

Prior learning: students will have created algorithms for Beebots to accomplish a task

Key resources

micro:bit



Laptop



Vocabulary

abstraction - selecting the most important details and leaving out any unrequired information, making it easier to solve problems.

algorithm - a precise set of ordered steps that can be followed by a human and implemented on a computer (as a program) to achieve a task.

E.g. tell someone to shout when they hear a loud noise.

input - data that is sent to a program to be processed.

Micro:bits have a few inputs: the buttons, a microphone, an accelerometer, radio receiver, bluetooth, compass.

E.g. If you program the micro:bit to flash when it hears a loud sound, the loud sound to the microphone will be the input.

output - the result of data processed by a computer.

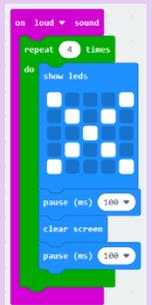
E.g. the LEDs flash.

debugging - while testing: finding and fixing problems in algorithms.

E.g. the LEDs don't flash.

logical reasoning - using clues and evidence to make predictions.

program - a set of ordered **commands** that can be **run** by a **computer** to complete a task.



process - a program, or part of a program, that is running on a computer.

The micro:bit takes the input and follows the instructions (program) you programmed it to do. This is the thinking part, you don't see this happening.

E.g. the microphone tells the micro:bit it's heard a loud noise, the micro:bit tells the LEDs to flash.

variable - a named piece of data (often a number or text) stored in a computer's memory, which can be accessed and changed by a computer program - this could be the score of a game, colour of a character, height of a jump...