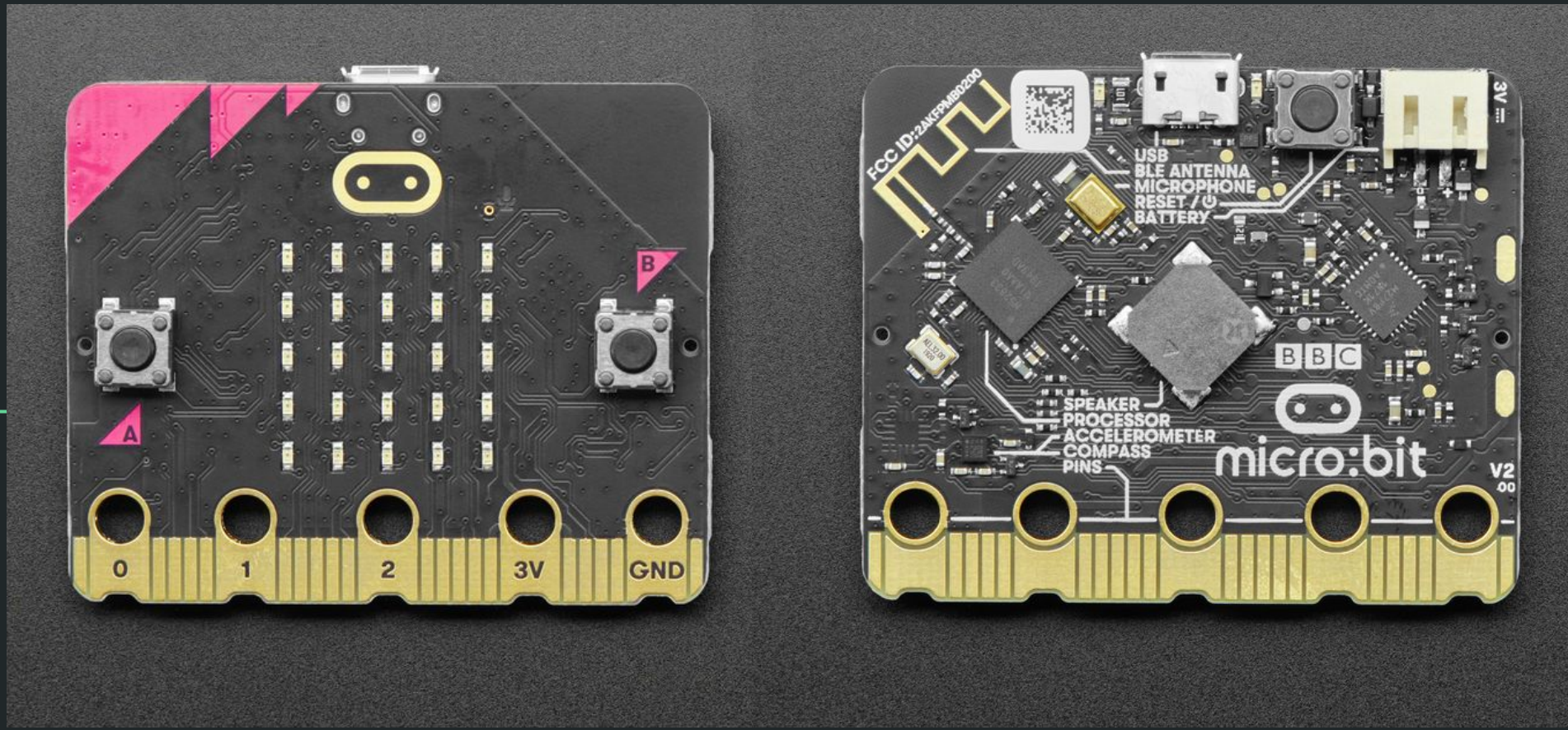
IEEE Girls Make STEM with Heart
BBC: Microbit v2

Steve Case

BBC micro:bit v2

BBC Micro:bit v2 Development Board



BBC micro:bit Development Board

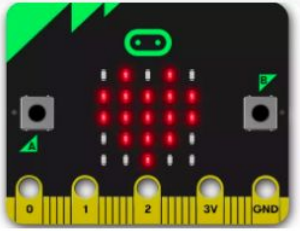
BBC Micro:bit

micro:bit

Home learning activities

Set 1: Icons and animals

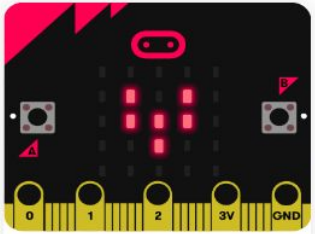
By following this sequence of projects, you'll learn how to create different images on the micro:bit LEDs by sequencing instructions and using the buttons. You'll then bring your creations to life using animation and loops.



Heart

Light up your micro:bit with love by showing a heart

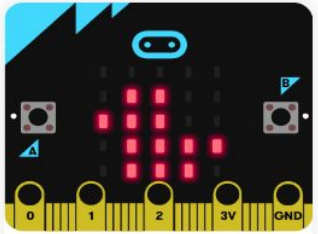
Beginner



Beating heart

Make your micro:bit's heart beat using loops

Beginner



Animated animals

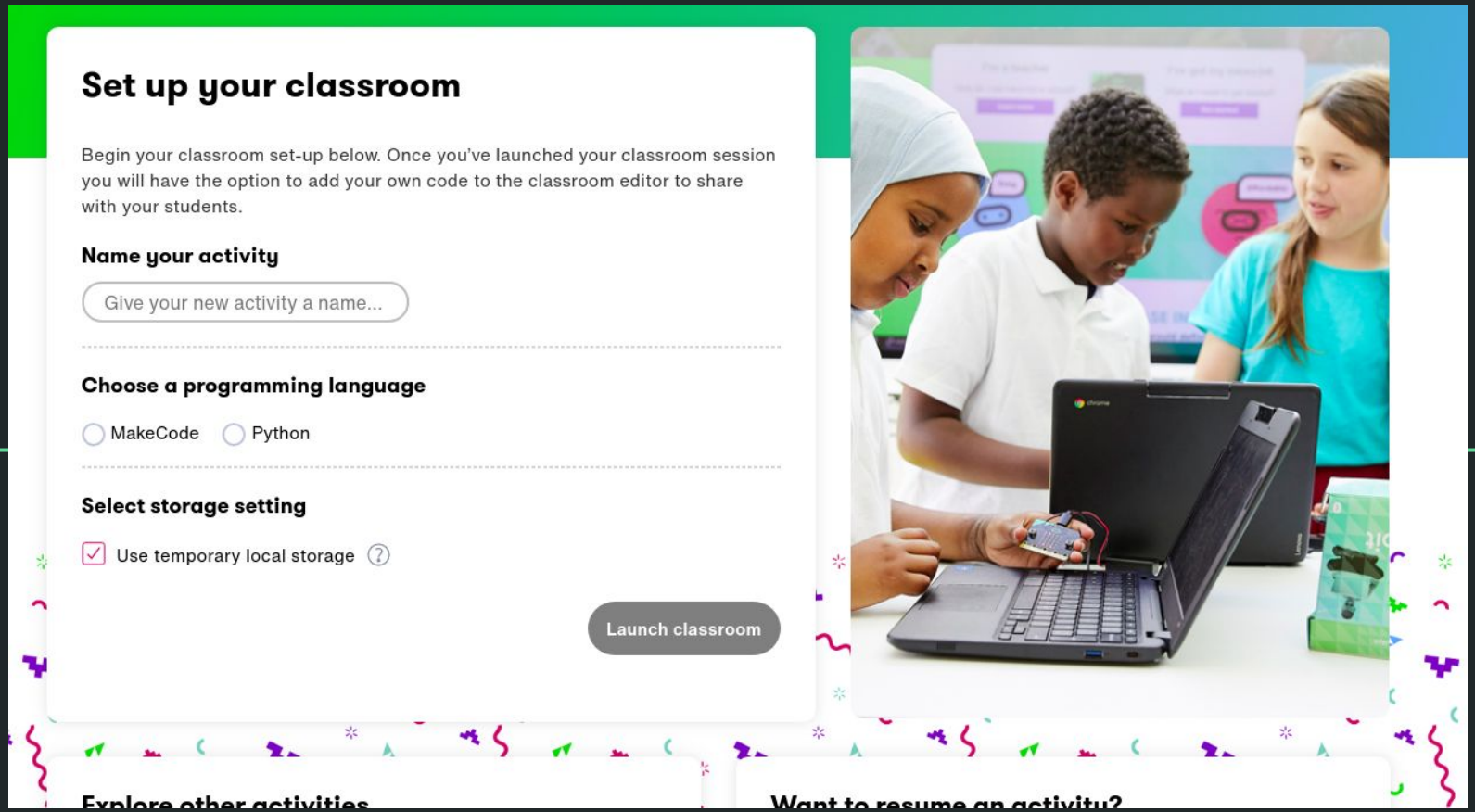
Animate your own animals on the micro:bit display

Beginner

Set 2: Emotions badge

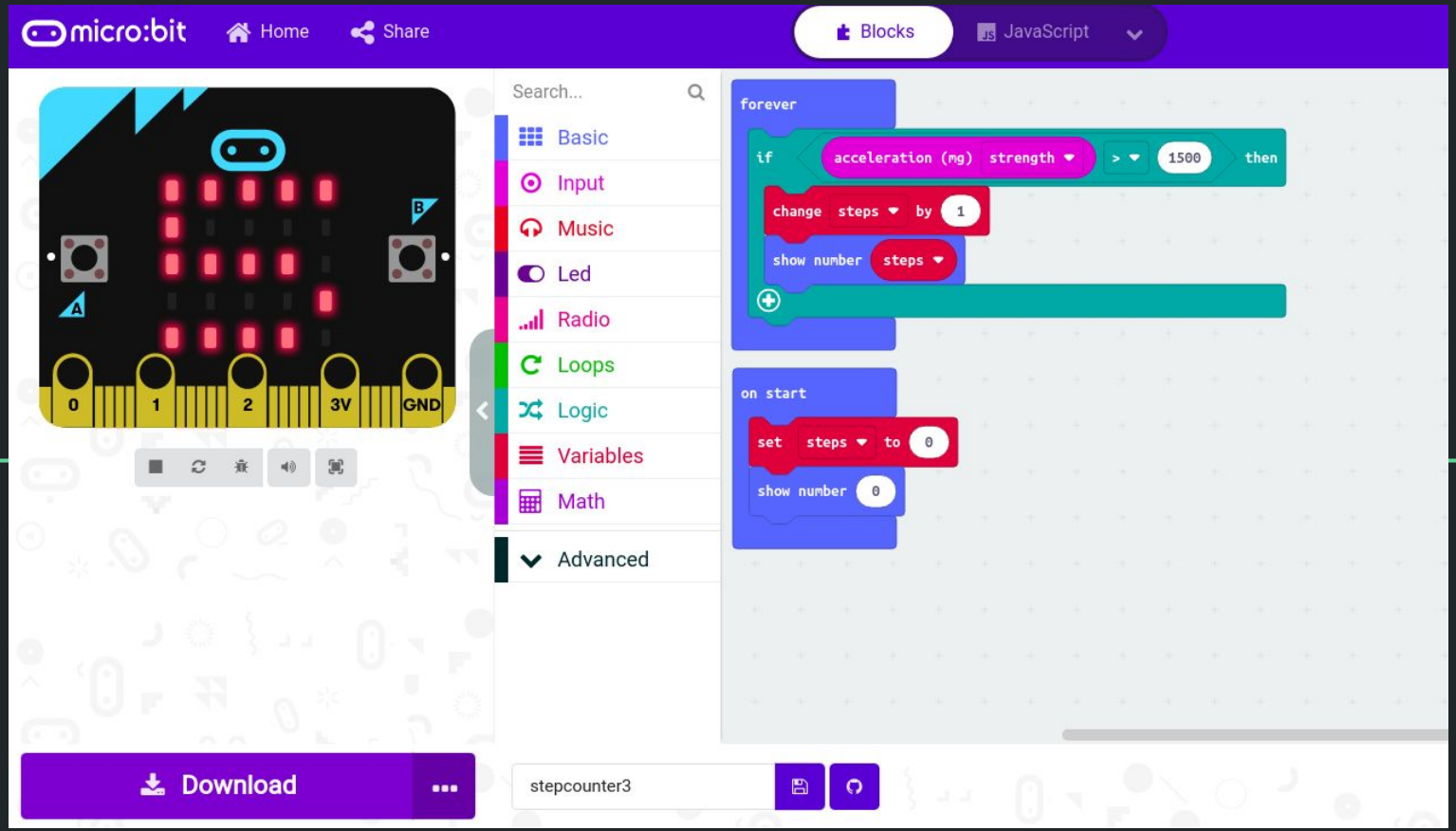
Follow this sequence of projects to create an emotion badge using the LEDs, buttons and accelerometer to let others know how you are feeling. First, you'll program your micro:bit to show happy and sad faces before making them flash and then showing more emotions when your micro:bit is shaken.

BBC Micro:bit



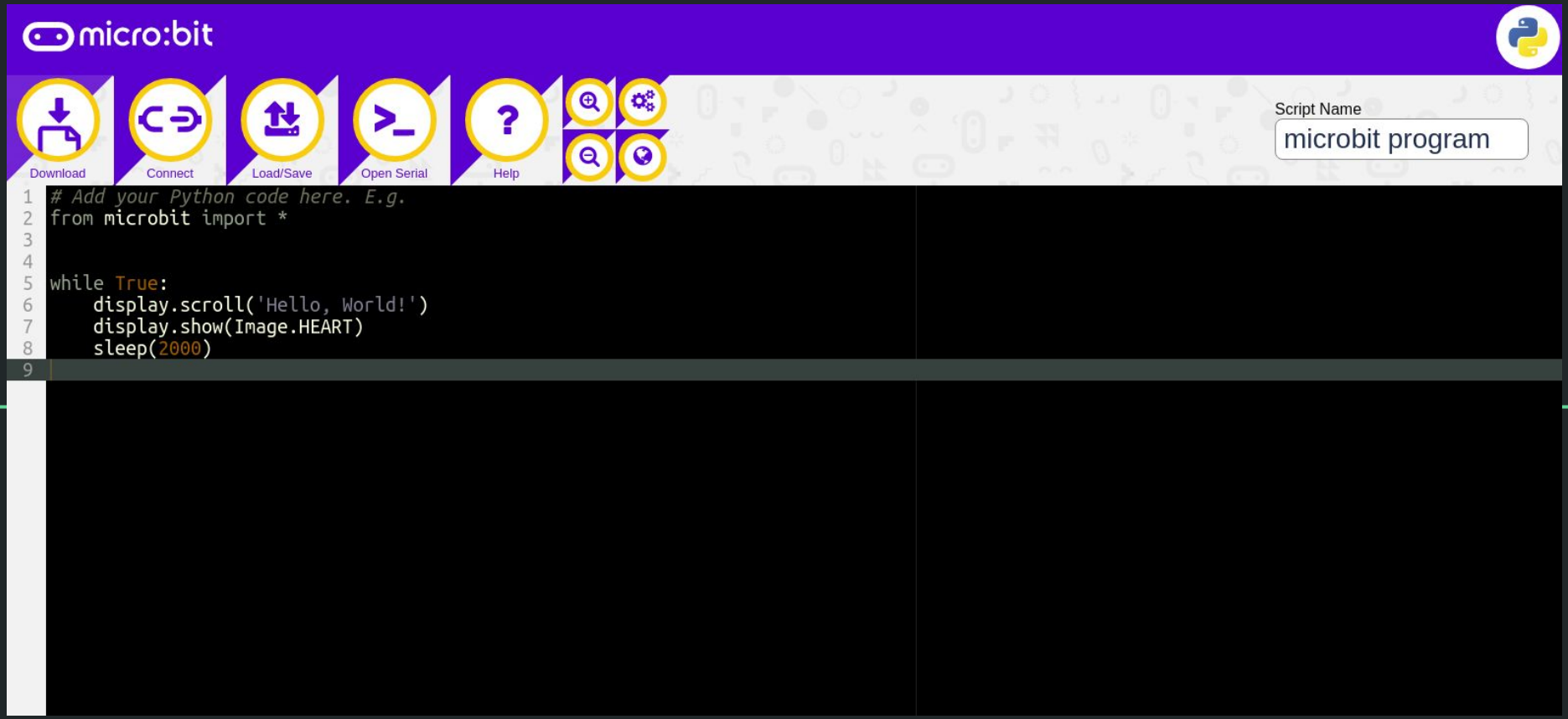
BBC micro:bit

Microsoft MakeCode



BBC Micro:bit

Python Editor



Mu Python Editor

Reference material

Adafruit Industries: www.adafruit.com
Gemma M0 learning: www.learn.adafruit.com/adafruit-gemma-m0?view=all

Sparkfun electronics: www.sparkfun.com

Mu-Editor Installation:
https://codewith.mu/en/download

Seminar Slides:
https://docs.google.com/presentation/d/1-rhsECbdl-_QQHVEifSHUANQlVRY3bAzd5QX7KLlMLc/edit?usp=sharing

Python:
https://www.w3schools.com/python/default.asp
https://www.python.org/ (advanced full reference for Python)
https://wiki.python.org/moin/BeginnersGuide (still pretty advanced)