designs. They understand 'if statements' for selection and attempt to combine these with other coding structures including variables to achieve the effects that they design in their programs. As well as understanding how variables can be used to store information while a program is executing, they are able to use and manipulate the value of variables. Children can make use of user inputs and outputs such as 'print to screen'. e.g. 2Code.</p> <p>Children's designs for their programs show that they are thinking of the structure of a program in logical, achievable steps and absorbing some new knowledge of coding structures. For example, 'if' statements, repetition and variables. They can trace code and use step through methods to identify errors in code and make logical attempts to correct this. e.g. traffic light algorithm in 2Code. In programs such as Logo, they can 'read' programs with several steps and predict the outcome accurately.</p> <p>Children recognise the main component parts of hardware which allow computers to join and form a network. Their ability to understand the online safety implications associated with the ways the internet can be used to provide different methods of communication is improving.</p>	<p>Children are able to turn a more complex programming task into an algorithm by identifying the important aspects of the task (abstraction) and then decomposing them in a logical way using their knowledge of possible coding structures and applying skills from previous programs. Children test and debug their program as they go and use logical methods to identify the cause of bugs, demonstrating a systematic approach to try to identify a particular line of code causing a problem.</p> <p>Children translate algorithms that include sequence, selection and repetition into code and their own designs show that they are thinking of how to accomplish the set task in code utilising such structures, including nesting structures within each other. Coding displays an improving understanding of variables in coding, outputs such as sound and movement, inputs from the user of the program such as button clicks and the value of functions.</p> <p>Children are able to interpret a program in parts and can make logical attempts to put the separate parts of a complex algorithm together to explain the program as a whole.</p> <p>Children understand and can explain in some depth the difference between the internet and the World Wide Web. Children know what a WAN and LAN are and can describe how they access the internet in school.</p>

Information Technology	<p>To know that we can use technology/computers to communicate with others, to present information and that different programmes link to different tasks.</p>	<p>Children demonstrate an ability to organise data using, for example, a database such as 2Investigate and can retrieve specific data for conducting simple searches. Children are able to edit more complex digital data such as music compositions within 2Sequence. Children are confident when creating, naming, saving and retrieving content. Children use a range of media in their digital content including photos, text and sound.</p>	<p>Children understand the function, features and layout of a search engine. They can appraise selected webpages for credibility and information at a basic level.</p> <p>Children are able to make improvements to digital solutions based on feedback. Children make informed software choices when presenting information and data. They create linked content using a range of software such as 2Connect and 2Publish+. Children share digital content within their community, i.e. using Virtual Display Boards.</p>	<p>Children readily apply filters when searching for digital content. They are able to explain in detail how credible a webpage is and the information it contains. They compare a range of digital content sources and are able to rate them in terms of content quality and accuracy. Children use critical thinking skills in everyday use of online communication</p> <p>Children make clear connections to the audience when designing and creating digital content. The children design and create their own blogs to become a content creator on the internet, e.g. 2Blog. They are able to use criteria to evaluate the quality of digital solutions and are able to identify improvements, making some refinements.</p>
Digital Literacy	<p>To know that we can use search technologies to find information. To be able to use a mouse and a keyboard to select different programmes and options. To know how to use an ipad to capture learning for Tapestry.</p>	<p>Children can effectively retrieve relevant, purposeful digital content using a search engine. They can apply their learning of effective searching beyond the classroom. They can share this knowledge, e.g. 2Publish example template. Children make links between technology they see around them, coding and multimedia work they do in school e.g. animations, interactive code and programs.</p>	<p>Children can explore key concepts relating to online safety using concept mapping such as 2Connect. They can help others to understand the importance of online safety. Children know a range of ways of reporting inappropriate content and contact.</p>	<p>Children demonstrate the safe and respectful use of a range of different technologies and online services. They identify more discreet inappropriate behaviours through developing critical thinking, e.g. 2Respond activities. They recognise the value in preserving their privacy when online for their own and other people's safety.</p>