

I micro:bit

By: Jen Perry

Duration: 1 hour

LEVEL	SUBJECTS	PROVINCES / TERRITORIES	TOOL
Grades 1-3	Science and Technology	Across Canada	Micro:bit

Overview

This is an introductory lesson to micro:bit. Learners will learn the parts, functions, and capabilities of micro:bit. They will also complete a beginner's micro:bit challenge. In this challenge, learners will understand that data can transfer between micro:bits using "packets" of data. Also, learners will create a forever loop to send a packet of data.

Prep Work

Materials

- micro:bit (one per learner)
- Computers or a device capable of pairing to micro:bit

The instructor should have some knowledge of micro:bit.

Learners should have had some previous experiences with coding (Scratch or Blockly).

Key Coding Concepts

- ✓ Algorithms
- ✓ Loops
- ✓ Debugging

Terminology

Algorithm

A step-by-step set of operations to be performed to help solve a problem

Loops

Running the same sequence multiple times

Debugging

Finding problems in code and solving them

References

MakeCode Reference Guide

Lesson

1. What is the micro:bit? Introducing the BBC micro:bit - BBC Make It Digital
<http://bit.ly/bbc-make-it-digital>
2. View introduction video: micro:bit Tutorial Series Part 1: Getting Started
*Note: watch first 3 minutes only
<http://bit.ly/microbit-tutorial-series>
3. Discuss projects that other learners have created (a web search of micro:bit will show many amazing projects)
4. Go to makecode.microbit.org and click the "Flashing Heart" tutorial.
5. Learners will complete micro:bit Flashing Heart lesson (30 minute lesson). Instructor should demo lesson using Smart TV/ projector.
6. Throughout the lesson, the instructor should emphasize coding concepts (including algorithms, loops, and debugging)
7. If time permits, learners can complete one of the challenge activities.

Assessment

Formatively assess learners to determine if they are able to use the MakeCode editor.

Extensions

Send a written message to a second micro bit. Check out starter project (writing your name) for tips:

<http://bit.ly/microbit-starter-project>

Create another animation and send it to the other device.

<https://makecode.microbit.org/reference>

The Official BBC micro:bit User Guide (2018) by Garteth Halfacree

Introducing the BBC micro:bit - BBC Make It Digital
https://www.youtube.com/watch?time_continue=78&v=Wuza5WXiMkc

micro:bit Tutorial Series Part 1: Getting Started
https://www.youtube.com/watch?v=ZIW_6rxYNBg

micro:bit by BBC - Creative Classroom Tips for Educators
https://www.youtube.com/watch?v=pR_AapxVudM

Starter project (writing your name) for tips by Tech Grandma Deb:
<http://tech.grandmadeb.com/wp-content/uploads/2018/09/Micro-bit-super-easy-lesson-plans-p1.pdf>