

Year 7 Computer Science Curriculum

	AUT1	AUT2	SPR1	SPR2	SUM1	SUM2
Topic:	Using technologies safely and responsibly Basic Skills Introduction to MS Teams	Using technologies safely and responsibly Basic Skills MS Teams Spreadsheets	Using technologies safely and responsibly Basic Skills MS Teams Spreadsheets	Understanding Computers & Networks Programming Essentials		Programming Essentials
Knowledge covered:	<ul style="list-style-type: none"> How to use the school systems according to the AUP How to create a secure and memorable password How to create and organise files/folders on the school network/Cloud server How the internet and social media can be used for positive self-promotion How people can curate and experiment with their identity online and why they might wish to do this. Be aware personal online activity, history or profile will affect the type of information returned in a search or on a social media stream, and intended to 	<ul style="list-style-type: none"> Describe and assess the benefits and the potential risks of sharing information online Describe what is appropriate to say and do in different online settings/platforms (e.g. opinions, values, information, shares, 'likes', 'forwards'). Describe a range of different bullying types and behaviours and assess when these are occurring (e.g. homophobic, racist, gender, exclusion). Identify and demonstrate actions to support others who are experiencing difficulties online Identify a target audience Select the tools in: A word processor; 	<ul style="list-style-type: none"> Every cell has a unique reference which consists of letter (Columns) and an number (Rows) There are two types of data that can be entered into a cell, data values or formula A well formatted spreadsheet makes it easy to read Formulas and functions make automatic calculations that update when the data does Charts and graphs provide a visual representation of data, which can be easier to understand 	<ul style="list-style-type: none"> Hardware includes the physical components of the computer Software includes the computer programs that run on the hardware Computers function as input, process and output systems. Data is input, computation is performed, and an output response is given Computers are often connected through networks A network is one or more computers connected via a router or switch The internet is a network of networks Connected computers have numeric IP (Internet Protocol) addresses, which are used to identify where to send data items and where they have come from Data items are packaged up into regular-sized chunks known as packets Each packet contains information about where it came from and where it is going A single message maybe made up of many packets, which may or may not take the same route through the network There are multiple routes between any two computers on the Internet making it robust. If one connection is broken, data packets can usually find an alternative route The World Wide Web is a collection of linked data files and not the Internet The language that defines the contents of a web page is called HTML Modelling is the process of developing a representation of a real-world system that captures the aspects of the situation that are necessary for a particular purpose, while omitting the unimportant Different purposes need different models 	<ul style="list-style-type: none"> Sequence – putting instructions in the right order to make something happen Selection – using conditions to control the flow of a program Repetition – the ability to execute a sequence of instructions many times until a certain condition is met Named variable – a data store used in a program to store a single value Boolean statements can have two values True or False The effect of the Boolean operators AND and OR 	

	<p>influence beliefs, actions and choices</p> <ul style="list-style-type: none"> • How and why people who they communicate with online may try to influence others negatively • Strategies for assessing the degree of trust placed in people or organisations online • Describe the initial signs of potentially problematic situations e.g. grooming, cyberbullying • Assess when they need to take action and explain what to do if they are concerned about an online relationship • How to engage with others using MS Teams and email • How to seek and submit work using MS Teams 	<p>Presentation software; Desktop publisher, to produce a document appropriate for a target audience</p>		<ul style="list-style-type: none"> • Computational abstraction is a model that includes sufficient information to represent the computational aspects of a situation without describing everything • An algorithm is a precise method for solving a given problem • Algorithms, programs and code are not the same thing • Programs contain algorithms but are written in programming languages • Code is a generic term for any set of statements written in a programming language • Algorithms can take the form of steps written in structured English or it can be expressed as a flowchart • There are several possible algorithms to solve the same problem, which differ in complexity, efficiency or generality (There is more than one way to solve a problem) 	
<p>Online Resources:</p>	<p>MS Teams Teach-ICT SAM Learning Seneca BBC Bitesize Code.org</p>	<p>MS Teams Teach-ICT SAM Learning Seneca BBC Bitesize Bebras Challenge Code.org</p>	<p>MS Teams Teach-ICT SAM Learning Seneca BBC Bitesize Code.org</p>	<p>MS Teams Teach-ICT SAM Learning Seneca BBC Bitesize Code.org</p>	<p>MS Teams Teach-ICT SAM Learning Seneca BBC Bitesize Code.org</p>