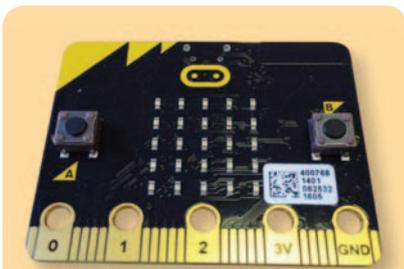


The future is here and it is BBC micro:bit

The giveaway of the BBC micro:bit free to all S1 pupils in Scotland could be the most important recruitment tool for future STEM related careers in a generation.



“The micro:bit aims to inspire young people to get creative with digital and develop skills in Technology, Engineering and Science.”

BBC website

The first thing that is clearly obvious about the micro:bit is its small size, just 50 mm x 40 mm which is less area than a credit card. However, it does manage to pack lots of features such as an attractive LED light array, 2 user controlled push buttons, an impressive 256k Flash Memory with both USB and Battery connectors, a 23 pin edge connector and also the potential for Bluetooth control!

Using the free Microsoft Block Editor software from <https://www.microbit.co.uk/> allows simulation of commands and outcomes as soon as the micro:bit comes out the box. In fact you don't actually require a micro:bit to simulate outputs and outcomes, which may be a big plus point should your pupil numbers outweigh the micro:bit numbers in front of you.

The BBC micro:bit has recently been launched in conjunction with a series of teacher CPD opportunities all across the UK. Every S1 pupil in Scotland is eligible to receive a BBC micro:bit free of charge and schools will make the decision whether they go home in their school bags or remain on campus as a resource. The small device can use a variety of different coding languages and is aimed at increasing STEM engagement across the board.



Figure 1 - Simply click and drag the required commands into a sequence, arrange the timing options of the LED lights as required, then simulate on screen before sending the command to your own micro:bit.



micro:bit CPD event.

The click and drag features of Block Editor mean that no prior knowledge of coding or language is required and that enthusiasm can be very quickly generated in your classroom.

SSERC hosted the first official BBC micro:bit CPD event for secondary teachers in March. The event was hugely over subscribed with guest presenters arranged by The Institution of Engineering and Technology and the National STEM Learning Centre.

During the CPD event, the teachers of various subjects worked through different tutorials similar to the ones they may teach in schools. An atmosphere more commonly associated with university or college tutorial labs for undergraduates or postgraduates soon evolved as the teacher groups went through a process of trial and error, and learning the basics of using Block Editor and Python language.

Recommendations for equipment purchases in schools, links to available online teacher resources and a very well engaged Q&A session during the plenary finished off an extremely valuable learning day for all involved.

In conjunction with the previously issued Quick Start Guide booklet the CPD at SSERC saw delegates receive a free copy of the IET Teaching Resources booklet (Figure 2). ◀



Figure 2 - BBC and IET Teaching Resources booklets.

BBC micro:bit quick links

- 1) www.microbit.co.uk - this is the official home page of the micro:bit and where the different language editors are kept. It has a very simple layout and is easy to follow.
- 2) www.kitronik.co.uk - an official partner of the BBC micro:bit and everything they use in their demonstrations is available to buy from the site.
- 3) www.techwillsaveus.com - a technology start up who have embraced the fun value of the micro:bit with lessons and products to purchase on their site.
- 4) www.sciencescope.uk - a more science focused education organisation with resources, lessons and available products on their website.
- 5) www.microbitgadgets.co.uk - a website full of promise including the legendary resource "How to pilot a Raspberry-Pi robot with your micro:bit!"
- 6) <http://faraday.theiet.org> - 13 classroom lessons form an official partner to get you started. Complete them all and very quickly you'll find yourself more than confident with the micro:bit.