Year 6 Computing Curriculum Map

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Computing Systems and Networks – Communication and collaboration	**Creating Media –**	**Programming A –**	**Data information –**	**Creating Media –**	**Programming B –**
Lesson 1: To explain the importance of internet addresses. • I can recognise that data is transferred using agreed methods • I can explain that internet devices have addresses • I can describe how computers use addresses to access websites	**Lesson 1: To review an existing website and consider its structure.** • I can explore a website. • I can discuss the different types of media used on websites. • I know that websites are written in HTML.	**Lesson 1: To define a 'variable' as something that is changeable.** • I can identify examples of information that is variable. • I can explain that the way a variable changes can be defined. • I can identify that variables can hold numbers or letters.	**Lesson 1: To create a data set in a spreadsheet.** • I can collect data. • I can suggest how to structure my data. • I can enter data into a spreadsheet.	**Lesson 1: To recognise that you can work in three dimensions on a computer.** • I can add 3D shapes to a project • I can view 3D shapes from different perspectives • I can move 3D shapes relative to one another.	**Lesson 1: To 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.
Lesson 2: To recognise how data is transferred across the internet. • I can identify and explain the main parts of a data packet • I can explain that data is transferred over networks in packets • I can explain that all data transferred over the internet is in packets	**Lesson 2: To 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	**Lesson 2: To explain why a variable is used in a program.** • I can identify a program variable as a placeholder in memory for a single value. • I can explain that a variable has a name and a value. • I can recognise that the value of a variable can be changed.	**Lesson 2: To build a data set in a spreadsheet.** • I can explain what an item of data is. • I can choose an appropriate format for a cell. • I can apply an appropriate format to a cell.	**Lesson 2: To identify that digital 3D objects can be modified.** • I can resize an object in three dimensions • I can lift/lower 3D objects • I can recolour a 3D object.	**Lesson 2: To explain that selection can control the flow of a program.** • 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 • I can determine the flow of a program using selection.

Lesson 3: To explain how sharing information online can help people to work together	Lesson 3: To consider the ownership and use of images (copyright).	Lesson 3: To choose how to improve a game by using variables.	Lesson 3: To explain that formulas can be used to produce calculated data.	Lesson 3: To recognise that objects can be combined in a 3D model.	Lesson 3: To update a variable with a user input.
• I can recognise how to access shared files stored online • I can send information over the internet in different ways • I can explain that the internet allows different media to be shared	• I can say why I should use copyright-free images. • I can find copyright-free images. • I can describe what is meant by the term 'fair use'.	• 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.	• I can explain which data types can be used in calculations. • I can construct a formula in a spreadsheet. • I can identify that changing inputs changes outputs.	• I can rotate objects in three dimensions. • I can duplicate 3D objects. • I can group 3D objects.	• I can use a condition to change a variable. • I can experiment with different physical inputs. • I can explain that checking a variable doesn't change its value.
Lesson 4: To evaluate different ways of working together online.	Lesson 4: To recognise the need to preview pages.	Lesson 4: To design a project that builds on a given example.	Lesson 4: To apply formulas to data.	Lesson 4: To create a 3D model for a given purpose.	Lesson 4: To use a conditional statement to compare a variable to a value.
• I can identify different ways of working together online • I can recognise that working together on the internet can be public or private • I can explain how the internet enables effective collaboration	• I can add content to my own web page. • I can preview what my web page looks like. • I can evaluate what my web page looks like on different devices and suggest/make edits.	• I can choose the artwork for my project. • I can create algorithms for my project. • I can explain my design choices.	• I can calculate data using different operations. • I can create a formula which includes a range of cells. • I can apply a formula to multiple cells by duplicating it.	• I can accurately size 3D objects. • I can show that placeholders can create holes in 3D objects. • I can combine a number of 3D objects.	• I can use an operand (e.g. <>=) in an if, then statement • I can explain the importance of the order of conditions in else, if statements • I can modify a program to achieve a different outcome
Lesson 5: To recognise how we communicate using technology.	Lesson 5: To outline the need for a navigation path.	Lesson 5: To use my design to create a project.	Lesson 5: To apply formulas to data.	Lesson 5: To plan my own 3D model.	Lesson 5: To design a project that uses inputs and outputs on a controllable device.
• I can explain the different ways in	• I can explain what a navigation path is.		• I can calculate data using different operations.	• I can analyse a 3D model.	

which people communicate • I can identify that there are a variety of ways to communicate over the internet • I can choose methods of communication to suit particular purposes	• I can describe why navigation paths are useful. • I can make multiple web pages and link them using hyperlinks.	• I can create the artwork for my project. • I can choose a name that identifies the role of a variable. • I can test the code that I have written.	• I can create a formula which includes a range of cells. • I can apply a formula to multiple cells by duplicating it.	• I can choose objects to use in a 3D model. • I can combine objects in a design.	• 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.
Lesson 6: To 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	**Lesson 6:** **To recognise the implications of linking to content owned by other people.** • I can explain the implication of linking to content owned by others. • I can create hyperlinks to link to other people's work. • I can evaluate the user experience of a website.	**Lesson 6: To evaluate my project.** • I can identify ways that my game could be improved. • I can use variables to extend my game. • I can share my game with others.	**Lesson 6: To choose suitable ways to present data.** • I can produce a chart • I can use a chart to show the answer to questions • I can suggest when to use a table or chart.	**Lesson 6: To 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.	**Lesson 6: To 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.