










Computing – Year 1



Summer 1	Programming B – Introduction to animation					
Prior learning 	This unit progresses learners’ knowledge and understanding of programming and follows on from ‘Programming A – Moving a robot’, where children will have learned to program a floor robot using instructions.					
Lesson objective 	To choose a command for a given purpose	To show that a series of commands can be joined together	To identify the effect of changing a value	To explain that each sprite has its own instructions	To design the parts of a project	To use my algorithm to create a program
Key vocabulary 	ScratchJr, Bee-Bot, command, sprite, compare, programming, programming area	Block, joining, command, Start block, run, program, programming area, background, delete, reset, algorithm, predict	Effect, change, value, block	Instructions, sprite, delete, program, algorithm	Sprite, background, appropriate, algorithm	Sprite, design, programming blocks, algorithm, programs
Creative context 	BBC bitesize provide some videos and pages to explain some of the key concepts of programming: https://www.bbc.co.uk/bitesize/subjects/zyhbwmn STEM learning also provide some extra resources including playground games to play based on scratch (see PDF in resources folder).					
Substantive knowledge 	I know that programming blocks give instructions in scratch. I know that scratch and bee bots are both programming programs.	I know that each colour of programming blocks allows for a different type of action/response. I know that the start blocks are yellow and the end blocks are red. I know that An algorithm is a precise set of instructions, which can be turned into code.	I know that the number underneath an action block shows how many times it will be repeated.	I know that a program can include more than one sprite. I know that different sprites can have difference programs.	I know that appropriate backgrounds and sprites must be chosen for a project.	I know that designs and plans help us to create a final project. I know that I can use the redo and undo keys to fix my algorithm is there are any issues.
Disciplinary knowledge 	I know how to instruct a sprite to move using a programming block. I know how to program the sprite to move up, down, left and right.	I know how to add a background to my program. I know how to create a sequence of actions with a start block and an end block.	I know how to repeated an action block. I know how to simplify and shorten programs.	I know how to add a sprite. I know how to delete a sprite. I know how to add blocks to individual sprites.	I know how to create an algorithm for each sprite. I know how to use the speed block.	I know how to block-fill parts of a sprite when designing. I know how to use the undo and redo functions.

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		I know how to delete blocks.				
Recorded learning 	Children will program a sprite to move up, down, left and right.	Children will follow an algorithm to program the sprite to complete a series of actions, with a start and end block either side.	Children will create a program using fewer blocks to instruct the sprite to move.	Children will create their own project with a background and 2 sprites, each with separate instructions.	Children will design their own “rocket race” project – they will design the background, rockets and algorithm.	Children will create their “rocket race” project.
Unit outcome 	<p>Over the course of this unit, the children will be developing their skills to create a final project at the end (rocket race). This needs to be saved.</p> <p>At the end of the unit, could you please complete the unit evaluation, either as a self-assessment or teacher assessment. The slide is in the folder; Add the children’s names into the boxes that are the best fit.</p>					
Future learning 	<p>This unit will prepare the children for the future programming units in year 2 to year 6. This will provide them with the basic understanding of what programming is and how it works, as well as an introduction to the programming tool scratch, which they will continue to use until year 6.</p>					