

What I should already know : Use small motor skills so that they can use a range of tools competently, safely and confidently. Explored BeeBot, moving it using one step instructions. Able to follow instructions and give clear instructions.

Enquiry Questions

- *To understand what an algorithm is.
- *To follow instructions precisely to carry out an action.
- *To understand that computers and devices around us use inputs and outputs.
- *To understand and be able to explain what decomposition is.
- *To know how to debug an algorithm.

Key Vocabulary

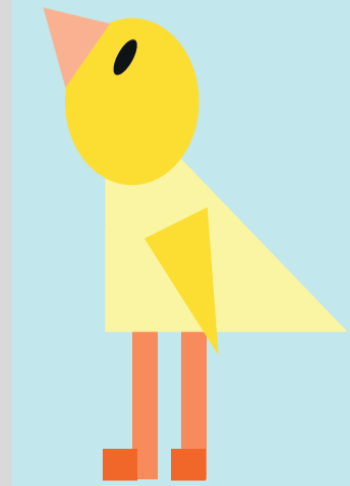
Algorithm - a clear set of instructions to carry out a task
Bug - An error or a mistake in computer code
Computer - Electronic machine that accepts and processes information to produce an output, and then stores the results.
Debug - To fix the error in code.
Decompose - To break something down into smaller chunks.
Device - Equipment created for a certain purpose or job.
Input - A way of telling the computer what you want it to do.
Instructions - A list of commands and directions on how to do something.
Output - Information or data that is sent by the computer to an output device such as a printer or speakers.
Solution - The methods to solve a problem.

Key Skills (National Curriculum)

Pupils should be taught to

- 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
- Use technology purposefully to create, organise, store, manipulate and retrieve digital content
- Recognise common uses of information technology beyond school
- Use technology purposefully to create, organise, store, manipulate, and retrieve digital content

Full picture:



Decomposition:

Shape:	How many?	Body part
	One	Eye
	One	Head
	One	Beak
	One	Wing
	One	Body
	Two	Legs
	Two	Feet

An algorithm for brushing your teeth:



1. Brush your front teeth
2. Add some toothpaste
3. Get your toothbrush
4. Brush your back teeth
5. Rinse your mouth
6. Smile!

There is a bug in the algorithm!

1. Get your toothbrush
2. Add some toothpaste
3. Brush your front teeth

Arrows indicate a loop from step 3 back to step 1.

Links to other areas of the curriculum :Speaking and Listening