

# BBC Micro:Bit Programming for Educators

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# About the BBC Micro:Bit

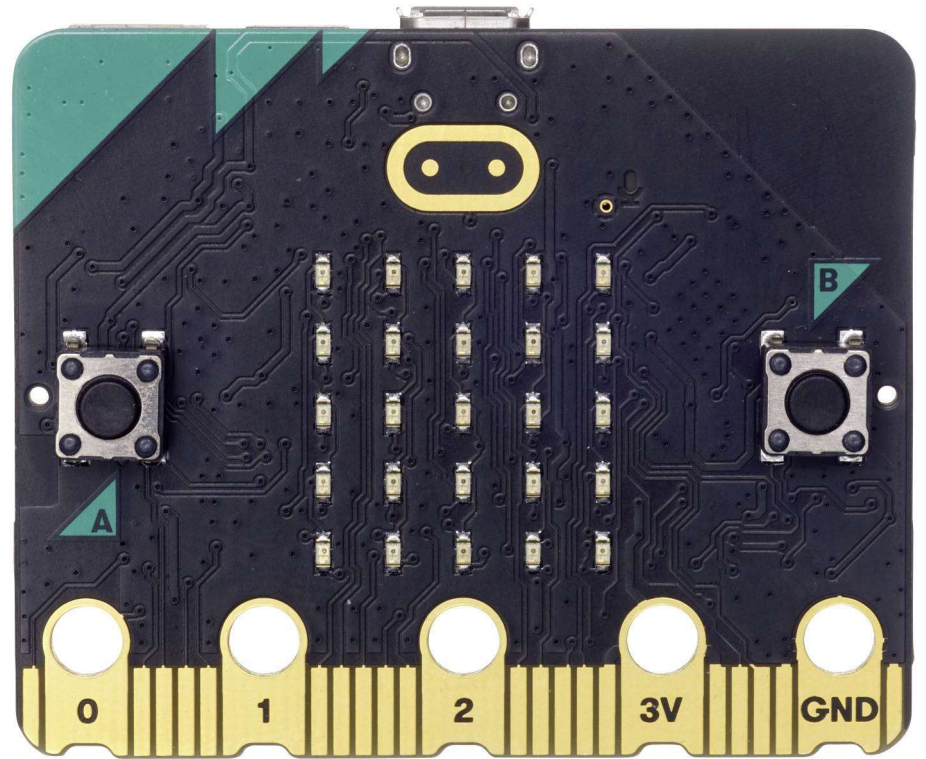
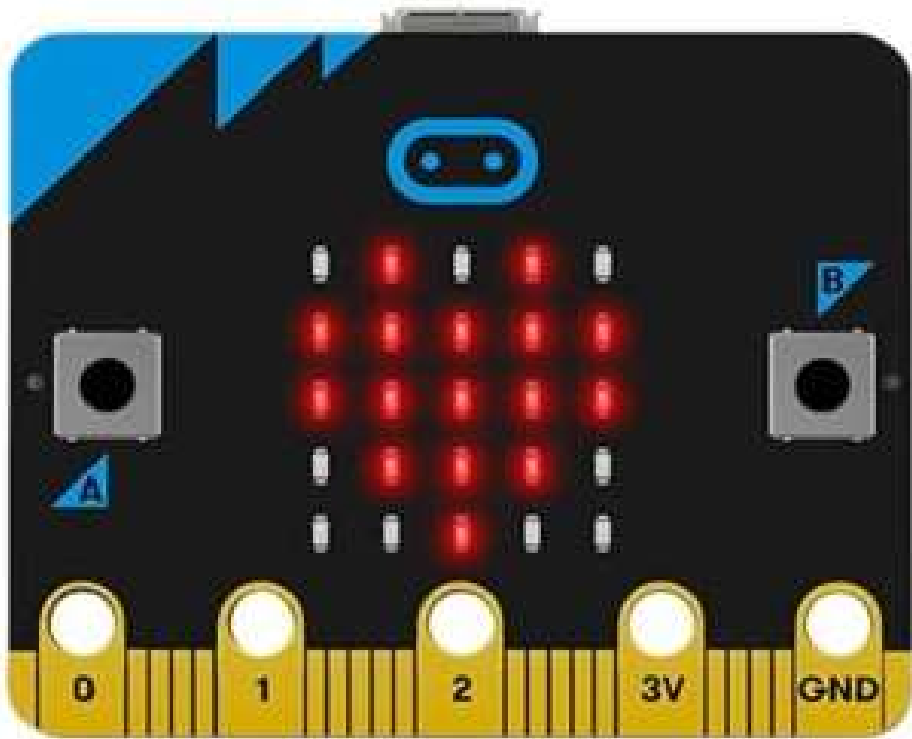
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# What is a Micro:Bit?

- BBC Micro:Bits are small computers that can be programmed using a block-based language (similar to Scratch), JavaScript or Python.
- They have several inputs and outputs available – depending on the version number.



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# Inputs

- Buttons (A, B and A+B)
- Touch Sensor (v2 only)
- Sound Sensor (v2 only)
- Light Sensor
- Accelerometer/Motion Detector
- Compass



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# Outputs

- 25 LED lights
- Speaker (v2 only)
- Live data readings



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# Pins

- Allow attachment of additional components
- Extensions add blocks to the menu for different components, i.e., Ultrasonics, Neopixels, and Servos.



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# No Micro:Bit Required!

- BBC Micro:Bits are programmed using block code in Microsoft Makecode. This is available in-browser or as a desktop app.
- The software includes a simulator that can run the programs created without needing access to a Micro:Bit.
- The simulator also replicates some components



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# Using MakeCode

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# MakeCode for Micro:Bit

- <https://makecode.microbit.org> or <https://makecode.microbit.org/offline-app>
- Block guide: <https://makecode.microbit.org/blocks>
- Lesson plans: <https://microbit.org/teach/lessons/> and <https://hwb.gov.wales/search?query=micro%3Abit>



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# Micro:Bit Classroom

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# Micro:Bit Classroom

- Allows teachers to share a base project and/or observe pupils progress on a programming task.
- <https://classroom.microbit.org/>



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# Thank You

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This presentation was bought to you by Aberystwyth University's Computer Science Department.

We offer workshops and further resources for all ages.

For more details, please visit:

<https://fbaps-outreach-hub.dcs.aber.ac.uk/CompSci/homePage.html>

Thank you