Year 4 Computing

Autumn 2: We Are Makers (Coding for micro:bit)

Session	National. Curriculum Statement	WALT	Learning Outcomes (Success Criteria)	Resources	Vocabulary
Subject Cultural Capital = Using & Applying computing knowledge to solve problems **Differentiation = please see the differentiation for the EXC EM & SEND (Please see SEND pupils IEPs when planning)** **Minimum expectations to check for understanding during lessons = targeted questioning / mini whiteboards/ peer talk /thumb signs** **Long term memory skill development strategy = LAST, LAST, LAST linked to the WALT** **Literacy & Numeracy skills development = ICT vocabulary bank linked to the WALT & include numeracy skills where they are linked to the WALT in the weekly planning**					
On Line Safety: Pupils can publish their programs to the MakeCode website. If they are to do so, parental permission will be needed. Pupils might explore the projects uploaded by others to the MakeCode website. They must let an adult know if they come across any inappropriate content when looking at these, although this is very unlikely					
1. Learning about MakeCode and the micro:bit	Design, write and debug programs that accomplish specific goals Use sequence, selection, and repetition in programs; work with various forms of input and output. Use logical reasoning to explain how some simple algorithms work	To learn about the micro:bit, and how to create a program using MakeCode	Children understand what a computer is. Children can create a simple program in MakeCode.	Microsoft MakeCode Micro:bits Laptops/desktops	Sequence Micro:bit Bluetooth Makecode Simulator

Session	National. Curriculum Statement	WALT	Learning Outcomes (Success Criteria)	Resources	Vocabulary
2. Understanding a micro:bit program	Design, write and debug programs that accomplish specific goals Use sequence, selection, and repetition in programs; work with various forms of input and output. Use logical reasoning to explain how some simple algorithms work	To read a micro:bit program and predict what it will do	Children can identify components of a micro:bit. Children can transfer a program form MakeCod onto a micro:bit	Microsoft MakeCode Micro:bits Laptops/desktops	Sequence Micro:bit Bluetooth Makecode Simulator Variables Source code Object code
3. Modifying a micro:bit program	Design, write and debug programs that accomplish specific goals Use sequence, selection, and repetition in programs; work with various forms of input and output. Use logical reasoning to explain how some simple algorithms work	To modify a micro:bit program	Children can discuss the algorithm that would allow a micro:bit to paly rock, paper, scissors. Children can change variables in the algorithm to play other games.	Microsoft MakeCode Micro:bits Laptops/desktops	Algorithm Micro:bit MakeCode Variables simulator
4. Developing a dice rolling game	Design, write and debug programs that accomplish specific goals Use sequence, selection, and repetition in programs; work with various forms of input and output. Use logical reasoning to explain how some simple algorithms work	To create a micro:bit program to simulate rolling two dice	Children write an algorithm for a micro:bit to simulate rolling two dice. Children can use MakeCode to create a program using the algorithm and test to see if it works as expected.	Microsoft MakeCode Micro:bits Laptops/desktops	Algorithm MakeCode Micro:bit

Session	National. Curriculum Statement	WALT	Learning Outcomes (Success Criteria)	Resources	Vocabulary
5. Planning a micro:bit project	Design, write and debug programs that accomplish specific goals Use sequence, selection, and repetition in programs; work with various forms of input and output. Use logical reasoning to explain how some simple algorithms work	To plan a micro:bit program	Children know inputs and outputs on a micro:bit. Children generate ideas for what a micro:bit can do. Children begin to generate algotithms to make their program work.	Microsoft MakeCode Micro:bits Laptops/desktops	Algorithm MakeCode Micro:bit
6. Writing and testing a micro:bit project	Design, write and debug programs that accomplish specific goals Use sequence, selection, and repetition in programs; work with various forms of input and output. Use logical reasoning to explain how some simple algorithms work	To code and test their own micro:bit project	Children review algorithms created and can test using the simulator in MakeCode.	Microsoft MakeCode Micro:bits Laptops/desktops	Algorithm MakeCode Micro:bit Source code Simulator Object code