

| Geography                    | Autumn 1                                                                                                                                                                                            | Autumn 2                                                                                                                                                                                                                                                   | Spring 1                                                                                                           | Spring 2                                                                                                                                                                                                                       | Summer 1                                                                                                                                            | Summer 2                                                                                                                                   |
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|                              | Computing systems and networks – Communication                                                                                                                                                      | Creating Media – Web Page Creation                                                                                                                                                                                                                         | Programming A – Variables in Games                                                                                 | Data and Information – Spreadsheets                                                                                                                                                                                            | Creating Media – 3D Modelling                                                                                                                       | Programming B - Sensing                                                                                                                    |
| Year 6                       | Are search engines accurate/assess the reliability of searches.                                                                                                                                     | Creating their own website using Google sites                                                                                                                                                                                                              | Create variables in games e.g. scores increasing/decreasing                                                        | Use data to create spreadsheets, see how these can be used to generate statistics/graphs                                                                                                                                       | Create 3D models using the website Tinkercad                                                                                                        | Use BBC: Microbits to be programmed                                                                                                        |
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|                              | <b>Concepts</b> <ul style="list-style-type: none"> <li>Effective use of <a href="#">toolsechnology</a></li> <li>Impact of Technology</li> <li>Networks</li> <li>Design &amp; Development</li> </ul> | <b>Concepts</b> <ul style="list-style-type: none"> <li>Design &amp; Development</li> <li>Creating Media</li> <li>Effective Use of <a href="#">Toolsechnology</a></li> <li>Networks</li> <li>Impact of Technology</li> <li>Security &amp; Safety</li> </ul> | <b>Concepts</b> <ul style="list-style-type: none"> <li>Programming</li> <li>Design &amp; Development</li> </ul>    | <b>Concepts</b> <ul style="list-style-type: none"> <li>Data &amp; Information</li> <li>Effective use of tools</li> <li>Programming</li> <li>Creating Media</li> </ul>                                                          | <b>Concepts</b> <ul style="list-style-type: none"> <li>Creating Media</li> <li>Design &amp; Development</li> <li>Effective use of tools</li> </ul>  | <b>Concepts</b> <ul style="list-style-type: none"> <li>Computing systems</li> <li>Design &amp; Development</li> <li>Programming</li> </ul> |
| National Curriculum Coverage | <ul style="list-style-type: none"> <li>design, write and debug programs that accomplish specific goals, including controlling or</li> </ul>                                                         | <ul style="list-style-type: none"> <li>use search technologies effectively, appreciate how results are selected and ranked,</li> </ul>                                                                                                                     | <ul style="list-style-type: none"> <li>design, write and debug programs that accomplish specific goals,</li> </ul> | <ul style="list-style-type: none"> <li>select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that</li> </ul> | <ul style="list-style-type: none"> <li>select, use and combine a variety of software (including internet services) on a range of digital</li> </ul> | <ul style="list-style-type: none"> <li>design, write and debug programs that accomplish specific goals,</li> </ul>                         |

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|  | <p>simulating physical systems; solve problems by decomposing them into smaller parts</p> <ul style="list-style-type: none"> <li>understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration</li> <li>use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content</li> <li>select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information</li> <li>use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report</li> </ul> | <p>and be discerning in evaluating digital content</p> <ul style="list-style-type: none"> <li>select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information</li> <li>use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact</li> </ul> | <p>including controlling or simulating physical systems; solve problems by decomposing them into smaller parts</p> <ul style="list-style-type: none"> <li>use sequence, selection, and repetition in programs; work with variables and various forms of input and output</li> <li>use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</li> <li>select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information</li> </ul> | <p>accomplish given goals, including collecting, analysing, evaluating and presenting data and information</p> | <p>devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information</p> <ul style="list-style-type: none"> <li>use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact</li> </ul> | <p>including controlling or simulating physical systems; solve problems by decomposing them into smaller parts</p> <ul style="list-style-type: none"> <li>use sequence, selection, and repetition in programs; work with variables and various forms of input and output</li> <li>use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</li> <li>select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information</li> </ul> |
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|  | concerns about content and contact |  |  |  |  |  |
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| Sticky Knowledge | Autumn 1                                                                                                                                                                                                                                                                      | Autumn 2                                                                                                                                                                                                                                         | Spring 1                                                                                                                                                                                                                                                                              | Spring 2                                                                                                                                                                                                                                                             | Summer 1                                                                                                                                                                                                                                                                                  | Summer 2                                                                                                                                                                                                                                                                                            |
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| <b>SK1</b>       | <ul style="list-style-type: none"> <li>- I know how to compare results from different search engines</li> <li>- I know how to complete a web search to find specific information</li> <li>- I know how to refine my search</li> </ul>                                         | <ul style="list-style-type: none"> <li>- I know how to discuss the different types of media used on websites</li> <li>- I know how to explore a website</li> <li>- I know that websites are written in HTML</li> </ul>                           | <ul style="list-style-type: none"> <li>- I know how to explain that the way that a variable changes can be defined</li> <li>- I know how to identify examples of information that is variable</li> <li>- I know how to identify that variables can hold numbers or letters</li> </ul> | <ul style="list-style-type: none"> <li>- I know how to answer questions from an existing data set</li> <li>- I know how to ask simple relevant questions which can be answered using data</li> <li>- I know how to explain the relevance of data headings</li> </ul> | <ul style="list-style-type: none"> <li>- I know how to discuss the similarities and differences between 2D and 3D shapes</li> <li>- I know how to explain why we might represent 3D objects on a computer</li> <li>- I know how to select, move, and delete a digital 3D shape</li> </ul> | <ul style="list-style-type: none"> <li>- I know how to apply my knowledge of programming to a new environment</li> <li>- I know how to test my program on an emulator</li> <li>- I know how to transfer my program to a controllable device</li> </ul>                                              |
| <b>SK2</b>       | <ul style="list-style-type: none"> <li>- I know how to explain why we need tools to find things online</li> <li>- I know how to recognise the role of web crawlers in creating an index</li> <li>- I know how to relate a search term to the search engine's index</li> </ul> | <ul style="list-style-type: none"> <li>- I know how to draw a web page layout that suits my purpose</li> <li>- I know how to recognise the common features of a web page</li> <li>- I know how to suggest media to include on my page</li> </ul> | <ul style="list-style-type: none"> <li>- I know how to explain that a variable has a name and a value</li> <li>- I know how to identify a program variable as a placeholder in memory for a single value</li> <li>- I know how to recognise that the value of a variable</li> </ul>   | <ul style="list-style-type: none"> <li>- I know how to apply an appropriate number format to a cell</li> <li>- I know how to build a data set in a spreadsheet application</li> <li>- I know how to explain what an item of data is</li> </ul>                       | <ul style="list-style-type: none"> <li>- I know how to change the colour of a 3D object</li> <li>- I know how to identify how graphical objects can be modified</li> <li>- I know how to resize a 3D object</li> </ul>                                                                    | <ul style="list-style-type: none"> <li>- I know how to determine the flow of a program using selection</li> <li>- I know how to identify examples of conditions in the real world</li> <li>- I know how to use a variable in an if, then, else statement to select the flow of a program</li> </ul> |

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| <b>SK3</b> | <ul style="list-style-type: none"> <li>- I know how to explain that a search engine follows rules to rank relevant pages</li> <li>- I know how to explain that search results are ordered</li> <li>- I know how to suggest some of the criteria that a search engine checks to decide on the order of results</li> </ul> | <ul style="list-style-type: none"> <li>- I know how to describe what is meant by the term 'fair use'</li> <li>- I know how to find copyright-free images</li> <li>- I know how to say why I should use copyright-free images</li> </ul>                                 | <ul style="list-style-type: none"> <li>- I know how to decide where in a program to change a variable</li> <li>- I know how to make use of an event in a program to set a variable</li> <li>- I know how to recognise that the value of a variable can be used by a program</li> </ul> | <ul style="list-style-type: none"> <li>- I know how to construct a formula in a spreadsheet</li> <li>- I know how to explain the relevance of a cell's data type</li> <li>- I know how to identify that changing inputs changes outputs</li> </ul>                                        | <ul style="list-style-type: none"> <li>- I know how to position 3D objects in relation to each other</li> <li>- I know how to rotate a 3D object</li> <li>- I know how to select and duplicate multiple 3D objects</li> </ul>                                                                                        | <ul style="list-style-type: none"> <li>- I know how to experiment with different physical inputs</li> <li>- I know how to explain that if you read a variable, the value remains</li> <li>- I know how to use a condition to change a variable</li> </ul>                                             |
| <b>SK4</b> | <ul style="list-style-type: none"> <li>- I know how to describe some of the ways that search results can be influenced</li> <li>- I know how to explain how search engines make money</li> <li>- I know how to recognise some of the limitations of search engines</li> </ul>                                            | <ul style="list-style-type: none"> <li>- I know how to add content to my own web page</li> <li>- I know how to evaluate what my web page looks like on different devices and suggest/make edits</li> <li>- I know how to preview what my web page looks like</li> </ul> | <ul style="list-style-type: none"> <li>- I know how to choose the artwork for my project</li> <li>- I know how to create algorithms for my project</li> <li>- I know how to explain my design choices</li> </ul>                                                                       | <ul style="list-style-type: none"> <li>- I know how to apply a formula to multiple cells by duplicating it</li> <li>- I know how to create a formula which includes a range of cells</li> <li>- I know how to recognise that data can be calculated using different operations</li> </ul> | <ul style="list-style-type: none"> <li>- I know how to create digital 3D objects of an appropriate size</li> <li>- I know how to group a digital 3D shape and a placeholder to create a hole in an object</li> <li>- I know how to identify the 3D shapes needed to create a model of a real-world object</li> </ul> | <ul style="list-style-type: none"> <li>- I know how to explain the importance of the order of conditions in else, if statements</li> <li>- I know how to modify a program to achieve a different outcome</li> <li>- I know how to use an operand (e.g. &lt;=&gt;) in an if, then statement</li> </ul> |
| <b>SK5</b> | <ul style="list-style-type: none"> <li>- I know how to choose methods of communication to suit particular purposes</li> <li>- I know how to explain the different ways in which people</li> </ul>                                                                                                                        | <ul style="list-style-type: none"> <li>- I know how to describe why navigation paths are useful</li> <li>- I know how to explain what a navigation path is</li> <li>- I know how to make</li> </ul>                                                                     | <ul style="list-style-type: none"> <li>- I know how to choose a name that identifies the role of a variable</li> <li>- I know how to create the</li> </ul>                                                                                                                             | <ul style="list-style-type: none"> <li>- I know how to apply a formula to calculate the data I need to answer questions</li> <li>- I know how to explain why data should be organised</li> <li>- I know how to use a spreadsheet to answer questions</li> </ul>                           | <ul style="list-style-type: none"> <li>- I know how to choose which 3D objects I need to construct my model</li> <li>- I know how to modify multiple 3D objects</li> </ul>                                                                                                                                           | <ul style="list-style-type: none"> <li>- I know how to decide what variables to include in a project</li> <li>- I know how to design the algorithm for my project</li> <li>- I know how to</li> </ul>                                                                                                 |

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|            | communicate<br>- I know how to identify that there are a variety of ways of communicating over the internet                                                                                                              | multiple web pages and link them using hyperlinks                                                                                                                                                              | artwork for my project<br>- I know how to test the code that I have written                                                                                              |                                                                                                                                                        | - I know how to plan my 3D model                                                                                                                                    | design the program flow for my project                                                                                                                                     |
| <b>SK6</b> | - I know how to compare different methods of communicating on the internet<br>- I know how to decide when I should and should not share<br>- I know how to explain that communication on the internet may not be private | - I know how to create hyperlinks to link to other people's work<br>- I know how to evaluate the user experience of a website<br>- I know how to explain the implication of linking to content owned by others | - I know how to extend my game further using more variables<br>- I know how to identify ways that my game could be improved<br>- I know how to share my game with others | - I know how to produce a graph<br>- I know how to suggest when to use a table or graph<br>- I know how to use a graph to show the answer to questions | - I know how to decide how my model can be improved<br>- I know how to evaluate my model against a given criterion<br>- I know how to modify my model to improve it | - I know how to create a program based on my design<br>- I know how to test my program against my design<br>- I know how to use a range of approaches to find and fix bugs |