



Make Something Cool: Turning Poundland into tech

Les Pounder
@biglesp
bigl.es



Who am I?

Les Pounder <http://bigl.es>

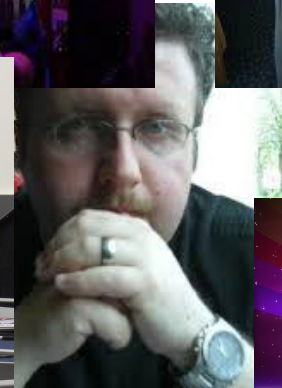
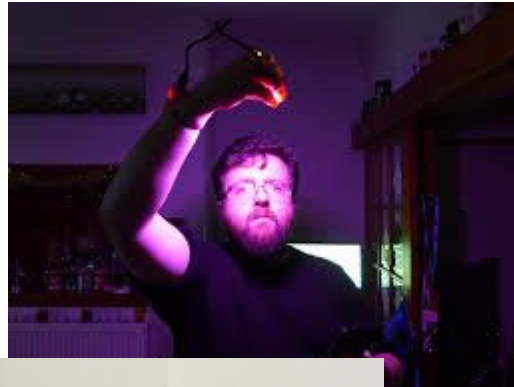
Tech Journalist - Linux Format, Linux Voice, The MagPi, Hackspace, Beanz, Electromaker.io, Tech Radar, Element 14.

Former Raspberry Pi Picademy Trainer

Maker of cheap tech

Greggs & Poundland Brand Ambassador

Never looks good in a photo >>>



So what are we doing today?

Playing with the micro:bit

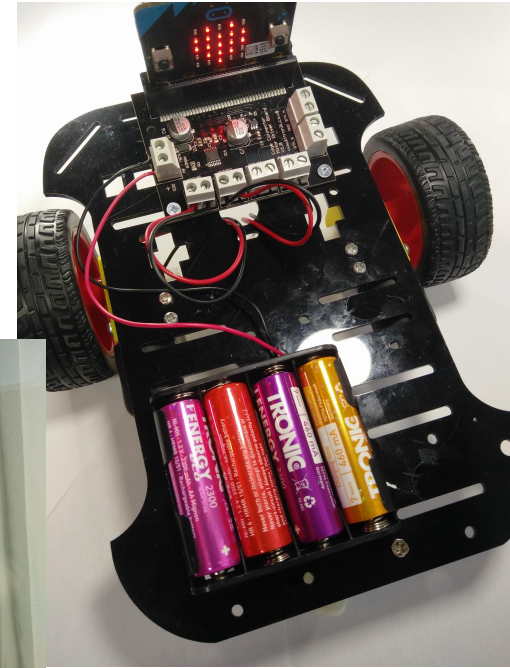
Learn a few new skills

Play with toys

Hack things

Learning to FAIL!

Have fun



Did you say FAIL?

F irst (Further)

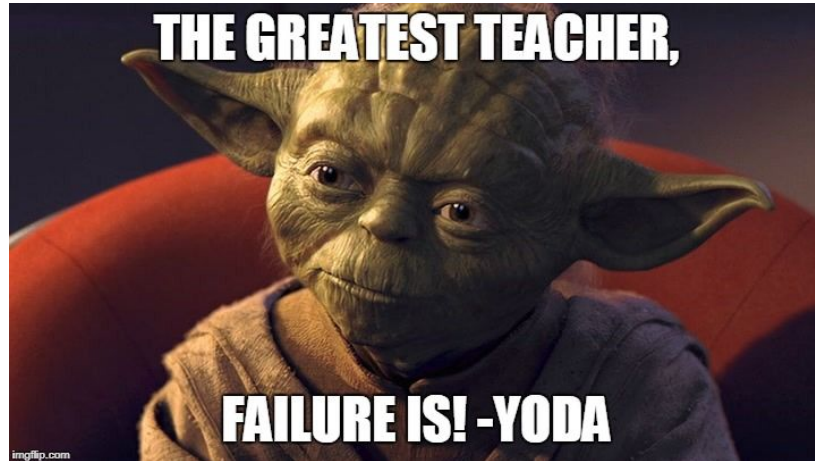
A ttempt

I n

L earning

Learn from failure

Celebrate success



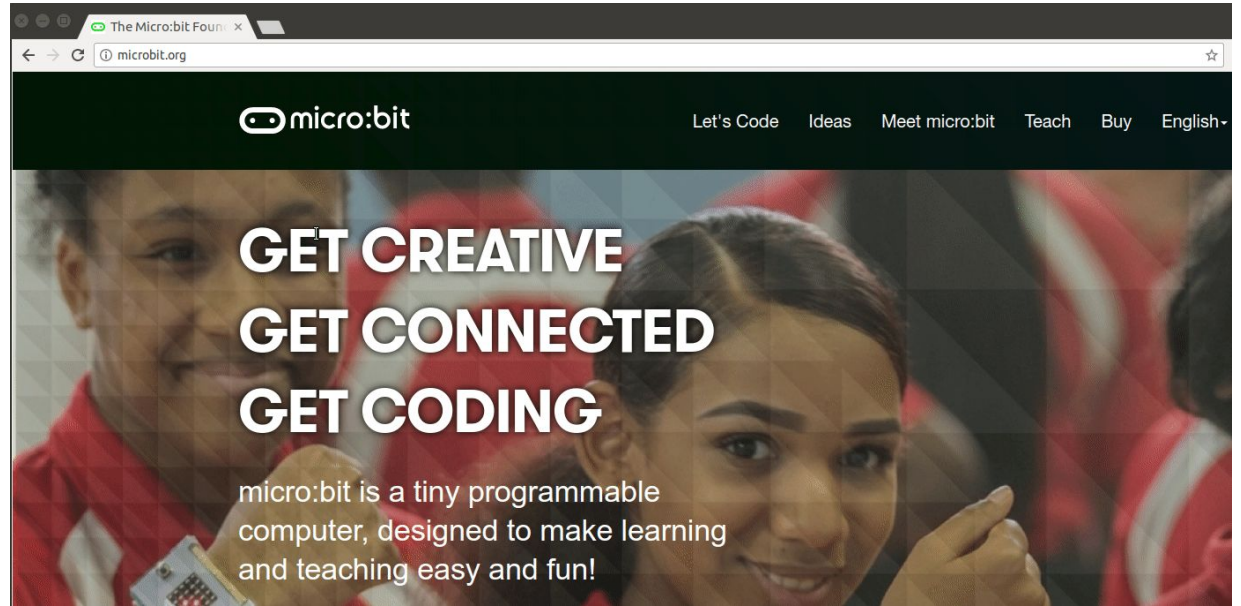


Playtime!

Open your web browser to

<http://microbit.org/>

Click on it!



JavaScript Blocks Editor

Click on Let's Code



JavaScript Blocks Editor

The micro:bit's JavaScript Blocks editor makes it easy to program your BBC micro:bit in Blocks and JavaScript.

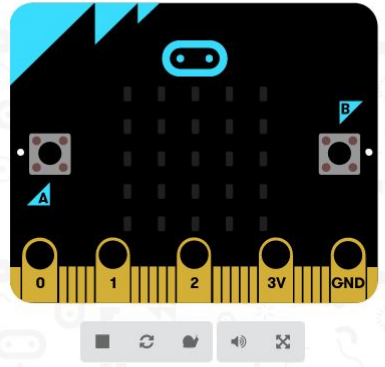
Powered by MakeCode. If you have any issues accessing the editor, check that it isn't [blocked](#) in your school. If you need some inspiration then check out these [Projects](#).

Let's Code

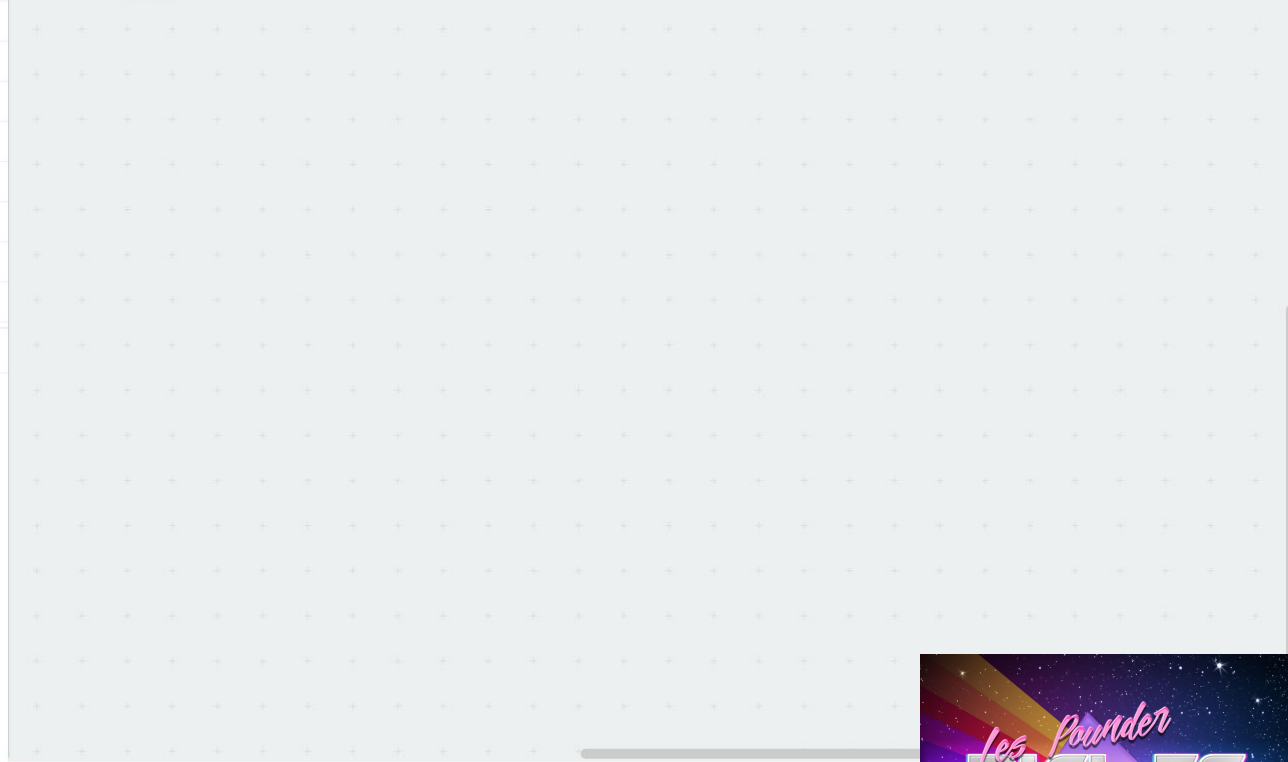
Reference

Lessons





- Search...
- Basic
 - Input
 - Music
 - Led
 - Radio
 - Loops
 - Logic
 - Variables
 - Math
 - Advanced



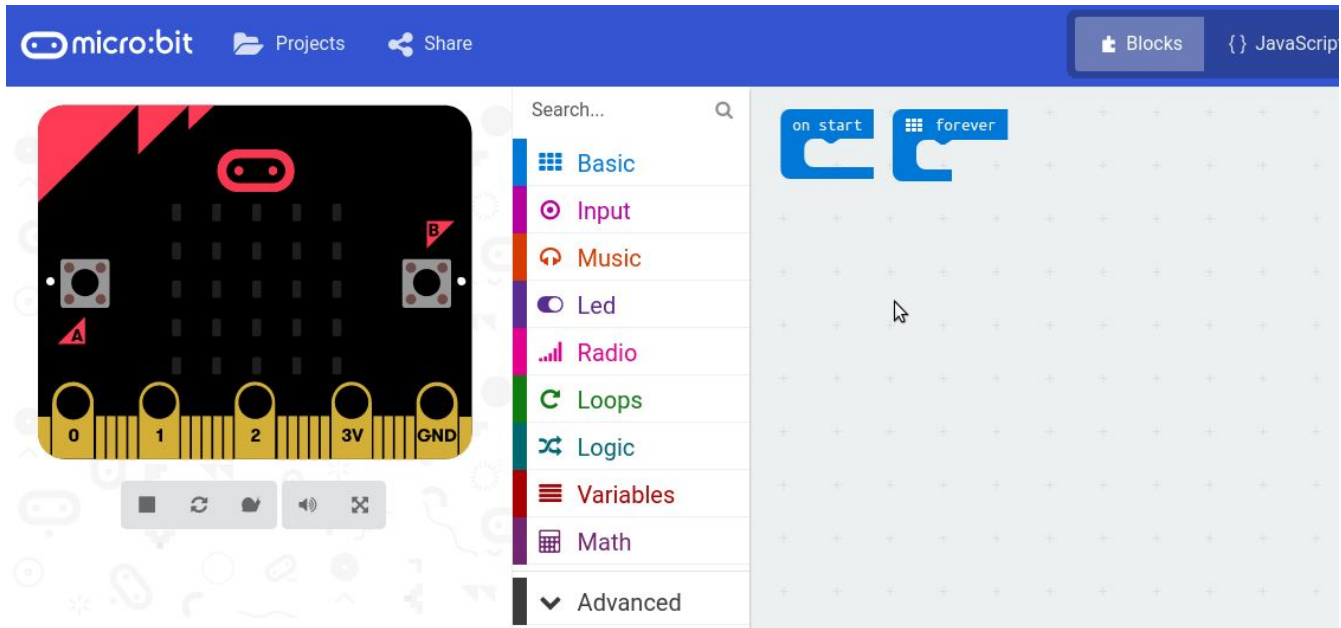
Getting Started

Download

Untitled



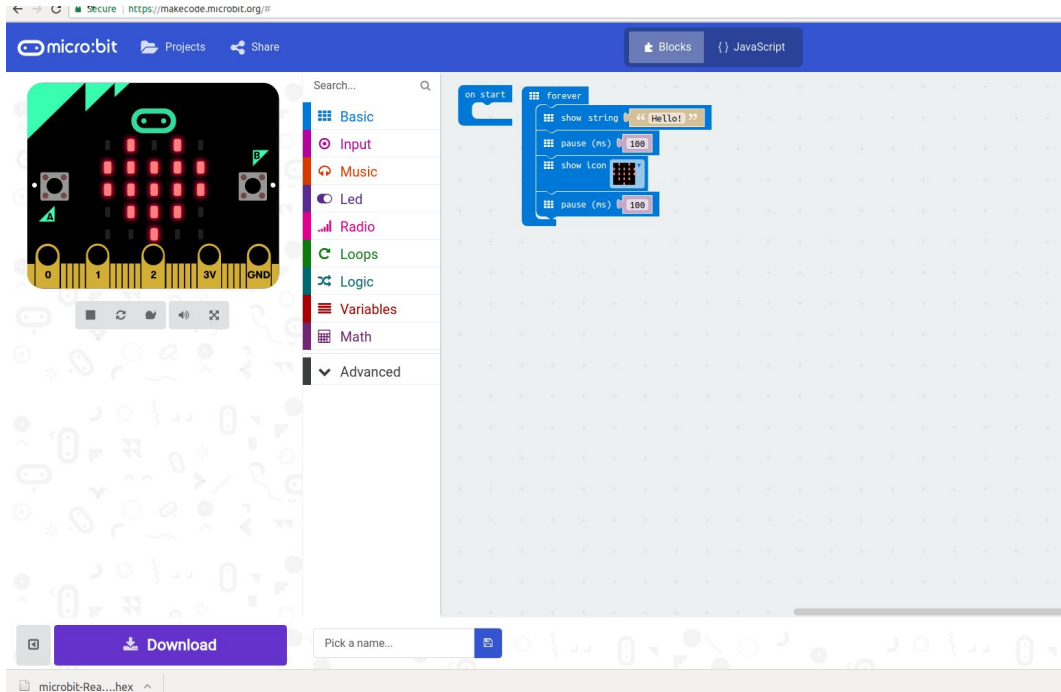
Building Code



The screenshot shows the micro:bit online code editor interface. At the top, there is a blue header bar with the micro:bit logo on the left, and navigation links for "Projects" and "Share" in the center. On the right side of the header, there are two tabs: "Blocks" (selected) and "JavaScript". Below the header, the interface is divided into three main sections. On the left, there is a large image of the micro:bit hardware board. Below the board image are several small icons: a square, a refresh symbol, a speech bubble, a speaker, and a close symbol. In the center, there is a vertical sidebar with a search bar at the top. Below the search bar is a list of categories: Basic, Input, Music, Led, Radio, Loops, Logic, Variables, Math, and Advanced. On the right, there is a large workspace with a light gray grid background. At the top of this workspace, there are two blue blocks: "on start" and "forever". A mouse cursor is visible in the center of the workspace.

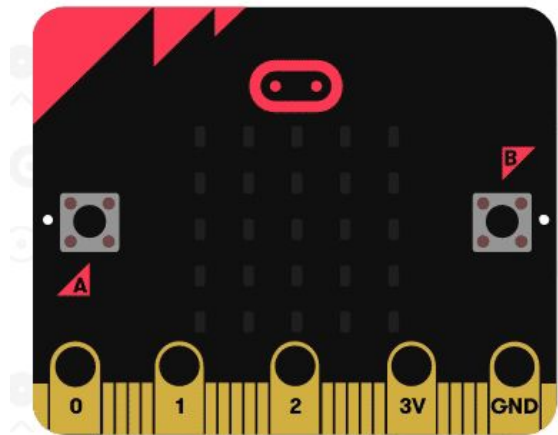


Getting Code On The micro:bit



The screenshot shows the MakeCode editor for the micro:bit. On the left is a virtual representation of the micro:bit board with a grid of red LEDs. Below it are icons for erasing, refreshing, and deleting code. A sidebar on the left lists various code blocks: Basic, Input, Music, Led, Radio, Loops, Logic, Variables, Math, and Advanced. The main workspace contains a script starting with 'on start', followed by a 'forever' loop containing 'show string Hello!', 'pause (ms) 100', 'show Icon', and another 'pause (ms) 100'. At the bottom, there is a 'Download' button and a text input field labeled 'Pick a name...'. The browser address bar at the top shows 'https://makecode.microbit.org/#'.





Search...



- Basic
- Input
- Music
- Led
- Radio
- Loops
- Logic
- Variables
- Math
- Advanced
- Functions
- Arrays
- Text

```
on button A pressed
  if light level < 128 then
    show icon [LED icon]
  else
    show icon [LED icon]
```

And these...

```
on button A pressed
  repeat 4 times
    do
      digital write pin P0 to 1
      pause (ms) 500
      digital write pin P0 to 0
      pause (ms) 500
```

```
on button A pressed
  for index from 0 to 1023
    do
      analog write pin P0 to index
      pause (ms) 20
  digital write pin P0 to 0
```

```
on shake
  show number pick random 0 to 6
  pause (ms) 1000
```





Challenge Time!

Can you turn a box of #Pounderland ~~to~~ goodies into something cool using the micro:bit?

- We have copper slug tape
- Foam / paper shapes
- Pipe cleaners
- Halloween LEDs
- Solar Lightbulb
- Rave LED sticks
- Get into teams and have fun!



So why did we do this?

Making should be fun!

Learning via making is where we FAIL and learn from failure.

Computer Science is not just hello world!

Computer Science is also physical computing.

