

Year 7 Computing					
	Embarking	Emerging	Developing	Securing	Mastering
<b>Algorithms</b>	<ul style="list-style-type: none"> <li>I am aware of tasks best completed by humans or computers.</li> <li>I can design solutions by decomposing a problem and create a sub-solution for each of these parts (decomposition).</li> </ul>	<ul style="list-style-type: none"> <li>I can see that computers need more precise instructions than humans and the need for precision to avoid errors.</li> <li>I know how to identify similarities and differences in situations and can use these to solve problems (pattern recognition).</li> </ul>	<ul style="list-style-type: none"> <li>I know that for some problems I can share the same characteristics and use the same algorithm to solve both (generalisation).</li> </ul>	<ul style="list-style-type: none"> <li>I know that algorithm design can be put into different programming languages.</li> </ul>	<ul style="list-style-type: none"> <li>I can explain that computers need more precise instructions than humans and the need for precision to avoid errors.</li> </ul>
<b>Programming</b>	<ul style="list-style-type: none"> <li>I can use at least one programming language to provide a visual solution to a problem.</li> <li>I can use programming concepts such as sequence, selection, repetition</li> <li>I know that different solutions exist for the same problem.</li> </ul>	<ul style="list-style-type: none"> <li>I can use structured language to explain a process for example to explain how a zebra crossing mimic works.</li> <li>I can analyse why there is a need to plan a sequence of instructions.</li> </ul>	<ul style="list-style-type: none"> <li>I can design criteria to critically evaluate the quality of solutions. I can use the criteria to identify improvements and can make appropriate refinements to the solution.</li> </ul>	<ul style="list-style-type: none"> <li>I can do data modelling including the use of What If analysis.</li> <li>I can explain the reason I choose different applications such as spreadsheets, word processors and presentations</li> </ul>	<ul style="list-style-type: none"> <li>I can use mathematical formulae involving the use of addition, multiplication, subtraction and division.</li> </ul>
<b>Computing Resources, Data and Information</b>	<ul style="list-style-type: none"> <li>Explain that data can have errors, how this might affect results and decisions based on the data and how errors can be corrected.</li> <li>I can explain the difference between data and information</li> <li>I can explain what a computer is and give examples of devices that include computers.</li> </ul>	<ul style="list-style-type: none"> <li>I can distinguish between reliable and non-reliable sources of information got from the Internet using reasons.</li> <li>I can show responsible use of technologies and online services, and I know a range of ways to report concerns.</li> <li>I can select appropriate IT devices for an application.</li> </ul>	<ul style="list-style-type: none"> <li>I can recognise ethical issues surrounding the application of information technology beyond school.</li> <li>I know the potential of information technology for collaboration when computers are networked.</li> </ul>	<ul style="list-style-type: none"> <li>I know how to evaluate the trustworthiness of digital content and consider the usability of visual design features when designing and creating digital artefacts for known audience.</li> </ul>	<ul style="list-style-type: none"> <li>I know how to justify the choice of, and independently combine and use multiple digital devices, internet services and application software to achieve given goals.</li> <li>I am able to tell the most appropriate format of representing information.</li> </ul>
<b>Communication, Social Networks and the Internet</b>	<ul style="list-style-type: none"> <li>I can explain the role of search engines and what happens when a user requests a web page in a browser.</li> <li>I can comment on safety and security when using a computer.</li> </ul>	<ul style="list-style-type: none"> <li>I can describe the effect of using weak passwords and know the reasons why passwords need to be changed regularly.</li> <li>I know how to select, combine and use internet services.</li> <li>I can explain why it is necessary to protect oneself from possible internet predators.</li> </ul>	<ul style="list-style-type: none"> <li>I know that I should never meet online friends in person unless accompanied by a trusted adult.</li> <li>I know that I should not trust friends that I meet online and am aware they may not be who they say they are.</li> </ul>	<ul style="list-style-type: none"> <li>I can effectively use search engines and I know how they rank search results.</li> <li>I know that data on the internet requires careful protection of online identity and privacy.</li> </ul>	<ul style="list-style-type: none"> <li>I am able to set my internet browser to privacy and can block and delete cookies. I am also aware that cookies are used to track internet activities.</li> <li>I am able to use Internet facilities of various social networks to report suspected abusers.</li> <li>I am able to setup my social networking applications so that they are secure from external access.</li> </ul>