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| **Year 6 Overview** | | | | |
| **Unit Name** | **Lesson** | **Learning Objectives** | **Success Criteria** | **Cross Curricular Links** |
| **Autumn 1** | | | | |
| Computing systems and networks - Communication and collaboration | 1 | Can I explain the importance of internet addresses? | -I can describe how computers use addresses to access websites - I can explain that internet devices have addresses - I can recognise that data is transferred using agreed methods |  |
| Computing systems and networks - Communication and collaboration | 2 | Can I recognise how data is transferred across the internet? | -I can explain that all data transferred over the internet is in packets - I can explain that data is transferred over networks in packets - I can identify and explain the main parts of a data packet |  |
| Computing systems and networks - Communication and collaboration | 3 | Can I explain how sharing information online can help people to work together? | -I can explain that the internet allows different media to be shared - I can recognise how to access shared files stored online - I can send information over the internet in different ways |  |
| Computing systems and networks - Communication and collaboration | 4 | Can I evaluate different ways of working together online? | -I can explain how the internet enables effective collaboration - I can identify different ways of working together online - I can recognise that working together on the internet can be public or private |  |
| Computing systems and networks - Communication and collaboration | 5 | Can I recognise how we communicate using technology? | -I can choose methods of communication to suit particular purposes - I can explain the different ways in which people communicate - I can identify that there are a variety of ways to communicate over the internet |  |
| Computing systems and networks - Communication and collaboration | 6 | Can I evaluate different methods of online communication? | -I can compare different methods of communicating on the internet - I can decide when I should and should not share information online - I can explain that communication on the internet may not be private |  |
| **Autumn 2** | | | | |
| Creating media – Web page creation | 1 | Can I review an existing website and consider its structure? | -I can discuss the different types of media used on websites - I can explore a website - I know that websites are written in HTML |  |
| Creating media – Web page creation | 2 | Can I plan the features of a web page? | -I can draw a web page layout that suits my purpose - I can recognise the common features of a web page - I can suggest media to include on my page |  |
| Creating media – Web page creation | 3 | Can I consider the ownership and use of images? (copyright) | -I can describe what is meant by the term ‘fair use’ - I can find copyright-free images - I can say why I should use copyright-free images |  |
| Creating media – Web page creation | 4 | Can I recognise the need to preview pages? | -I can add content to my own web page - I can evaluate what my web page looks like on different devices and suggest/make edits - I can preview what my web page looks like |  |
| Creating media – Web page creation | 5 | Can I outline the need for a navigation path? | -I can describe why navigation paths are useful - I can explain what a navigation path is - I can make multiple web pages and link them using hyperlinks |  |
| Creating media – Web page creation | 6 | Can I recognise the implications of linking to content owned by other people? | -I can create hyperlinks to link to other people's work - I can evaluate the user experience of a website - I can explain the implication of linking to content owned by others |  |
| **Spring 1** | | | | |
| Programming A – Variables in games | 1 | Can I define a ‘variable’ as something that is changeable? | -I can explain that the way a variable changes can be defined - I can identify examples of information that is variable - I can identify that variables can hold numbers or letters |  |
| Programming A – Variables in games | 2 | Can I explain why a variable is used in a program? | -I can explain that a variable has a name and a value - I can identify a program variable as a placeholder in memory for a single value - I can recognise that the value of a variable can be changed |  |
| Programming A – Variables in games | 3 | Can I choose how to improve a game by using variables? | -I can decide where in a program to change a variable - I can make use of an event in a program to set a variable - I can recognise that the value of a variable can be used by a program |  |
| Programming A – Variables in games | 4 | Can I design a project that builds on a given example? | -I can choose the artwork for my project - I can create algorithms for my project - I can explain my design choices |  |
| Programming A – Variables in games | 5 | Can I use my design to create a project? | -I can choose a name that identifies the role of a variable - I can create the artwork for my project - I can test the code that I have written |  |
| Programming A – Variables in games | 6 | Can I evaluate my project? | -I can identify ways that my game could be improved - I can share my game with others - I can use variables to extend my game |  |
| **Spring 2** | | | | |
| Data and information – Spreadsheets | 1 | Can I create a data set in a spreadsheet? | -I can collect data - I can enter data into a spreadsheet - I can suggest how to structure my data |  |
| Data and information – Spreadsheets | 2 | Can I build a data set in a spreadsheet? | -I can apply an appropriate format to a cell - I can choose an appropriate format for a cell - I can explain what an item of data is |  |
| Data and information – Spreadsheets | 3 | Can I explain that formulas can be used to produce calculated data? | -I can construct a formula in a spreadsheet - I can explain which data types can be used in calculations - I can identify that changing inputs changes outputs |  |
| Data and information – Spreadsheets | 4 | Can I apply formulas to data | -I can apply a formula to multiple cells by duplicating it - I can calculate data using different operations - I can create a formula which includes a range of cells |  |
| Data and information – Spreadsheets | 5 | Can I create a spreadsheet to plan an event? | -I can apply a formula to calculate the data I need to answer questions - I can explain why data should be organised - I can use a spreadsheet to answer questions |  |
| Data and information – Spreadsheets | 6 | Can I choose suitable ways to present data? | -I can produce a chart - I can suggest when to use a table or chart - I can use a chart to show the answer to questions |  |
| **Summer 1** | | | | |
| Creating media – 3D Modelling | 1 | Can I recognise that you can work in three dimensions on a computer? | -I can add 3D shapes to a project - I can move 3D shapes relative to one another - I can view 3D shapes from different perspectives |  |
| Creating media – 3D Modelling | 2 | Can I identify that digital 3D objects can be modified? | -I can lift/lower 3D objects - I can recolour a 3D object - I can resize an object in three dimensions |  |
| Creating media – 3D Modelling | 3 | Can I recognise that objects can be combined in a 3D model? | -I can duplicate 3D objects - I can group 3D objects - I can rotate objects in three dimensions |  |
| Creating media – 3D Modelling | 4 | Can I create a 3D model for a given purpose? | -I can accurately size 3D objects - I can combine a number of 3D objects - I can show that placeholders can create holes in 3D objects |  |
| Creating media – 3D Modelling | 5 | Can I plan my own 3D model? | -I can analyse a 3D model - I can choose objects to use in a 3D model - I can combine objects in a design |  |
| Creating media – 3D Modelling | 6 | Can I create my own digital 3D model? | -I can construct a 3D model based on a design - I can explain how my 3D model could be improved - I can modify my 3D model to improve it |  |
| **Summer 2 – ORDER RESOURCES (MICRO:BIT)** | | | | |
| Programming B - Sensing movement | 1 | Can I create a program to run on a controllable device? | -I can apply my knowledge of programming to a new environment - I can test my program on an emulator - I can transfer my program to a controllable device |  |
| Programming B - Sensing movement | 2 | Can I explain that selection can control the flow of a program? | -I can determine the flow of a program using selection - I can identify examples of conditions in the real world - I can use a variable in an if, then, else statement to select the flow of a program |  |
| Programming B - Sensing movement | 3 | Can I update a variable with a user input? | -I can experiment with different physical inputs - I can explain that checking a variable doesn’t change its value - I can use a condition to change a variable |  |
| Programming B - Sensing movement | 4 | Can I use a conditional statement to compare a variable to a value? | -I can explain the importance of the order of conditions in else, if statements - I can modify a program to achieve a different outcome - I can use an operand (e.g. <>=) in an if, then statement |  |
| Programming B - Sensing movement | 5 | Can I design a project that uses inputs and outputs on a controllable device? | -I can decide what variables to include in a project - I can design the algorithm for my project - I can design the program flow for my project |  |
| Programming B - Sensing movement | 6 | Can I develop a program to use inputs and outputs on a controllable device? | -I can create a program based on my design - I can test my program against my design - I can use a range of approaches to find and fix bugs |  |