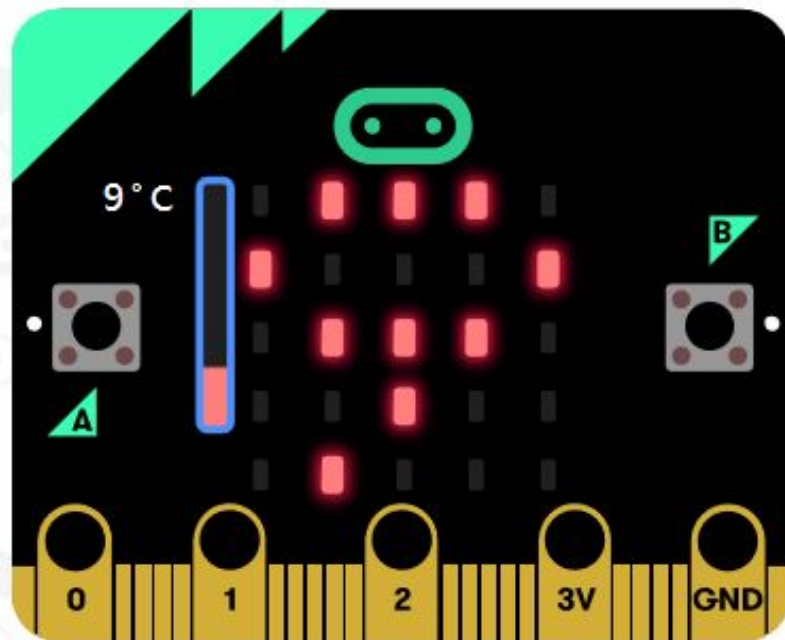


# Coding Microbits using Python

Plans, Notes, Sketches & Reflections



## STEAM

Science Technology Engineering Arts Math

Grades 7-9  
Student Booklet



A Project by  
Carl Lyman

**Utah Coding Project**



July 2019

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Name

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School

## Introduction

This booklet has been created for use in teaching **Coding Microbits using Python**. It is designed to be used in 7th - 9th grades. In this booklet there are pages for planning projects, notes & reflections, and pages to make sketches of ideas.

The course contains 6 modules and with project in the end. Each module should be able to be completed in about 3-5 hours. The projects are designed to teach creativity, collaboration, problem solving, computational thinking, coding using Python, and thinking that leads to innovation.

## Resources

Microbit website - <https://microbit.org/>

Python IDE - <https://python.microbit.org/v/1.1>

Micro Python reference - <https://microbit.org/guide/python/>

Microbit projects - <https://microbit.org/ideas/> > Python

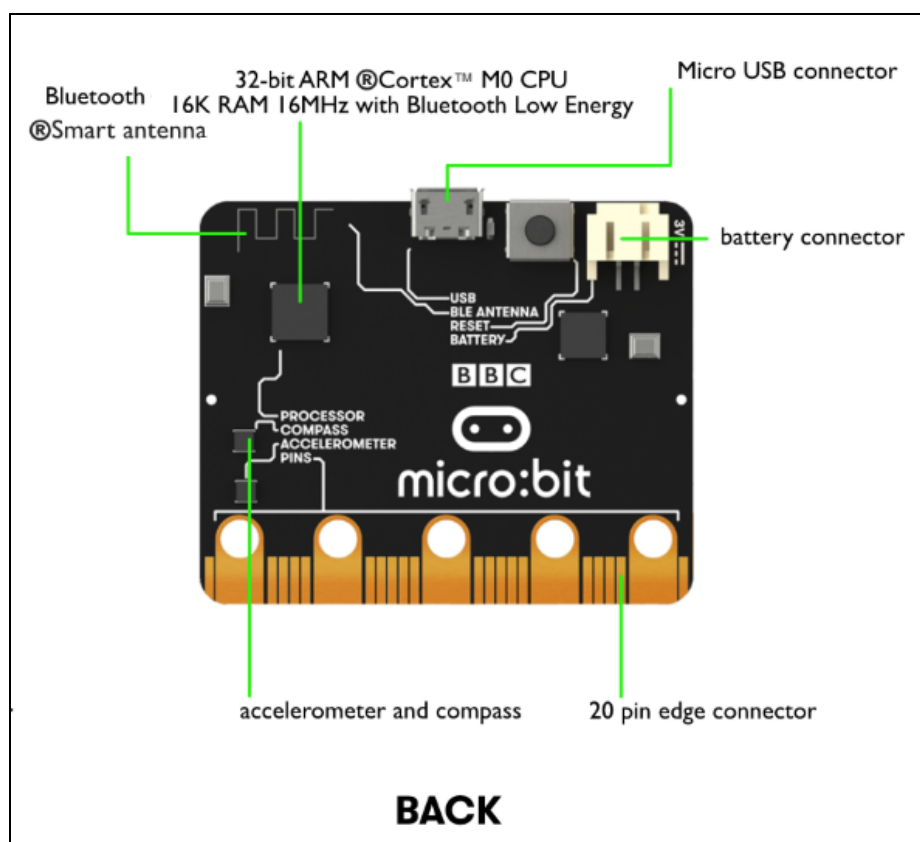
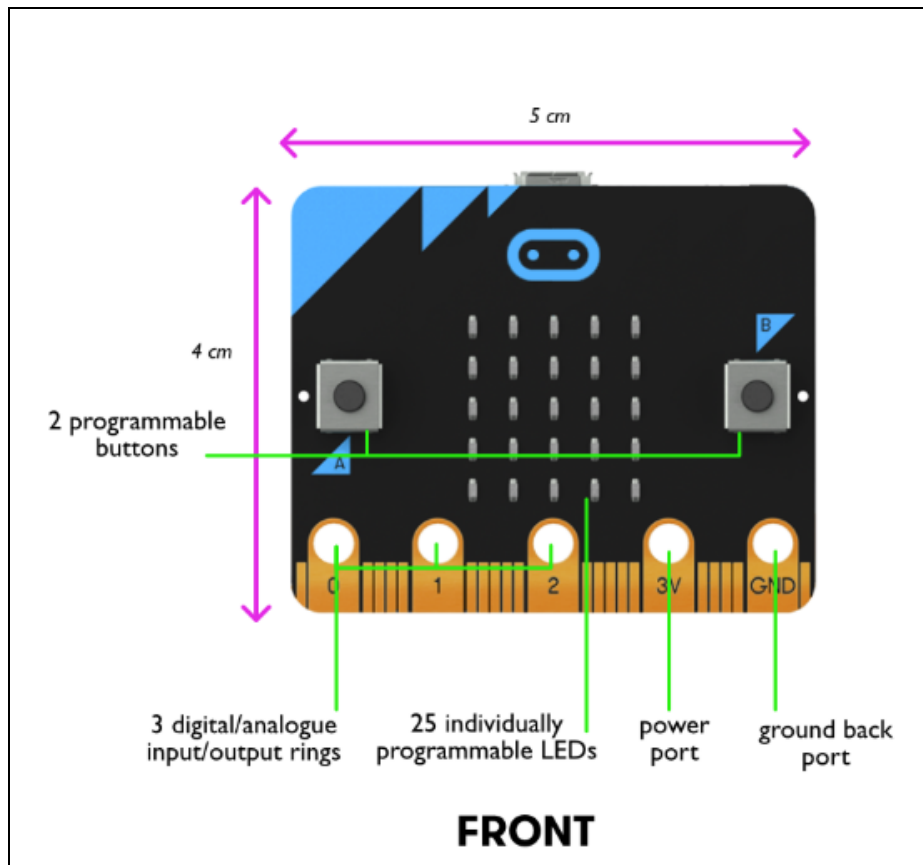
Microbit Courses - <https://makecode.microbit.org/courses>

Coding Microbits using Python website - <http://UtahCoding.org> >

Microbits > Python Coding Microbits

GitHub version - <https://carllyman.github.io/Python-Microbits/>

# Microbit Front & Back Features




The micro:bit has the following physical features:


- [25 individually-programmable LEDs](#)
- [2 programmable buttons](#)
- [Physical connection pins](#)
- [Light](#) and [temperature](#) sensors
- Motion sensors ([accelerometer](#) and [compass](#))
- Wireless Communication, via [Radio](#) and [Bluetooth](#)
- [USB interface](#)

Source: <https://microbit.org/guide/features/>


# Micro Python IDE




Download




Save




Load



Snippets



Help



Script Name

2.2a\_Sensor\_Temper.

Project Name:  
When file is saved it adds a .py to the file name.

1

# 2.2a Sensor Temperature

2

# by C Lyman

3

# March 2019

4

# Activity from Module

5

# Displays current temp

6

7

from microbit import \*

8

9

display.scroll("SEN

10

11

# forever loop for events

12

while True:

13

# button A pressed?

14

if button\_a.is\_pressed():

15

display.scroll(temperature())

16

sleep(2000)

17

display.clear

18

Menu Bar: Options to Download, Save, Load, etc.

Help

Project Comments: by starting a line with a #. Title, coder, date, & description

import - brings microbit module into Python

Events - forever loop

Button A pressed event - checks to see if button was pressed and runs the code