






Morley and Tacolneston Federation - Knowledge Organiser

KS 1 Computing Knowledge Organiser - Introducing algorithms using simple programming

Prior Learning: In EYFS, the children have had experience of talking about internet safety, using the internet to search for information as a class, and controlling devices using Beebots. This builds on these developing skills.

Algorithm	An algorithm is a precise sequence of instructions or set of rules, for performing a task.	
Sequence	Sequence means arranging instructions for algorithms and programs in a particular order.	
Code	Code is the language a computer understands that we use to give a computer instructions.	
Programming	Programming is designing and writing instructions for a computer in a language it understands.	
Debugging	Debugging is about finding out what is wrong in an algorithm or program and fixing it.	

SKILLS

By the end of this topic pupils should be able to:


- 1) Understand what an algorithm is.
- 2) Create a simple algorithm using logical reasoning.
- 3) Understand what is meant by debugging.
- 4) Debug a simple algorithm.
- 5) Begin to use logical reasoning to predict the behaviour of simple algorithm.
- 6) Use simple directions and movement in an algorithm.








KNOWLEDGE

By the end of this topic pupils should know:

1. What an algorithm is.
2. Create and use simple algorithms to make a Bee Bot move.
3. How to begin to record simple algorithms.
4. What logical reasoning means.
5. How to use logical reasoning.
6. What debugging means.
7. How to debug an algorithm.

Programming Bee-Bot and Blue-Bot Robots and Apps

You can program a Bee-Bot or Blue-Bot to move around a map grid by using the buttons. The buttons are the code (the language) the Bee-Bot or Blue-Bot understands for what it needs to do. You can enter a sequence of buttons to form an algorithm. For example: 

 Moves forwards	 Reverses (go backwards)	 Turns 1 quarter turn left	 Turns 1 quarter turn right
 Go - the Bee-Bot starts to run the program	 Pause - This will pause the Bee-Bot in the middle of the algorithm before continuing.	 Clear Program - this deletes the program so that you can start again.	