

Computing (Year 7)

	Initial – a student who is still initial will be able to partially meet some of the following with support:	Emerging – a student whose understanding is still emerging will be able to:	Developing – a student whose understanding is developing will also be able to:	Secure – a student whose understanding is secure will also be able to:	Advanced – a student whose understanding is advanced will be able to do some of the following:	Mastered – a student who has mastered their understanding will be able to do all of the following consistently:
Programming and Development	Use graphical based programming. Runs, checks and changes programmes. Understands that programmes execute by following precise instructions.	Use graphical based programming. Knows that users can develop their own programmes, and can demonstrate this by creating a simple programme in an environment that does not rely on text eg programmable robots etc.	Use graphical based programming. Understands the difference between, and appropriately uses if, then and else statements. Is able to write and debug programmes with limited teacher support.	Uses nested selection statements in a visual programming language. Has practical experience of a high-level textual language, including using standard libraries, when programming.		
Data and Data Representation	Understands the difference between data and information.	Analyses and evaluates data and information, and recognises that poor quality data leads to unreliable results, and inaccurate conclusions.	Knows that digital computers use binary to represent all data. Understands how bit patterns represent numbers and images. Knows that computers transfer data in binary.	Distinguishes between data used in a simple programme (a variable) and the storage structure for that data.		

<p>Hardware and Processing</p>	<p>Knows that computers collect data from various input devices, including sensors and application software. Understands the difference between hardware and application software, and their roles within a computer system.</p>	<p>Understands why and when computers are used. Understands the main functions of the operating system. Knows the difference between physical, wireless and mobile networks.</p>	<p>Recognises and understands the function of the main internal parts of basic computer architecture. Is aware of the concepts behind the fetch-execute cycle. Knows that there is a range of operating systems and application software for the same hardware device.</p>	
<p>Communications and Networks</p>	<p>Understands the difference between the internet and internet service eg world wide web. Recognises what is acceptable and unacceptable behaviour when using technologies and online services.</p>	<p>Understands how to effectively use search-engines, and knows how search results are selected, including that search engines use 'web crawler programmes'. Selects, combines and uses internet services. Demonstrates responsible use of technologies and online services, and knows a range of ways to report concerns.</p>	<p>Understands how search engines rank search results. Understands how to construct static web pages using HTML and CSS. Understands how to effectively use search-engines, and knows how search results are selected. Demonstrates responsible use of technologies and online services, and knows a range of ways to report concerns.</p>	<p>Meets secure criteria and uses technologies and online services securely, and knows how to identify and report inappropriate conduct.</p>

<p>IT</p>	<p>Uses technology with increasing independence to purposefully organise digital content.</p> <p>Uses a variety of software to manipulate and present digital content: data and information.</p> <p>Talks about their work and makes improvements to solutions based on feedback received.</p> <p>Uses software under the control of the teacher to create, store and edit digital content using appropriate file and folder names.</p>	<p>Collects, organises and presents data and information in digital content.</p> <p>Creates digital content to achieve a given goal through combining software packages and internet services to communicate with a wider audience eg blogging.</p> <p>Makes appropriate improvements to solutions based on feedback received, and can comment on the success of the solution.</p>	<p>Evaluates the appropriateness of digital devices, internet services and application software to achieve given goals.</p> <p>Recognises ethical issues surrounding the application of information technology beyond school.</p> <p>Designs criteria to critically evaluate the quality of solutions, uses the criteria to identify improvements and can make appropriate refinements to the solution.</p>	<p>Meets secure criteria and justifies the choice of and independently combines and uses multiple digital devices, internet services and application software to achieve given goals.</p>
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