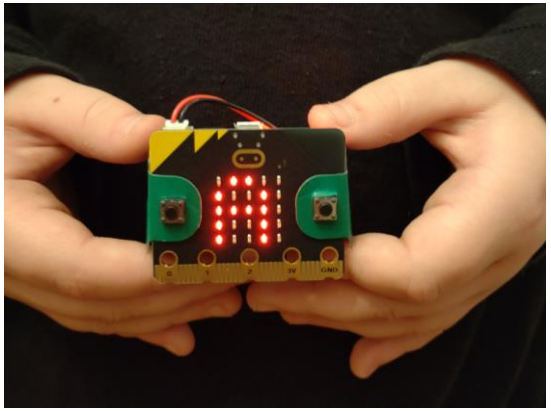
micro:bit

First lessons with MakeCode and the micro:bit

Lesson 1
Name badge





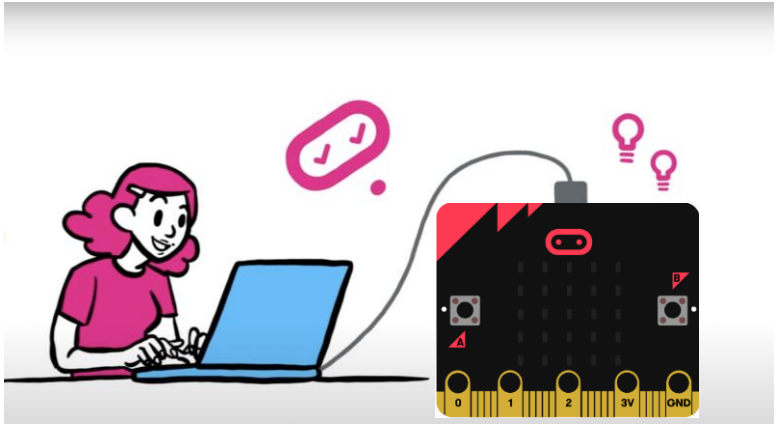
Recap: what is a computer?

- What do computers do?
- Where do we find them?
- Is a phone a computer?
- A game console?
- What else do you think has a computer inside?



Think: what is a micro:bit?

- A tiny **computer**
- You tell it what to do by writing instructions in **code**
- The code is an **algorithm**, a sequence of instructions.
- The micro:bit can show words on its LED display output.
- You can unplug your micro:bit, attach a battery pack and the code still works



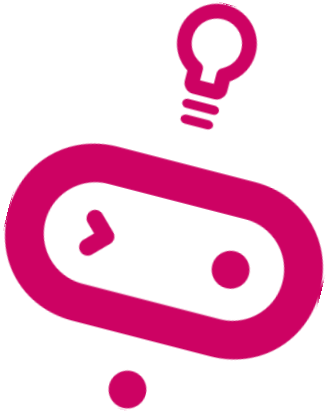
Think: introduction to the BBC micro:bit



Optionally play video: https://youtu.be/u2u7UJSRuko

Think: learning objectives

- I can explain that the micro:bit is a tiny computer.
- I can explain that computers need to be given sets of instructions (an algorithm) in code.
- I can give the micro:bit instructions in code to make a name badge using the LED display output.



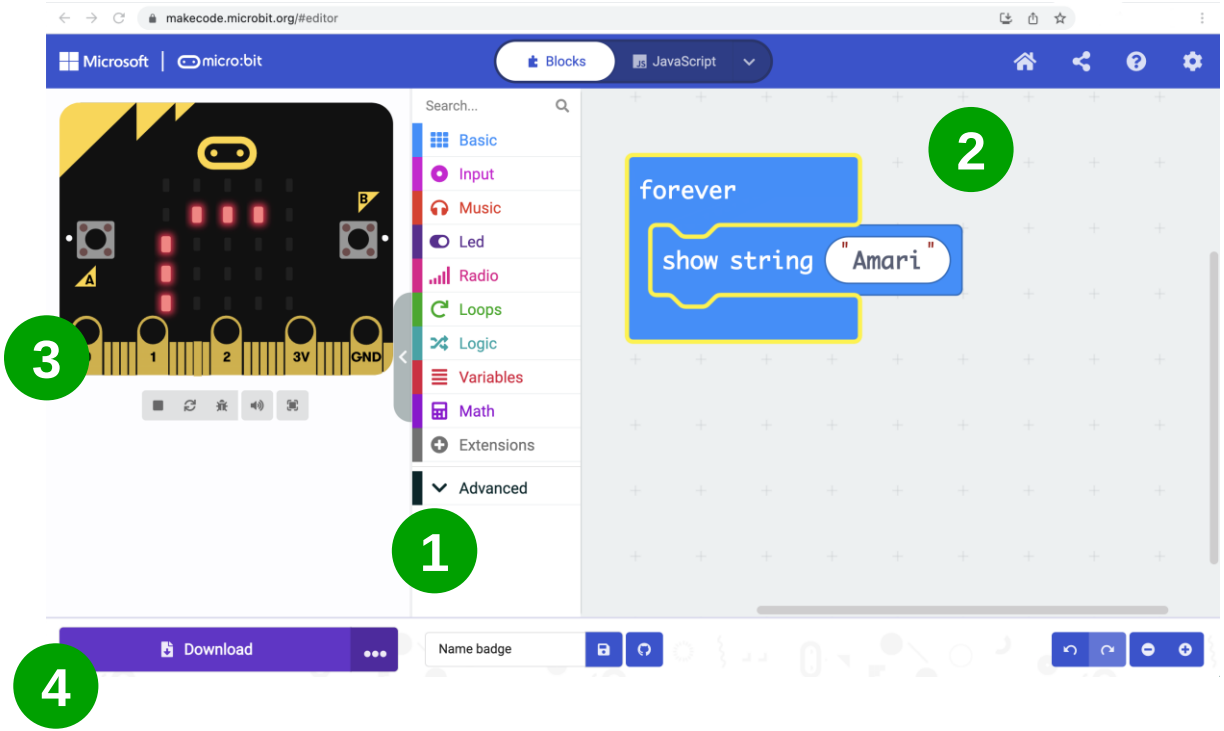
Think: name badge introduction video



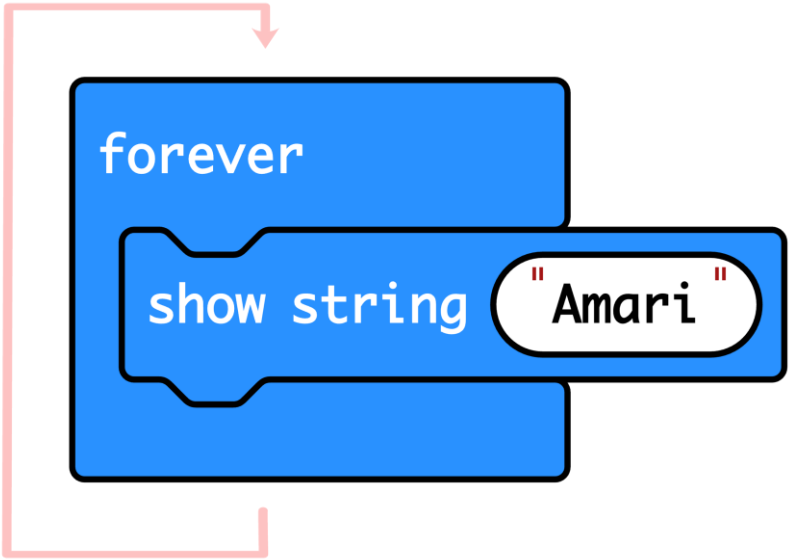
Optionally play video: https://youtu.be/teC0wzWF4tI

Introducing the MakeCode editor

1. **Toolbox**: find code blocks
2. **Workspace**: assemble your code
3. **Simulator**: test your code
4. **Download** code to your micro:bit



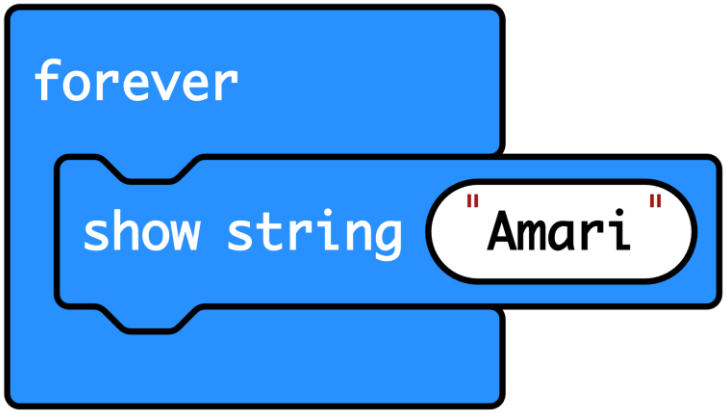
Create: examine the code



- **‘Forever’** is a loop that keeps the code running.
- **‘Show string’** scrolls the string of letters that make up your name across the LED display output.
- The code then goes back to the top of the loop and runs again.

Teacher: open completed code in editor

Create: build the code



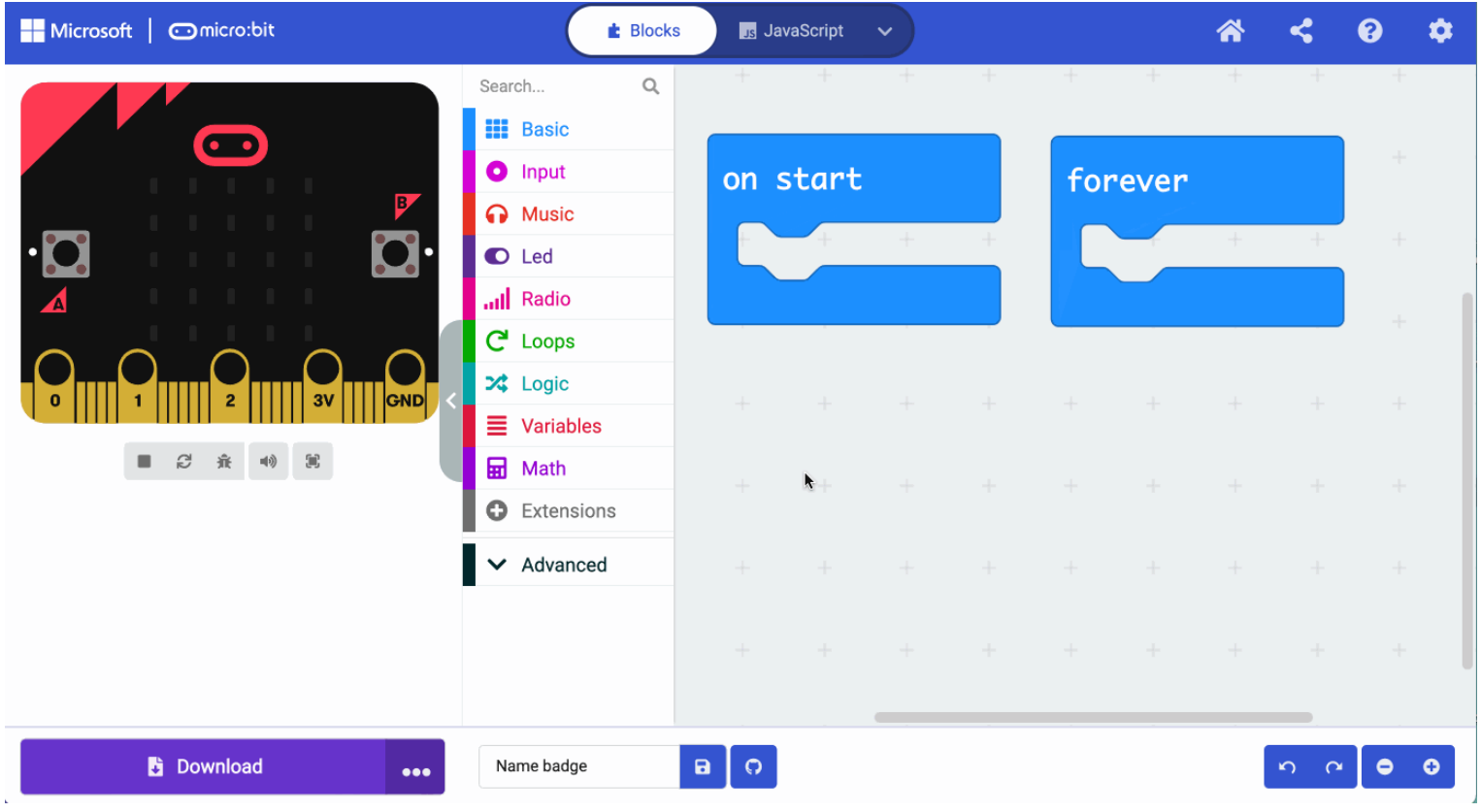
- Open a new MakeCode project https://makecode.microbit.org/

Create: coding video



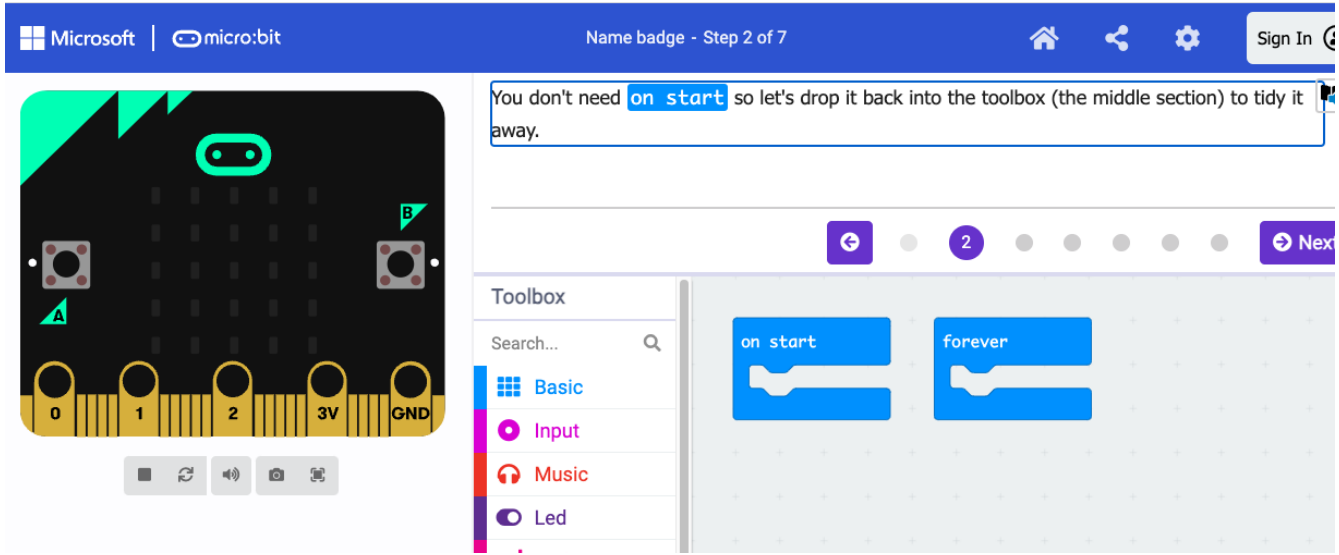
YouTube coding video: https://mbit.io/lessons-name-code-video

Create: coding animation



Create: step-by-step online tutorial

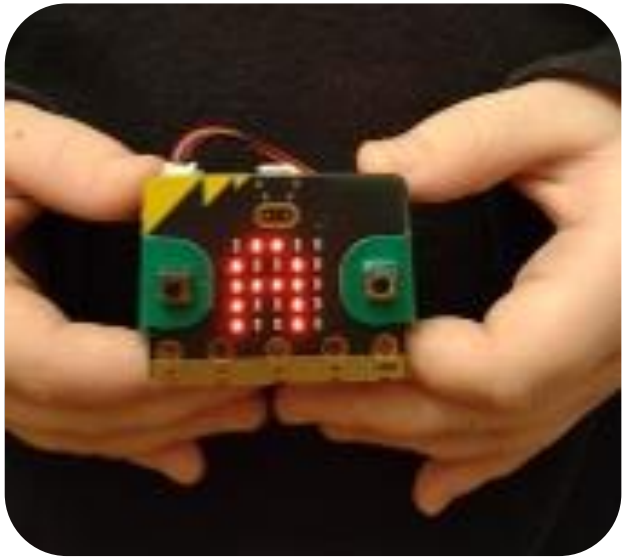
https://mbit.io/tutorial-name-badge



Evaluate

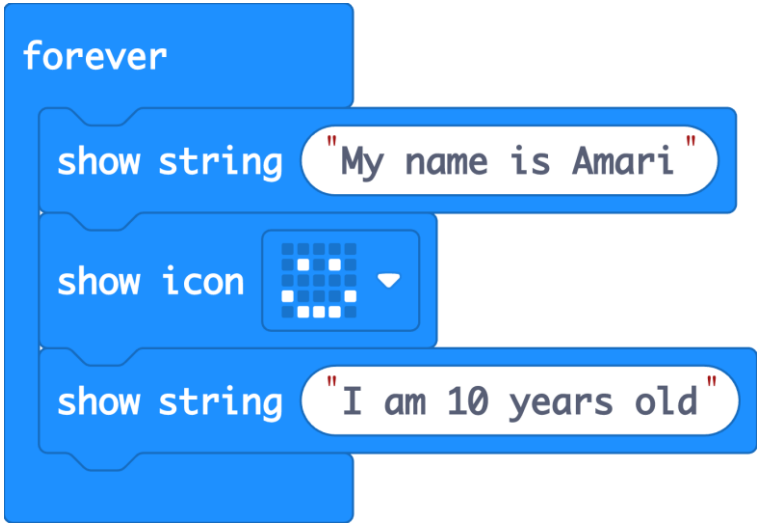
Download your code to a micro:bit

- Does it work as you expect?
- How good is the project?
- Could it have other uses?
- How does it work?



Extend

- Add more words or numbers to express more about yourself.
- Add some icons (pictures) using the ‘show icon’ block to show how you’re feeling or express your personality.

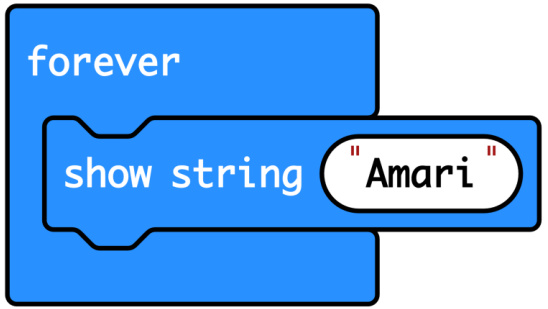


Share: revisit the learning objectives

- I can explain that that the micro:bit is a tiny computer.

- I can explain that computers need to be given sets of instructions (an algorithm) in code.

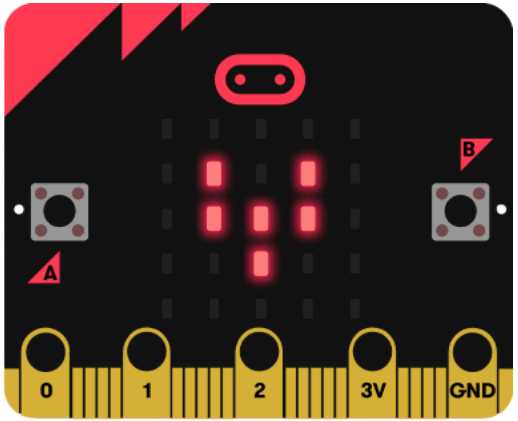
- I can give the micro:bit instructions in code to make a name badge using the LED display output.



Next steps

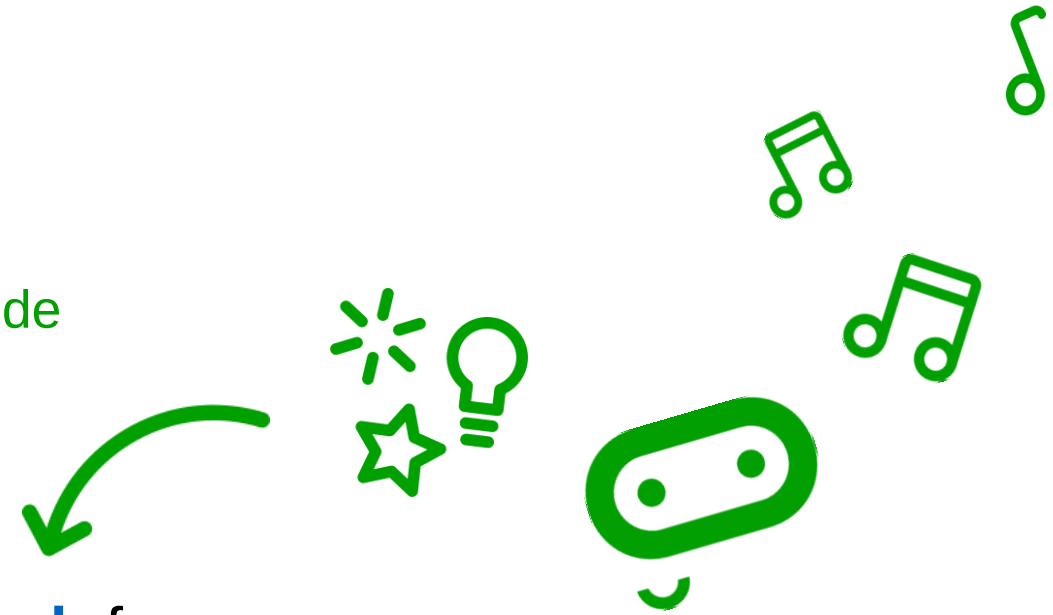
Today we used the **‘forever’** loop block and instructions to make name badges.

Next time we’ll use the **‘forever’** loop block and sequences of instructions to make animations.



micro:bit

First lessons with MakeCode
and the micro:bit



Visit microbit.org/teach for more lessons, projects, courses and help

This content is published by the Micro:bit Educational Foundation under a [Creative Commons Attribution-ShareAlike 4.0 International (CC BY-SA 4.0)] licence