



Overarching skill	Year 1	Year 2	Year 3/4	Year 4/5	Year 5/6
<b>Text and multi media</b>	<ul style="list-style-type: none"> <li>• Work with others and with support to contribute to a digital class resource which includes text, graphic and sound.</li> </ul>	<ul style="list-style-type: none"> <li>• Generate their own work, (with help where appropriate with multimedia) combining text, graphics and sound.</li> <li>• Save and retrieve and edit their work.</li> </ul>	<ul style="list-style-type: none"> <li>• Record and present information integrating a range of appropriate media combining text and graphics in printable form and sound and video for on-screen presentations which include hyperlinks.</li> <li>• Begin to show an awareness of the intended audience and seek feedback.</li> </ul>	<ul style="list-style-type: none"> <li>• Use advanced tools in word processing/ DTP software such as tabs, appropriate text formatting, line spacing etc. appropriately to create quality presentations appropriate for a known audience.</li> </ul>	<ul style="list-style-type: none"> <li>• Multimedia work shows restrained use of effects that help to convey meaning rather than impress.</li> </ul>
<b>Digital Images (photos, paint, animation)</b>	<ul style="list-style-type: none"> <li>• Use a range of simple tools in a paint package / image manipulation software to create / modify a picture.</li> </ul>	<ul style="list-style-type: none"> <li>• Use a range of tools in a paint package/ image manipulation software to create / modify a picture to communicate an idea.</li> <li>• Create a simple animation to tell a story</li> </ul>	<ul style="list-style-type: none"> <li>• Manipulate digital images using a range of tools in appropriate software to convey a specific mood or idea.</li> </ul>	<ul style="list-style-type: none"> <li>• Make a short film / animation from images (still and / or moving) that they have sourced, captured or created.</li> </ul>	<ul style="list-style-type: none"> <li>• Use images that they have sourced / captured / manipulated as part of a bigger project (e.g. presentation or document).</li> </ul>
<b>Sound and music (including sound recorders)</b>	<ul style="list-style-type: none"> <li>• Chose suitable sounds from a bank to express their ideas.</li> <li>• Record short speech.</li> </ul>	<ul style="list-style-type: none"> <li>• Compose music from icons.</li> <li>• Produce a simple presentation incorporating sounds the children have captured, or created.</li> </ul>	<ul style="list-style-type: none"> <li>• Create a simple podcast, selecting and importing already existing music and sound effects as well as recording their own.</li> </ul>	<ul style="list-style-type: none"> <li>• Create multiple track compositions that contain a variety of sounds.</li> </ul>	<ul style="list-style-type: none"> <li>• Create and share more sophisticated podcasts and consider the effect that their podcasts will have on the audience.</li> </ul>



<p><b>Electronic Communication</b></p>	<ul style="list-style-type: none"> <li>• Contribute ideas to a class email to another class / school etc.</li> </ul>	<ul style="list-style-type: none"> <li>• Work collaboratively by email to share and request information of another class or story character.</li> </ul>	<ul style="list-style-type: none"> <li>• Begin to understand the need to abide by school e-safety rules.</li> </ul>	<ul style="list-style-type: none"> <li>• Share ICT work they have done electronically by email, VLE, or uploading to authorised sites.</li> <li>• Where possible seek and respond to feedback.</li> </ul>	<ul style="list-style-type: none"> <li>• Abide by school rules for e-safety</li> </ul>
<p><b>Research and e-safety</b></p>	<ul style="list-style-type: none"> <li>• As a class exercise children explore information from a variety of sources (electronic, paper based, observations of the world around them, etc.).</li> <li>• They show an awareness of different forms of information</li> </ul>	<ul style="list-style-type: none"> <li>• Children use a search engine to find specific relevant information to use in a presentation for a topic.</li> <li>• They save and retrieve their work</li> </ul>	<ul style="list-style-type: none"> <li>• Using another curriculum area as a starting point, children ask their own questions then use ICT sources to find answers, making use of search engines, an index, menu, hyperlinks as appropriate.</li> <li>• Children use the information or resources they have found.</li> <li>• Children talk about using ICT to find information / resources noting any frustrations and showing an emerging understanding of internet safety.</li> </ul>	<ul style="list-style-type: none"> <li>• Make use of copy and paste, beginning to understand the purpose of copyright regulations and the need to repurpose information for a particular audience.</li> <li>• They show an understanding that not all information on the internet is accurate.</li> <li>• Develop a growing awareness of how to stay safe when using the internet (in school and at home) and that they abide by the school's internet safety policy.</li> </ul>	<ul style="list-style-type: none"> <li>• Independently and with due regard for safety, search the internet using a variety of techniques to find a range of information and resources on a specific topic.</li> <li>• Use appropriate methods to validate information and check for bias and accuracy.</li> <li>• Repurpose and make appropriate use of selected resources for given audiences, acknowledging material used where appropriate.</li> </ul>



St. Michael's Catholic Primary School Learning Challenge Curriculum  
 Progression in Skills: Computing

<p><b>Control (algorithms)</b></p>	<ul style="list-style-type: none"> <li>Control simple everyday devices to make them produce different outcomes.</li> </ul>	<ul style="list-style-type: none"> <li>Control a device, on and off screen, making predictions about the effect their programming will have.</li> <li>Children can plan ahead.</li> </ul>	<ul style="list-style-type: none"> <li>Children are able to type a short sequence of instructions and to plan ahead when programming devices on and off screen.</li> </ul>	<ul style="list-style-type: none"> <li>Engage in Logo based problem solving activities that require children to write procedures etc. and to predict, test and modify.</li> <li>Use control software to control devices (using output commands) or to simulate this on screen.</li> <li>Predict, test and refine their programming.</li> </ul>	<ul style="list-style-type: none"> <li>Independently create sequences of commands to control devices in response to sensing (i.e. use inputs as well as outputs).</li> <li>Design, build, test, evaluate and modify the system; ensuring that it is fit for purpose</li> </ul>
<p><b>Handling information (databases and graphs)</b></p>	<ul style="list-style-type: none"> <li>As a class or individually with support, children use a simple pictogram or painting program to develop simple graphical awareness / one to one correspondence</li> </ul>	<ul style="list-style-type: none"> <li>Use a graphing package to collect, organise and classify data, selecting appropriate tools to create a graph and answer questions.</li> <li>Enter information into a simple branching database, database or word processor and use it to answer questions.</li> <li>They save, retrieve and edit their work.</li> </ul>	<ul style="list-style-type: none"> <li>Children use a simple database (the structure of which has been set up for them) to enter and save and save information on a given subject.</li> <li>They follow straight forward lines of enquiry to search their data for their own purposes.</li> <li>They talk about their experiences of using ICT to process data compared with other methods</li> </ul>	<ul style="list-style-type: none"> <li>Children work as a class or group to create a data collection sheet and use it to setup a straight forward database to answer questions.</li> <li>Enter information and interrogate it (by searching, sorting, graphing etc).</li> <li>Begin to reflect on how useful the collected data and their interrogation was and whether or not their questions were answered.</li> </ul>	<ul style="list-style-type: none"> <li>Independently solve a problem by planning and carrying out data collection, by organising and analysing data involving complex searches using a database, and by drawing conclusions and presenting findings.</li> <li>The need for accuracy is demonstrated and strategies for spotting implausible data are evident.</li> <li>Children should be able to talk about issues relating to data protection and the need</li> </ul>



					for data security in the world at large (e.g. health, police databases)
<b>Modelling and simulations (spreadsheets, adventure games and simulations)</b>	<ul style="list-style-type: none"> <li>• Make simple choices to control a simple simulation program.</li> </ul>	<ul style="list-style-type: none"> <li>• Children are able to play an adventure game and use a simple simulation, making choices and observing the results.</li> <li>• Their conversation shows they understand that computers are good at replicating real life events and allowing them to explore contexts that are otherwise not possible</li> </ul>	<ul style="list-style-type: none"> <li>• Use models and simulations to find things out and solve problems. Recognise that simulations are useful in widening experience beyond the classroom.</li> <li>• Make simple use of a spreadsheet to store data and produce graphs.</li> </ul>	<ul style="list-style-type: none"> <li>• Set up and use a spreadsheet model to explore patterns and relationships. Make predictions.</li> <li>• Know how to enter simple formulae to assist this process.</li> </ul>	<ul style="list-style-type: none"> <li>• Set up and use their own spreadsheet, which contains formulae to investigate mathematical models.</li> <li>• Ask "what if ..." questions and change variable in their model.</li> <li>• Understand the need for accuracy when creating formulae and check regularly for mistakes, by questioning results.</li> <li>• Relate their use of spreadsheets to model situations to the wider world</li> </ul>
<b>Data logging (science and maths)</b>	-	-	<ul style="list-style-type: none"> <li>• Begin to use data logger to sense physical data (sound, light, temperature).</li> </ul>	<ul style="list-style-type: none"> <li>• Use a data logger confidently, connected to the computer or remotely, to capture continuous or intermittent data readings.</li> </ul>	<ul style="list-style-type: none"> <li>• Children are able to identify their own opportunities for data logging and carry out their own experiments.</li> <li>• They check and question results and are able to spot trends in</li> </ul>



				<ul style="list-style-type: none"> <li>• Interpret the results and use these in their investigations.</li> <li>• Realise the advantages of using ICT to collect data that might otherwise be problematic.</li> </ul>	data and identify when problems may have occurred
<b>Understanding technologies (individual technologies)</b>	<ul style="list-style-type: none"> <li>• Show an awareness of the range of devices and tools they encounter in everyday life</li> </ul>	<ul style="list-style-type: none"> <li>• Show an awareness of a range of inputs to a computer (IWB, mouse touch screen, microphone, keyboard, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>• Begin to show discernment in their use of computing devices and tools for a particular purpose and explain why their choice was made.</li> </ul>	<ul style="list-style-type: none"> <li>• Make choices about the devices and tools they use for specific purposes and explain them in relation to the context.</li> <li>• Begin to show an awareness of specific tools used in working life</li> </ul>	<ul style="list-style-type: none"> <li>• Evaluate the tools available to them including any that are unfamiliar or new and use them to solve problems.</li> <li>• Demonstrate an awareness of the appropriateness of outcomes depending on choices regarding tools and devices</li> </ul>
<b>Understanding technologies (networks)</b>	<ul style="list-style-type: none"> <li>• Show an awareness that what they create on a computer or tablet device can be shown to others via another device (e.g. printer, projector, Apple TV)</li> </ul>	<ul style="list-style-type: none"> <li>• Begin to show an awareness that computers can be linked to share resources</li> </ul>	<ul style="list-style-type: none"> <li>• Show an understanding that their password is the key to accessing a personalised set of resources and files (e.g. My Documents).</li> <li>• Show an awareness of where passwords are critical in everyday use (e.g. parents accessing bank details)</li> </ul>	<ul style="list-style-type: none"> <li>• Show an understanding of the school network and how it links computers to resources in school and beyond.</li> <li>• Compare this with other networks they may encounter at home or in the wider world (e.g. banks)</li> </ul>	<ul style="list-style-type: none"> <li>• Show an understanding of how filtering and monitoring tools affect their use of the school network and Internet and compare this with their experience of access outside school.</li> </ul>



<p><b>Understanding technologies (the internet)</b></p>	<p>-</p>	<ul style="list-style-type: none"> <li>• Use websites and demonstrate an awareness of how to manage their journey around them (e.g. using the back/forward button, hyperlinks)</li> </ul>	<ul style="list-style-type: none"> <li>• Show an awareness that not all the resources/tools they use are resident on the device they are using.</li> <li>• Begin to show an understanding of URLs.</li> </ul>	<ul style="list-style-type: none"> <li>• Perform a search using different search engines and check the results against each other, explaining why they might be different.</li> <li>• Show an awareness of the need for accuracy in spelling and syntax to search effectively.</li> </ul>	<ul style="list-style-type: none"> <li>• Use collaborative tools and e-mail showing a sensitivity for this type of remote collaboration and communication</li> </ul>
<p><b>Vocabulary</b></p>	<p>Digital, text, graphic, sound, email, save, document, information, presentation, communicate, record, hyperlink, website, tablet, device, printer, projector, database, word process,</p>		<p>E-safety, social media, podcast, import, download, upload, source, capture, manipulate, code, sequence, instructions, programme, network, device, filtering, debug, command, response, data protection</p>		