YEAR 7 BBC MICRO:BIT CODING (SPRING 1)

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Micro:bit	is an ARM-based embedded system designed by the BBC for use in computer education in the UK.
Accelerometer	An input device within the Micro:bit to control or alter programs by tilting or moving the device.
Microsoft Block Editor	The visual programming language used to create
Algorithm	A set of instructions to be followed to complete a given task or solve a problem.
Program	A sequence of instructions used by a computer.
Sequence	The order which the computer will run code in, one line at a time.
Selection	A decision made by a computer, choosing what code should be run only when certain conditions are met.
Processor	Receives inputs from the computer and produces outputs.

IMPORTANT FACTS
The Micro Bit was designed to encourage children to get actively involved in writing software for computers and building new things, rather than being consumers of media
It was designed to work alongside other systems, such as the Raspberry Pi.
The BBC micro:bit is a pocket-sized computer that introduces student to how software and hardware work together.
It has an LED light display, buttons, sensors and many input/output features that you can program and physically interact with.
The latest micro:bit adds sound sensing and playback capabilities.
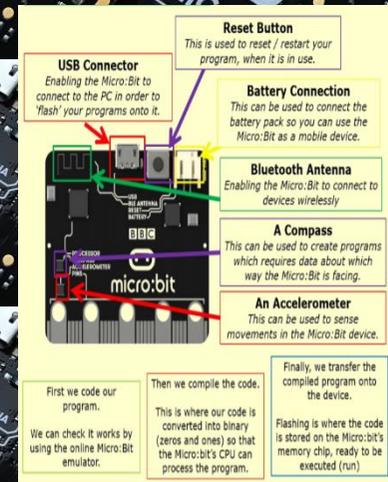
Sequence of learning.

Identify the main components of a BBC micro:bit.
Use logical reasoning to compare the utility of alternative algorithms for the same problem.
Design and develop modular programs that use procedures or functions.
Use coordinates to plot position on a screen.
Use radio blocks to transmit data from one device to another.
Design and create a simple game that responds to user input.
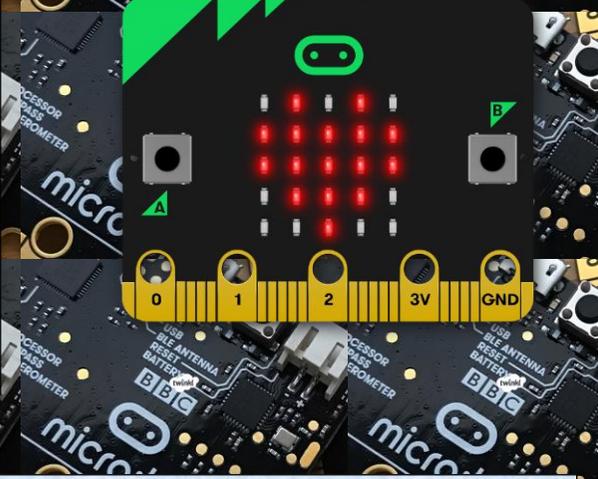
Final outcome:

During this term the students will start the 'Programming A micro:bit' unit. This is a practical unit on coding using a device called a micro:bit. It has been designed to continue bridge the gap between visual and text based programming. They will learn about a range of coding concepts including inputs, outputs, variables, loops, selection, sprites and arrays. The They will also be introduced to the use of java Script. This will all culminate in creating one or more playable games.

Key Skills
Understand the hardware and software components that make up computer systems, and how they communicate with one another and with other systems,
Know how to use if to make branching decisions in a computer program
Know how reusable functions can be used to respond to user events.
Know how variables are used in a program to store information.
Understand sorting algorithms that reflect computational thinking.
Undertake creative projects to achieve challenging goals.