

Subject	Skills and Objectives	
<b>Computing</b>		
<b>Year 5</b>	<b>Using a computer</b>  Working above:  Working below:	<p><b>To continue to develop typing speed and accuracy to develop competency in typing</b></p> <p><b>To understand the purpose of and use independently a range of different technology.</b></p> <p><b>To make choices about when to use technology, which piece(s) of technology to use, which software/tools they are going to use on the technology and be able to explain their choices to others.</b></p> <ul style="list-style-type: none"> <li>• Throughout KS2 children should:-</li> <li>• Continue to become familiar with a range of devices, for example tablets, desktop computers, laptops, microphones, cameras etc and increasingly develop their independence and confidence in using these devices.</li> <li>• Continue to increase their typing speed, and be encouraged to play games at home and school which help with this.</li> <li>• Aim to reach the accepted competency rate for children of 20WPM by the end of Year 4.</li> <li>• Be encouraged to increasingly make sensible choices about the technology they use to help them work, and to justify their choices- for example, why they have chosen to use a tablet rather than a laptop, or why they have chosen to use an easi-speak microphone rather than the computer to record sound.</li> </ul>
	<b>Using the Internet</b>  Working above:  Working below:	<p><b>To use a range of sources to check validity and recognise different viewpoints and the impact of incorrect data</b></p> <p><b>To save and use pictures, text and sound and be able to import into a document for presentation (ref. multimedia presentation)</b></p> <p><b>To recognise that the Internet may contain material that is irrelevant, bias, implausible and inappropriate</b></p> <p><b>To understand the issues of copyright and how they apply to their own work.</b></p> <ul style="list-style-type: none"> <li>• Discuss different strategies for finding relevant information e.g. using different keywords to find information on a given enquiry</li> <li>• Use a range of keywords to find different sources of information and enter them into a chosen search engine</li> <li>• Modify searches further to find relevant information for a report</li> <li>• Select and combine information from a range of different sources and present their findings using a word processing or multimedia/publishing package for a specific audience</li> <li>• Be aware that web sites are not always accurate and that information should be checked before it is used.</li> <li>• Discuss issues of copyright and downloading material e.g. mp3s, images, videos etc. Find images which are creative common licenced and understand the importance of stating their sources.</li> </ul>
	<b>Communicating and collaborating online</b>  Working above:  Working below:	<p><b>To share and exchange their ideas using e-mail and electronic communication- inside the school environment.</b></p> <p><b>To use collaboration tools to work together to produce a joint piece of work</b></p> <ul style="list-style-type: none"> <li>• Discuss different strategies for finding relevant information e.g. using different keywords to find information on a given enquiry</li> <li>• Use a range of keywords to find different sources of information and enter them into a chosen search engine</li> </ul>

		<ul style="list-style-type: none"> <li>• Modify searches further to find relevant information for a report</li> <li>• Select and combine information from a range of different sources and present their findings using a word processing or multimedia/publishing package for a specific audience</li> <li>• Be aware that web sites are not always accurate and that information should be checked before it is used.</li> <li>• Discuss issues of copyright and downloading material e.g. mp3s, images, videos etc. Find images which are creative common licenced and understand the importance of stating their sources.</li> </ul>
	<p><b>Creating and Publishing</b></p> <p>Working above:</p> <p>Working below:</p>	<p><b>To create non-traditional presentations using a range of tools, for a specific purpose.</b></p> <p><b>To create websites for a specific purpose and improve these sites.</b></p> <p><b>To use technology to help them present their work, showing an increasing degree of skill and using advanced features of software and tools.</b></p> <p><b>To select tools which they can use to help them achieve a specific aim and justify these choices to others.</b></p> <ul style="list-style-type: none"> <li>• Use an alternative presentation tool (for example Prezi or Ahead) to create a presentation linking into a topic, arContinue to create websites based on topics, area of interest or events, increasing the complexity of these sites.</li> <li>• Continue to regularly use word processing and desktop publishing to present their work, combing formatted text with other media and making choices about programs and features to use and justifying these choices to others.</li> <li>• Continue to use ICT to create a finished product or set of linked products, developing consistency in style across linked products. of interest or event.</li> </ul>
	<p><b>Digital media</b></p> <p>Working above:</p> <p>Working below:</p>	<p><b>To use a range of technology to sequence sound samples, giving consideration to the audience and purpose.</b></p> <p><b>To use technology to electronically compose music or sounds including creating melodies and save these as audio files.</b></p> <p><b>To use technology to capture and edit video, applying a range of different effects and incorporating numerous video clips.</b></p> <p><b>To use technology to create images including using layers.</b></p> <p><b>To understand the difference between a image and a vector drawing.</b></p> <p><b>To independently take photographs and record video taking into account the audience and/or purpose for the image/video.</b>     • Use a range of devices to create extended pieces of music using a wide range of pre-recorded samples.</p> <ul style="list-style-type: none"> <li>• Use a range of devices to create music samples and sequence these.</li> <li>• Use image creation tools to create more complex images, including using layers.</li> <li>• Understand the differences between an image and a vector drawing.</li> <li>• Continue to choose to independently record video for a range of purposes.</li> <li>• Continue to take photographs for a specific reason or project and/or find appropriate images on-line.</li> </ul>
	<p><b>Programming and control</b></p> <p>Working above:</p> <p>Working below:</p>	<p><b>To continue to develop their understanding of how computer and technology works and how computers process instructions and commands, including the use of coding languages.</b></p> <p><b>To explore ways in which software can be planned.</b></p> <p><b>To use assisted programming software to create basic software which interacts with external controllers, and elements on screen, creating algorithms and using logic and calculations.</b></p> <ul style="list-style-type: none"> <li>• Continue to develop an understanding of how technology works, with a focus on developing computational thinking.</li> <li>• Understand that software relies on codes to run and that a range of different coding languages exist.</li> </ul>

		<ul style="list-style-type: none"> <li>• Explore different ways in which computer software can be planned.</li> <li>• Use a range of assisted programming software (e.g Scratch and/or Kodu) to plan, design and create basic software (for example a simple game), which interact with external controllers (e.g. keyboard and/or mouse).</li> <li>• Using the software control the movement and responses of different elements on screen.</li> <li>• Use visual programming based software to plan, design and create basic non-game software which use logic, algorithms and calculations. (e.g. use scratch to create an interactive maths quiz for a KS1 child)</li> </ul>
	<p><b>Modelling and simulation</b></p> <p>Working above:</p> <p>Working below:</p>	<p><b>To understand that ICT allows for situations to be modelled, or those which it would be impractical to try out in real life and investigate the effect of changing variables in these simulations.</b></p> <p><b>Know that simulations are often guided by hidden rules</b></p> <p><b>To use software to model 3D objects.</b></p> <ul style="list-style-type: none"> <li>• Use software to create models of 3D objects, landscapes or items.</li> <li>• Explore a range of increasingly complex simulations, exploring the effect of changing variables and recording the results.</li> </ul>
	<p><b>Using Data</b></p> <p>Working above:</p> <p>Working below:</p>	<p><b>To continue to use, search, enter data into and create their own databases.</b></p> <p><b>To continue to use technology, including spreadsheets to create graphs and present data in different ways.</b></p> <ul style="list-style-type: none"> <li>• Use ICT to sort objects into groups according to a give criteria, or criteria which the child identifies themselves.</li> <li>• Begin to use technology to create graphs and pictograms</li> </ul>