

Y1 COMPUTING – 4 CREATING AND FOLLOWING INSTRUCTIONS

QUESTION: HOW DO WE MAKE SURE A PROGRAM DOES WHAT WE WANT IT TO?



Algorithms



Programming

WEEKS OF TEACHING	LINE OF ENQUIRY	THRESHOLD CONCEPT	SUBSTANTIVE KNOWLEDGE	DISCIPLINARY KNOWLEDGE	CURRICULUM ENDPOINT
1	Following Instructions	Communicate	- Instructions tell us how something should be done. - An algorithm is a set of instructions in order.	Use a range of applications and devices in order to communicate ideas, work and messages.	Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions.
2	Instructions Using a Computer	Communicate	- A computer program is a set of instructions (an algorithm) that tells a computer what to do. - Coding means writing instructions for a computer, telling it what to do, step-by-step.	Use a range of applications and devices in order to communicate ideas, work and messages.	
3	Following a Recipe	- Code (Control) - Communicate	- Changing the order of instructions in an algorithm will give a different result. - A bug (in computing terms) is an error (mistake) in the way that a computer program works. - Debugging means finding and removing bugs from a computer program.	- Specify the nature of events (such as a single event or a loop). - Use a range of applications and devices in order to communicate ideas, work and messages.	

ASSESSMENT OPPORTUNITY:

Can children correctly sequence steps of a recipe and debug a sequence, explaining what was wrong with the sequence which led to the incorrect result?

Children can follow and give clear, ordered instructions both practically and on a computer. They understand that an algorithm is a set of instructions in order, and that a program is an algorithm used by a computer. They demonstrate this by completing tasks such as painting by numbers or building models correctly. They can explain what might happen if steps are out of order and begin to identify and fix simple errors (bugs) in sequences.