



Topic	Learning Objectives	Key Vocabulary	Learning Sequence	Linked Learning	Home Learning
<p>Turtle graphics Co-Ordinates Sequencing instructions</p>	<p>Importing external turtle into python Making turtle variables Adapting turtle properties Controlling turtle using simple sequencing commands</p>	<p>Shell and editor Shape Forward Right/left (angles) Pen colour Pensize</p>	<p>Basic geometry shape coding using left/right and turn angles. Declaring variables for turtle Changing Pensize and colour for turtle</p>	<p>Sequencing instruction Algorithms to solve problems for given tasks Variable - programming and development</p>	<p>This will be set on a by need basis. In order to consolidate learning and fluency of subject specific language.</p>
<p>Turtle graphics co-ordinate geometry</p>	<p>Developing turtle positions using co-ordinate geometry</p>	<p>Goto</p>	<p>Using co-ordinate geometry to draw shapes on the turtle interface</p>	<p>x,y co-ordinate geometry in Maths Linked to the algorithm strand at KS3 and KS4</p>	



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Modelling	<p>Applying basic functionality of a spreadsheets</p> <p>Using simple formula to investigate how spreadsheets handle input process and output</p> <p>Using functions to handle number sequences</p> <p>Displaying data in different formats</p> <p>What if analysis</p> <p>Web Queries</p>	<p>Cells</p> <p>Workbook</p> <p>Worksheet</p> <p>Cell reference</p> <p>Fill handle</p> <p>Graphs</p> <p>Min</p> <p>Max</p> <p>Average</p> <p>Sum</p> <p>Formulas/functions</p> <p>Goal Seek</p> <p>Trial & improvement</p> <p>Web Query</p>	<p>Manipulate and edit cells</p> <p>Identify cell references within a spreadsheet</p> <p>Using formula to carry out basic calculations</p> <p>Using functions SUM, MAX, Average and MIN to handle number sequences</p> <p>Generate graph to represent weather data</p> <p>Carry out goal seek within a model</p> <p>Import external data from the web using web query</p>	KS4 ICT pathway	This will be set on a by need basis. In order to consolidate learning and fluency of subject specific language.



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Using Models to solve real world problems	Use models to validate inputted Data to remove human error To use models as tools for selection algorithms Use models to collate data Apply a model to solve a real world problem using complex functions such as VLOOKUP	Cells Workbook Worksheet Cell reference Formulas/functions Conditional formatting IF statements Validation Nested IF Vlookup COUNTIF Workbook Protection	Research suitable questions for a quiz and appropriate alternative answers, taking into consideration fact V opinion. Design and implement a spreadsheet layout suitable for a quiz Validating cells to allow permitted answers Using selection to mark the quiz Using conditional formatting selection to colour the answers to the quiz Use countIF function generate a score for the quiz Using workbook and cell protection to avoid human errors Create a workbook for a teachers marking system that applies VLOOKUP to convert raw marks to grades	Design, use and evaluate computational abstractions that model the state and behaviour of real-world problems and physical systems	This will be set on a by need basis. In order to consolidate learning and fluency of subject specific language.



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HTML	To write basic webpages using HTML tags	HTML Tags Browsers Hyperlinks Images HEX	<p>Look at source code on existing websites</p> <p>Creating a basic webpage using tags HTML, HEAD and TITLE</p> <p>Formatting a HTML document using simple formatting tags and the representation of colours using HEX data</p> <p>Exploring the use of the HEAD tag to make changes to an entire document</p> <p>Adding hyperlinks and images to a webpage using HTML tags</p>	<p>Undertake creative projects that involve selecting using and combining multiple applications preferably across a range of device to achieve challenging goals, including, collecting and analysing data and meeting needs of known users.</p> <p>Use of a textual programming language</p> <p>Using software components and how they communicate with other systems</p> <p>Understand how instructions are stored and executed the within a computer system</p>	This will be set on a by need basis. In order to consolidate learning and fluency of subject specific language.



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Ghost World	A creative project that uses ICT tools to solve a real world problem, theme park	Target Audience Purpose Logo Images Surveys Mail Merge	Identify target audience for the theme park Use graphic tools to develop and implement a logo including images from a variety of sources Create a traditional paper based survey. Create an online survey Compare the advantage and disadvantage of each methodology Use mail merge to link a given database to a document to inform potential target audience.	Undertake creative projects that involve selecting using and combining multiple applications preferably across a range of device to achieve challenging goals, including, collecting and analysing data and meeting needs of known users. 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	This will be set on a by need basis. In order to consolidate learning and fluency of subject specific language.