National Curriculum Links: KS1 Computing

- **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 and use logical reasoning to predict the behaviour of simple programs**

I can …	CS1.4 debug a simple algorithm that is causing an unexpected outcome.
CS1.1 tell you what an algorithm is	**CS1.5** break an algorithm down into smaller parts (decomposing / chunking)
CS1.2 plan a simple algorithm	
CS1.3 give and follow commands, which include straight / turning commands – one at a time.	**CS1.6** predict if a simple algorithm will work

Computer Science Vocabulary

computer science	BBC Bitesize Computing KS1 Computer scientists design new software, solve computing problems and develop different ways to use technology.
computational thinking	involves looking at a problem and working out a way a computer might be able to help you solve it.
algorithm	a set of instructions in everyday language, e.g 'get ready for school', 'go out to play'
decompose	breaking a program down into smaller steps
debugging/ deglitching	Identifying and correcting mistakes when the program doesn't work as expected
abstraction	being able to focus on the problem and ignoring detail, focus on program before look and feel e.g. colour, size, background
Input / output	data or information that a computer receives in or displays out
unplugged	computer science without using the computer
event blocks	all programs need an event which acts like a start button
mathematical language	Directional language- backward, left, right, angles, clockwise / Anti-clockwise

What would be your algorithm?
BeeBot starts at the beanstalk
Then travels over the bridge
Pauses at the straw house
Finishes at tower

Important:
Always plan your algorithm
Then test your algorithm
If the out-come was not what you predicted
Debug
Re test

Left   Right

Backwards   Forwards

When planning your algorithm you need to think about:
Where do I want my algorithm to start?
What do I want my BeeBot to do?
Does my BeeBot need to pause, change direction?
Input program / test / debug

Can you use the pause command in your algorithm?

Can you input more than one command at a time?