

Year 1 Programming

Prior Learning (EYFS):

Begin to describe a sequence of events using words such as 'first', 'then'...

Key Vocabulary

Algorithm	Are a set of clear, precise and ordered instructions
Program	A collection of algorithms that are implemented on a digital device
Command	A line of code written as part of a computer program

Key Unit Specific Vocabulary:

Bee Bot; Forwards; Backwards; Right turn; Left turn; Go; Clear; Pause; Route; Robots

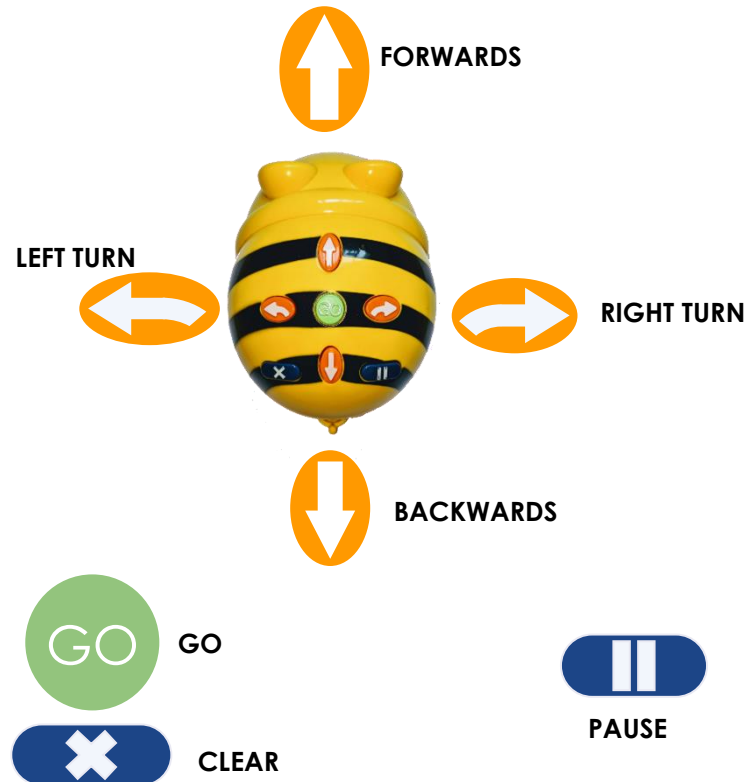
Key Questions:

- How can I run a command on a device?
- How can I create instructions?
- How can we combine forwards and backwards movements to create a sequence?
- How can I predict the outcome of a sequence involving up to four commands?
- What is an algorithm?
- How can I plan a program?

Current Learning (Y1):

Introduces learners to early programming concepts. Learners will explore using individual commands, both with other learners and as part of a computer program. They will identify what each floor robot command does and use that knowledge to start predicting the outcome of programs. The unit is paced to ensure time is spent on all aspects of programming and builds knowledge in a structured manner. Learners are also introduced to the early stages of program design through the introduction of algorithms.

Bee Bots – The Buttons

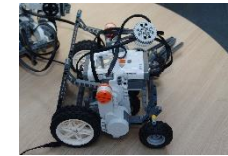


Future Learning (Y2):

Develops pupils' understanding of instructions in sequences and the use of logical reasoning to predict outcomes. Pupils will use given commands in different orders to investigate how the order affects the outcome. Pupils will also learn about design in programming. They will develop artwork and test it for use in a program. They will design algorithms and then test those algorithms as programs and debug them.

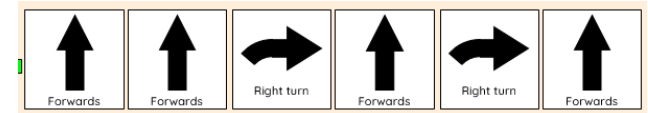
Robots

Robots are machines that can do tasks (robots can be specialised or multipurpose). Robots complete their tasks because they have been programmed to do so by humans: that is, we tell robots what to do.



What are algorithms?

Algorithms are a set of instructions given to a computer in order to complete a task. These need to be precise and specific so that computers can follow them and achieve the right outcome.



When there is a collection of algorithms sequenced together, this creates a program.