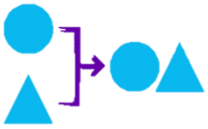
Year One Programming Progression 2020 - 2021

Y1	Programming - **Algorithms**	Computational Thinking - **Algorithm**	What this looks like - **Example Projects**
Greater Depth	• Can identify a mistake in an **algorithm**. • Can plan, test and successfully run an **algorithm** on more than one device (e.g. Beebot and an app)	I know that steps of an algorithm are used to solve problems and can identify the rule for other algorithms.	We need to encourage the children to think "computationally" in everyday contexts as well as teaching the code. Here are some non tech examples. • How to draw a square • Instructions to move your Beebot • How to get changed for PE • How to build a Lego model • How to make a sandwich In Y1 the focus is for children to understand that algorithm is a set of simple but clear instructions. Children will plan and create their own programs for everyday tasks and then developing this into moving robots like the Beebot. BBC what is Coding? BBC What is an algorithm?
Expected	• Understands an **algorithm** is a set of precise instructions. • Can test a simple **algorithm** that they planned.	I know that steps of an algorithm are used to solve problems that need to be achieved the same way each time.	
Working Towards	• Understands what an **algorithm** is. • Can plan a simple **algorithm**.	I know that steps of an algorithm are used to solve problems.	

Key Vocabulary		Apps	Breakdown
 Algorithm	In Year 1, children should be taught that an algorithm is a sequence of instructions or a set of rules to get something done. This is usually to solve a problem that requires the same approach each time.	   	Bee bot - it's important with these devices that the children are given a specific aim. Debugging on Bee bot is pressing the reset button. CodeSpark Academy and Daisy the Dinosaur is a good place to extend the directional knowledge picked up after using Beebot. Code Spark follows more of a game pattern. It is important to note at what stage each child was up to with each app before handing over to Year 2.

NC KS1 Objectives

- Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions.
- Create and debug simple programs.
- Use logical reasoning to predict the behaviour of simple programs.