Year 7	Year 8	Year 9
Intro to computing	Digital Graphics	Text-based programming
<ul> <li>All students will be baselined to assess prior knowledge.</li> <li>Students will know how to use basic computer systems such as Office 365, Seneca, iDEA, Synergy and Canva.</li> <li>They will know how to manage their work in on the network and how to use cloud (Office 365) computing/storage effectively and collaboratively.</li> <li>They will know how to create projects over multiple applications for a target audience – the will use new software such as Canva and Photoshop.</li> </ul>	<ul> <li>They will know digital graphics and their use and creation.</li> <li>They will understand the concept of colour theory.</li> <li>They will understand the different composition techniques applied to digital graphics creation.</li> <li>They will understand the use of a colour wheel and the professions that use them.</li> <li>They will be able to create, reuse and repurpose digital graphics using basic and advanced photoshop skills.</li> <li>They will understand how to work efficiently by using shortcuts.</li> <li>Students can evaluate their work and make improvements to solutions based on feedback received.</li> </ul>	<ul> <li>Students will know how to write algorithms.</li> <li>Students will understand what variables are and be able to identify them in a given code.</li> <li>Students will be able to define abstraction and decomposition.</li> <li>Students will know why computer programs need to be tested and to search for errors.</li> <li>They will understand the importance of using comments.</li> <li>Understand the difference between, and appropriately uses if and if, then and else statements.</li> </ul>
teaches them problem-solving and computational	Computer Systems	Animation
thinking.	<ul> <li>Students will know how devices can be used to input/store and output data.</li> <li>They will have knowledge of different types of storage used in a range of digital devices.</li> <li>Students will develop their hardware knowledge by learning how the CPU processes data and interacts with RAM.</li> <li>Students will understand the factors that affect the performance of computing systems.</li> <li>They will understand the difference between hardware and software.</li> <li>They will be able to identify and explain the role of the Operating System.</li> </ul>	<ul> <li>Students will explain how professionals create 3D animations using the industry-standard software package, Blender.</li> <li>Students will understand how to join basic shapes and use basic animation tools.</li> <li>They will know how to create their own materials and the importance of naming them.</li> <li>They will understand the use of keyframes.</li> <li>They will be able to identify the different types of animation.</li> </ul>

Spreadsheets	Game creation and programming	Web development
<ul> <li>Students will learn fundamental spreadsheet skills through modelling real world problems.</li> <li>They will know what cryptography is and how it applies to encryption.</li> </ul>	<ul> <li>Students are able to collect, organise and present data and information in digital content.</li> <li>Students can create digital content to achieve a given goal through combining software packages and internet services to communicate with a wider audience</li> <li>Students will understand the key terms within gaming.</li> <li>They will understand how to create an autonomous game within PowerPoint using advanced skills.</li> <li>Students can make appropriate improvements to solutions based on feedback received and can comment on the success of the colution</li> </ul>	<ul> <li>Students will know how to build a basic website and web page using HTML5 and potentially CSS</li> <li>They will understand that all websites have a skeleton of code</li> <li>They will be able to identify tags used in HTML and explain their use.</li> <li>They will understand the use and benefits of CSS.</li> <li>They will understand how search engines work and what this means to web designers</li> <li>They will be able to explain that HTML allows a programmer to communicate the way content should be structured on a web</li> </ul>
Networks	<ul> <li>Understand the difference between, and appropriately uses if</li> </ul>	App Development
<ul> <li>Students will be able to identify and define a computer network.</li> <li>Students will know how computers operate in a network, the different topologies and the hardware required.</li> <li>They will understand that in order for networks to work effectively, protocols must be used.</li> <li>Students will understand the security implications of data being shared/travelling within networks</li> </ul>	<ul> <li>and if, then and else statements.</li> <li>They can recognise the audience when designing and creating digital content.</li> <li>They will know how to use logical reasoning and If/Else scenarios to create an adventure game in first in PowerPoint and then in Python.</li> <li>They will be able to design, write and debug programs that accomplish specific goals.</li> </ul>	<ul> <li>Students will be able to consider the needs of the user when creating an app</li> <li>They will be able to decompose their project into smaller, more manageable parts</li> <li>They will understand the use of success criteria and be able to define suitable SC</li> <li>They will understand how to define an event and be able to identify how an event is triggered.</li> <li>They will know how to sequence a program and be able to identify when code is out of sequence.</li> <li>They will be able to use computational thinking and logic to work out the output of a given program</li> </ul>
Block-based programming	Data Representation	Cyber Security
<ul> <li>Students will understand how to problem solve using computing and how to program with block-based programming</li> <li>They will understand abstraction and decomposition.</li> </ul>	<ul> <li>Students understand how to convert from binary to denary and vice versa.</li> <li>The will know how to add binary numbers and explain the concept of an 'overflow ' error.</li> </ul>	<ul> <li>Students will understand techniques used by cybercriminals to steal data, disrupt systems, and infiltrate networks.</li> <li>They will consider the value of their data to organisations and what they might use it for.</li> </ul>

<ul> <li>They identify and use arithmetic operators, if statements, and loops, within programs.</li> <li>They can use logical reasoning to predict the behaviour of programs.</li> <li>They are able to detect and correct simple semantic errors i.e. debugging, in programs.</li> </ul>	<ul> <li>They will understand character sets and extended ASCII and Unicode.</li> <li>Students will develop their knowledge of images and how computers represent them.</li> <li>Students will understand Boolean logic and the logic gates such as AND, OR, NOT and how they work.</li> </ul>	<ul> <li>Students will understand social engineering techniques as well as the more common cybercrimes</li> <li>They will know how to methods to protect themselves and their data.</li> </ul>
Digital Literacy Project	Digital Literacy Project	Digital Literacy Project
<ul> <li>Students will understand how to design and market a theme park.</li> <li>Students will learn how to create projects over multiple applications and devices for a target audience.</li> <li>They will learn how to create, reuse and repurpose digital artefacts and be introduced to the manipulation and representation of data in video and sound.</li> <li>They will combine all the skills learnt over the last two years to creating an online business (featuring Web design, digital graphics, video and sound).</li> <li>Students can evaluate their work and make improvements to solutions based on feedback</li> </ul>	<ul> <li>Students will understand how to market an event.</li> <li>Students will learn how to create projects over multiple applications and devices for a target audience.</li> <li>They will learn how to create, reuse and repurpose digital artefacts and be introduced to the manipulation and representation of data in video and sound.</li> <li>They will combine all the skills learnt over the last two years to creating an online business (featuring Web design, digital graphics, video and sound).</li> <li>Students can evaluate their work and make improvements to solutions based on feedback received.</li> </ul>	<ul> <li>Students will understand how to create an online business.</li> <li>Students will learn how to create projects over multiple applications and devices for a target audience.</li> <li>They will learn how to create, reuse and repurpose digital artefacts and be introduced to the manipulation and representation of data in video and sound.</li> <li>They will combine all the skills learnt over the last three years to creating an online business (featuring Web design, digital graphics, video and sound).</li> <li>Students can evaluate their work and make improvements to solutions based on feedback received.</li> </ul>