Computing-Summer

Computing SOL (Sequence of Learning)

		→							Outcome	Vocabulary
Year 1 Programming A- Moving a Robot	3.1	Learning: To explain what a given command will do	Learning: To act out a given word	Learning: To combine 'forwards' and 'backwards' commands to make a sequence	Learning: To combine four direction commands to make a sequence	Learning: To plan a simple program	Learning: To find more than one solution to a problem	Summative Assessment	To write short algorithms and programs for floor robots, and predict program outcomes.	Command Sequence Algorithm
Year 1 Programming B- Introduction to Animation	3.2	Learning: To choose a command for a given purpose	Learning: To show that a series of commands can be joined together	Learning: To identify the effect of changing a value	Learning: To explain that each sprite has its own instructions	To design the parts of a project	To use my algorithm to create a program	Summative Assessment	To design algorithms and programs that use events to trigger sequences of code to make an interactive quiz.	Sprite Predict Program
Year 2 Programming A- Robot Algorithms	3.1	Learning: To describe a series of instructions as a sequence	Learning: To explain what happens when we change the order of instructions	Learning: To use logical reasoning to predict the outcome of a program	Learning: To explain that programming projects can have code and artwork	Learning: To design an algorithm	Learning: To create and debug a program that I have written	Summative Assessment	To create and debug programs, and use logical reasoning to make predictions.	Algorithm Sequence Predict Bug/debug
Year 2 Programing B- Robot Algorithms	3.2	Learning: To explain that a sequence of commands has a start	Learning: To explain that a sequence of commands has an outcome	Learning: To create a program using a given design	Learning: To change a given design	Learning: To create a program using my own design	Learning: To decide how my project can be improved	Summative Assessment	To design algorithms and programs that use events to trigger sequences of code to make an interactive quiz.	Outcome Sequence

Year 3 Programming A- Sequence in Music	3.1	Learning: To explore a new programming environment	Learning: To identify that commands have an outcome	Learning: To explain that a program has a start	Learning: To recognise that a sequence of commands have an order	Learning: To change the appearance of my project	Learning: To create a project from a task description	Summative Assessment	To create sequences in block-based programming language to make music.	Command Sequence Algorithm Code
Year 3 Programming B- Events and Actions	3.2	Learning: To explain how a sprite moves in an existing project	Learning: To create a program to move a sprite in four directions	Learning: To adapt a program to a new context	Learning: To develop my program by adding features	Learning: To identify and fix bugs in a program	Learning: To design and create a maze-based challenge	Summative Assessment	To write algorithms and programs that use a range of events to trigger sequences of actions	Bug/debug Event block
Year 4 Programming A- Repetition in Shapes	3.1	Learning: To identify that accuracy in programming is important	Learning: To create a program in a text-based language	Learning: To explain what 'repeat' means	Learning: To modify a count-controlled loop to produce a given outcome	Learning: To decompose a task into small steps	Learning: To create a program that uses count-controlled loops to produce a given outcome	Summative Assessment	To use a text-based programming language to explore count-controlled loops when drawing shapes.	Code snippet Algorithm Repetition Decompose
Year 4 Programming B- Repetition in Games	3.2	Learning: To develop the use of count-controlled loops in a different programming environment	Learning: To explain that in programming there are infinite loops and count-controlled loops	Learning: To develop a design that includes two or more loops which run at the same time	Learning: To modify an infinite loop in a given program	Learning: To design a project that includes repetition	Learning: To create a project that includes repetition	Summative Assessment	To use a block based programming language to explore count-controlled and infinite loops when creating a game.	Infinite loop Count-controlled loop Costumes Modify

Year 5 Programming A- Selection in Physical Computing	3.1	Learning: To control a simple circuit connected to a computer	Learning: To write a program that includes count-controlled loops	Learning: To explain that a loop can stop when a condition is met	Learning: To explain that a loop can be used to repeatedly check whether a condition has been met	Learning: To design a physical project that includes selection	Learning: To create a program that controls a physical computing project	Summative Assessment	To explore conditions and selection using a programmable microcontroller.	Microcontroller Conditions Selection
Year 5 Programming B- Selection in Quizzes	3.2	Learning: To explain how selection is used in computer programs	Learning: To relate that a conditional statement connects a condition to an outcome	Learning: To explain how selection directs the flow of a program	Learning: To design a program that uses selection	Learning: To create a program that uses selection	Learning: To evaluate my program	Summative Assessment	To explore selection in programming to design and code an interactive quiz.	Conditions Selection Algorithm
Year 6 Programming A- Variables in Games	3.1	Learning: To define a 'variable' as something that is changeable	Learning: To explain why a variable is used in a program	Learning: To choose how to improve a game by using variables	Learning: To design a project that builds on a given example	Learning: To use my design to create a project	Learning: To evaluate my project	Summative Assessment	To explore variables when designing and coding a game.	Variable Algorithm Code
Year 6 Programming B- Sensing	3.2	Learning: To create a program to run on a controllable device	Learning: To explain that selection can control the flow of a program	Learning: To update a variable with a user input	Learning: To use a conditional statement to compare a variable and a value	Learning: To design a project that uses inputs and outputs on a controllable device	Learning: To develop a program to use inputs and outputs on a controllable device	Summative Assessment	To design and code a project that captures inputs from a physical device.	Micro:bit Emulator Initialisation