Computing Progression of Skills Overview for Year 6

| Computing systems and networks Communication and collaboration | Creating media – Web page creation | Programming A – Variables in games | Data and information – Spreadsheets | Creating media – 3D Modelling | Programming B Sensing movement |
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| • I can describe how computers use addresses to access websites<br>• I can explain that internet devices have addresses<br>• I can recognise that data is transferred using agreed methods<br>• I can explain that all data transferred over the internet is in packets<br>• I can explain that data is transferred over networks in packets<br>• I can identify and explain the main parts of a data packet<br>• I can explain that the internet allows different media to be shared<br>• I can recognise how to access shared files stored online<br>• I can send information over the internet in different ways<br>• I can explain how the internet enables effective collaboration<br>• I can identify different ways of working together online<br>• I can recognise that working together on the | • . I can discuss the different types of media used on websites<br>• I can explore a website<br>• I know that websites are written in HTML<br>• I can draw a web page layout that suits my purpose<br>• I can recognise the common features of a web page<br>• I can suggest media to include on my page<br>• I can describe what is meant by the term 'fair use'<br>• I can find copyright-free images<br>• I can say why I should use copyright-free images<br>• I can add content to my own web page<br>• I can evaluate what my web page looks like on different devices and suggest/make edits<br>• I can preview what my web page looks like | • I can explain that the way a variable changes can be defined<br>• I can identify examples of information that is variable<br>• I can identify that variables can hold numbers or letters<br>• I can explain that a variable has a name and a value<br>• I can identify a program variable as a placeholder in memory for a single value<br>• I can recognise that the value of a variable can be changed<br>• I can decide where in a program to change a variable<br>• I can make use of an event in a program to set a variable<br>• I can recognise that the value of a variable can be used by a program<br>• I can choose the artwork for my project<br>• I can create algorithms for my project<br>• I can explain my design choices<br>• I can choose a name that identifies the role of a variable<br>• I can create the artwork for my project<br>• I can test the code that I have written | • I can collect data<br>• I can enter data into a spreadsheet<br>• I can suggest how to structure my data<br>• I can apply an appropriate format to a cell<br>• I can choose an appropriate format for a cell<br>• I can explain what an item of data is<br>• I can construct a formula in a spreadsheet<br>• I can explain which data types can be used in calculations<br>• I can identify that changing inputs changes outputs<br>• I can apply a formula to multiple cells by duplicating it<br>• I can calculate data using different operations<br>• I can create a formula which includes a range of cells<br>• I can apply a formula to calculate the data I need to answer questions | • I can add 3D shapes to a project<br>• I can move 3D shapes relative to one another<br>• I can view 3D shapes from different perspectives<br>• I can lift/lower 3D objects<br>• I can recolour a 3D object<br>• I can resize an object in three dimensions<br>• I can duplicate 3D objects<br>• I can group 3D objects<br>• I can rotate objects in three dimensions<br>• I can accurately size 3D objects<br>• I can combine a number of 3D objects<br>• I can show that placeholders can create holes in 3D objects<br>• I can analyse a 3D model<br>• I can choose objects to use in a 3D model<br>• I can combine objects in a design<br>• I can construct a 3D model based on a design<br>• I can explain how my 3D model could be improved<br>• I can modify my 3D model to improve it | • I can apply my knowledge of programming to a new environment<br>• I can test my program on an emulator<br>• I can transfer my program to a controllable device<br>• I can determine the flow of a program using selection<br>• I can identify examples of conditions in the real world<br>• I can use a variable in an if, then, else statement to select the flow of a program<br>• I can experiment with different physical inputs<br>• I can explain that checking a variable doesn't change its value<br>• I can use a condition to change a variable<br>• I can explain the importance of the order of conditions in else, if statements<br>• I can modify a program to achieve a different outcome<br>• I can use an operand (e.g. <>=) in an if, then statement |

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| internet can be public or private<br>• I can choose methods of communication to suit particular purposes<br>• I can explain the different ways in which people communicate<br>• I can identify that there are a variety of ways to communicate over the internet<br>• I can compare different methods of communicating on the internet<br>• I can decide when I should and should not share information online<br>• I can explain that communication on the internet may not be private | • I can describe why navigation paths are useful<br>• I can explain what a navigation path is<br>• I can make multiple web pages and link them using hyperlinks<br>• I can create hyperlinks to link to other people's work<br>• I can evaluate the user experience of a website<br>• I can explain the implication of linking to content owned by others | • I can identify ways that my game could be improved<br>• I can share my game with others<br>• I can use variables to extend my game | • I can explain why data should be organised<br>• I can use a spreadsheet to answer questions<br>• I can produce a chart<br>• I can suggest when to use a table or chart<br>• I can use a chart to show the answer to questions | | • I can decide what variables to include in a project<br>• I can design the algorithm for my project<br>• I can design the program flow for my project<br>• I can create a program based on my design<br>• I can test my program against my design<br>• I can use a range of approaches to find and fix bugs |