

## Computing Curriculum Map - Year 7

		Autumn 1 Digital Literacy	Autumn 2 Online Safety	Spring 1 Graphics Editing	Spring 2 Modelling Data	Summer 1 Scratch Programming	Summer 2 Kodu Programming
Learning outcomes/ composite knowledge		Be able to confidently use Word processing, Spreadsheet and Presentation software tools.	Be aware of the dangers of the online world, how they can affect a person. Will be able to give examples of the dangers online; know how to report them & know how to get help.	Know how to use graphic manipulation tools to create a multi layered graphic for a target audience.	Be able to calculate the cost of an event using formula and present the data using graphs.	Be able to create modular programs using blocks of code.	Be able to create modular programs using a visual programming language.
Knowledge Components	Declarative – knowing what	<p>I know tools can be used in a Word processor to create documents</p> <p>I know Presentation can be created in software</p> <p>I know interactive Presentations can be created in software</p> <p>I know mathematical calculations can be performed using formulas in spreadsheets</p> <p>I know numerical data can be presented in a visual format using spreadsheets</p>	<p>I know what makes up my own identity</p> <p>I can recognise dangerous online relationships</p> <p>I know how to keep a positive online reputation and recognise fake news</p> <p>I know what the law says about Cyber bullying</p> <p>I know how to behave online and the types of online comments that can be abusive.</p> <p>I know the impact of technology on my health &amp; wellbeing</p> <p>I understand how I can protect myself against viruses and Malware</p>	<p>I know that graphics software tools can be used to desaturate and change the look of an image.</p> <p>I know how to create an image using multiple layers</p> <p>I know how to plan the creation of a digital graphic according to the client's requirements</p> <p>I know how to combine my graphics manipulation skills to create a final graphic for a client</p> <p>I know how to evaluate my final graphic according to a success criteria</p>	<p>I know how to structure data in a data set</p> <p>I know how to apply appropriate formats to cells</p> <p>I know how to construct formula in a Spreadsheet</p> <p>I know how to construct a formula, which includes a range of cells</p> <p>I know how to find the answer about a data set in a Spreadsheet</p> <p>I know how to use a chart to find the answer to a question about a data set</p>	<p>I know the procedure involved in programming an object to move using the mouse.</p> <p>I know how to program a sprite to change costumes using control code blocks</p> <p>I know how to program a single player Pong game using a Variable</p> <p>I know how to program a game using motion and control code blocks</p> <p>I know how to program a game using multiple scripts, including motion, control and variable code blocks simultaneously.</p>	<p>I know the basics of the Kodu programming environment</p> <p>I know the purpose of a Variable and how to program a Kodu to pick up items to gain points</p> <p>I know how to program characters to move in a two player racing game</p> <p>I know how to program a strategy game in Kodu, which includes an attacker and a health bar</p> <p>I know how to program an underwater Kodu game with multiple levels</p> <p>I know how to program my own customised Kodu</p>
	Procedural – knowing how and when	<p>I know how to use basic tools in a Word processor.</p> <p>I know how to create Presentations.</p> <p>I know how to create an interactive Presentation.</p>	<p>I can recognize the dangers of changing identity online.</p> <p>I know how to report dangerous online</p>	<p>I can use graphics software tools to desaturate and change the look of an image.</p> <p>I can create an image</p>	<p>I can structure data in a data set</p> <p>I can apply an appropriate format to a cell</p>	<p>I can programme an object to move using the mouse.</p> <p>I can program a sprite to change costumes using control code blocks</p>	<p>I can name the tools in the Kodu programming environment</p> <p>I can program a Kodu to pick up objects and gain points using a Variable.</p>

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		<p>I know how to add numerical data to a Spreadsheet and use basic formulas to add the data together.</p> <p>I know how to display numerical data in a visual format using a spreadsheet.</p>	<p>relationships</p> <p>I know how to report fake news</p> <p>I know how to get help with Cyber bullying</p> <p>I know how to report abusive online comments and get help.</p> <p>I know how to manage my screen time so I can keep healthy</p> <p>I know how to scan for malware and viruses on my digital devices</p>	<p>using multiple layers</p> <p>I can plan the creation of a digital graphic according to the client's requirements</p> <p>I can combine my graphic manipulation skills to create a final graphic for a client</p> <p>I can evaluate my final graphic according to a success criteria</p>	<p>I can construct a formula in a Spreadsheet</p> <p>I can construct a formula which includes a range of cells</p> <p>I can use a Spreadsheet to answer questions</p> <p>I can use a chart to find the answer to a question</p>	<p>I can program a single player Pong game using a Variable</p> <p>I can program a game using motion and control code blocks</p> <p>I can program a game using multiple scripts, including motion, control and variable code blocks simultaneously.</p>	<p>I can program characters in a two player racing game</p> <p>I can program a strategy game in Kodu, which includes an attacker and a health bar</p> <p>I can program an underwater Kodu game with multiple levels</p> <p>I can program my own Kodu game</p>
National Curriculum reference	<p>Design, use and evaluate computational abstractions that model the state and behaviour of real-world problems and physical systems</p> <p>Undertake creative projects that involve selecting, using, and combining multiple applications, preferably across a range of devices, to achieve challenging goals, including collecting and analysing data and</p>	<p>Understand a range of ways to use technology safely, respectfully, responsibly and securely, including protecting their online identity and privacy; recognise inappropriate content, contact and conduct and know how to report concerns.</p>	<p>Pupils will create, re-use, revise and re-purpose digital artefacts for a given audience, with attention to trustworthiness, design and usability</p>	<p>Undertake creative projects that involve selecting, using, and combining multiple applications, preferably across a range of devices, to achieve challenging goals, including collecting and analysing data and meeting the needs of known users.</p>	<p>Use two or more programming languages, at least one of which is textual, to solve a variety of computational problems; make appropriate use of data structures (for example, lists, tables or arrays); design and develop modular programs that use procedures or functions.</p>	<p>Use two or more programming languages, at least one of which is textual, to solve a variety of computational problems; make appropriate use of data structures (for example, lists, tables or arrays); design and develop modular programs that use procedures or functions.</p>	

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	meeting the needs of known users					
Common misconceptions	<p>Assumption that pupils are digital natives</p> <p>Overconfidence of skills in using IT applications.</p>	<p>Pupils confidence in staying safe online</p> <p>Digital footprints are deleted, once deleted by the user online</p>	<p>You need to be talented to do graphics editing.</p> <p>You need fancy tools for graphic editing</p> <p>Graphics editing is easy</p> <p>Graphics editing is not important</p>	<p>Using Spreadsheets and in particular learning to use formulas can be challenging for less able pupils.</p> <p>Pupils may also not find a link between the use of Spreadsheets and their future career.</p>	<p>Coding is boring and lacks excitement</p> <p>Scratch is only used to create games</p> <p>The If block works as a loop</p>	<p>Kodu can only be used to create game</p> <p>Programming is only necessary for children who want to become programmers</p> <p>Programming is very difficult and only suitable for clever children</p>
Exemplar composite Task(s)	<p>Create a folder structure</p> <p>Add a title in a word processor</p> <p>Create a table</p> <p>Create a school timetable using tables</p> <p>Use the fill tool and colour the timetable</p>	<p>What is online identity?</p> <p>Do people behave differently online?</p> <p>Offline vs online task</p> <p>Create an online avatar</p>	<p>What are graphic editors used for?</p> <p>Name popular graphic editing software</p> <p>Tutorial – Create a multi layered image</p> <p>Desaturate the image</p> <p>Use the rubber tool to create a multi layered coloured image</p>	<p>What can we collect data about?</p> <p>Collect data from a dice game on paper</p> <p>Organise the data</p> <p>What is a Spreadsheet?</p> <p>Enter the data in a Spreadsheet</p>	<p>Computer programmer starter game</p> <p>Introduction to: sequencing</p> <p>Example of a sequence in real life</p> <p>Example of a sequence in programming</p> <p>Sequencing – scratch programming task</p> <p>Controlling a character using sequencing in scratch</p>	<p>What is a programming language?</p> <p>Introduction to Kodu programming</p> <p>Kodu programming environment</p> <p>Kodu programming tools</p> <p>Create a basic Kodu world using the tools</p> <p>Add a character to your world</p>