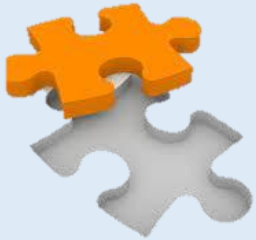
Year 1 Term 5

Where do I fit in?

COMPUTING



National Curriculum Links:
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.

Essential Prior Learning:
Children need to understand basic directional language, such as forwards and backwards; it is useful if children can recognise left and right. They should be able to follow a series of instructions for movement, e.g. move forwards three places. Some toys can move or perform actions if they are switched on and the correct buttons pressed.

Progression in Skill:
Understand algorithms as sequences of instructions in everyday contexts. Take real world problems and plan a sequence of steps to solve these. Give explanations for what they think a program will do. Program floor turtles using sequences of instructions to implement an algorithm.

Long-term Memory Knowledge:
Know that an algorithm is a set of instructions. Follow a set of instructions. Talk about how they would solve a simple problem and give a set of instructions that would help. Know how to use a bee-bot: be able to switch it on and program it to move in a given direction. Talk about what algorithm they will program into a bee bot, what they expect will happen and give suggestions as to why it went wrong (if it did.)

Key Vocabulary	
algorithm	instructions that are split into little steps so that a computer can solve a problem
bee-bot	a resource that can programmed to move forwards and backwards and turn in different directions
program	a set of instructions that a computer can understand to make something happen
debug	fix errors in a program
predict	make a guess

Progression in Resources:
Bee-bots Large maps

Relevance	
Now	Develop an understanding that computers respond to the instructions we give them; children can program toys and equipment to get the response they want.
Future	Identify errors in computer inputs and be able to resolve common problems; be able to program electronic devices in everyday life so that they work as expected.
Aspiration	Pursue a career in computing, e.g coder, software developer, IT technician, secondary school IT teacher.