|  |
| --- |
| **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 |   |