Year 5 Thinking like a computer scientist

Programming—Micro-bits score counter

Key Knowledge:

- A Micro-bit can be used to perform a number of tasks using the on-board features it has to offer.
- The features can be used through MakeCode, which allow users to code various tasks using block coding or Python (a more sophisticated coding language).
- Code is transferred to the Micro-bit by downloading the program file and transferring via a USB to the device.
- A score counter will allow the users to add or subtract from a number to record points scored in a game
- It will require gestures or button presses to be coded to change the score, which will be displayed on the LED

Keyword	Definition
Micro-bit	The **BBC micro:bit** is a small programmable computer used for learning coding. It has buttons, LEDs, sensors, and can run programs you create.
Program	A **program** is a set of instructions written in code that tells the micro:bit what to do.
code	**Code** is the language used to write programs (like Python or block-based coding in MakeCode). It's how you communicate instructions to
algorithm	The total you get when you add numbers together.
variable	Information entered into a spreadsheet, such as numbers or words.
input	**Input** is data the micro:bit receives. This might be the pressing of a button, shake of the device or the temperature sensor reading.
Debug	To **debug** means to find and fix errors in your program.

Learning Questions

What is a Micro-bit?

How can a Micro-bit be programmed for a specific purpose?

What is block coding and how can this be used to program specific features of the Micro-bit?

What coding is required to program a Micro-bit into a score counter?

Does my Micro-bit code create a user friendly score counter?

How could I further improve my code to add additional features to improve its functionality?

What else do you know?