

Mastering the Code: Year 5 Computing Flashcards

Learning objective: To define key programming terminology and understand the fundamental logic behind computer algorithms and debugging.

Read the front of the flashcard and attempt to define the term or answer the question before flipping to the back to check your understanding. Use these to test your knowledge of computational thinking with Kit the Fox.

What is an Algorithm?

An algorithm is a precise, step-by-step set of instructions designed to complete a specific task or solve a problem.

Define a 'Bug' in the context of computer programming.

A bug is an unexpected error, mistake, or flaw in a computer program that prevents it from running correctly.

What is 'Debugging'?

Debugging is the systematic process of identifying, analysing, and fixing errors or 'bugs' within a piece of code.

Explain the term 'Variable'.

A variable is a placeholder or a 'container' used in code to store information or data that can be changed or updated while the program is running.

What is a 'Loop' used for in coding?

A loop is a programming structure that allows a sequence of instructions to be repeated multiple times until a specific condition is met.

Define 'Sequence' in programming.

A sequence is the specific order in which instructions are executed, one after the other, from start to finish.

What is 'Selection' in computer logic?

Selection allows a program to make a decision based on a condition, often using 'if' or 'else' statements to choose a different path.

What is an 'Input'?

An input is any data or signal sent to a computer system, such as a mouse click, a key press, or information from a sensor.

What is an 'Output'?

An output is the information or action produced by a computer program after it has processed the input, such as text on a screen or movement from a robot.

What is 'Syntax' in a programming language?

Syntax refers to the set of rules that defines the correct combination of symbols, words, and punctuation required to write valid code.

Explain the difference between a 'Count-controlled loop' and a 'Condition-controlled loop'.

A count-controlled loop repeats a task a set number of times, whereas a condition-controlled loop repeats until a specific condition changes (e.g., 'repeat until true').

Why is it important to use comments in your code?

Comments are notes written by the programmer to explain what sections of code do; they help others understand the logic and make debugging much easier.