

# Explora Microcontroller Workshop Requirements

## **Micro:bit**

Hardware requirements:

Mac, Windows, or Chromebook with a USB port and internet connection.

Software requirements:

Web browser such as Safari, Edge or Chrome

Websites to be accessed:

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

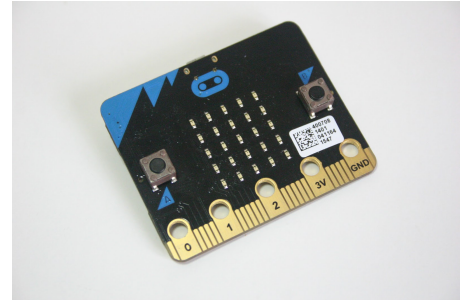
<https://makecode.microbit.org/#editor>

What to do prior to first workshop:

Nothing

Materials list:

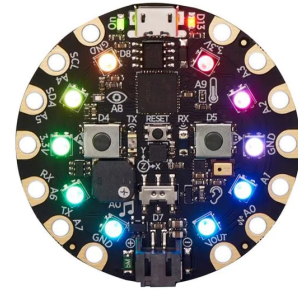
Item	URL	SKU	Price
micro:bit Go Bundle	<a href="https://www.sparkfun.com/products/14336">https://www.sparkfun.com/products/14336</a>	DEV-14336	\$16.50
Servo - Generic (Sub-Micro Size)	<a href="https://www.sparkfun.com/products/9065">https://www.sparkfun.com/products/9065</a>	ROB-09065	\$8.95
Mini Speaker - PC Mount 12mm 2.048kHz	<a href="https://www.sparkfun.com/products/7950">https://www.sparkfun.com/products/7950</a>	COM-07950	\$1.95
Alligator Clip with Pigtail (10 Pack)	<a href="https://www.sparkfun.com/products/14303">https://www.sparkfun.com/products/14303</a>	CAB-14303	\$6.95
Alligator Test Leads - Multicolored (10 Pack)	<a href="https://www.sparkfun.com/products/12978">https://www.sparkfun.com/products/12978</a>	PRT-12978	\$3.25



## **Circuit Playground**

Hardware requirements:

Mac, Windows, or Chromebook with a USB port and internet connection.



Software requirements:

Web browser such as Safari, Edge or Chrome

Websites to be accessed:

<https://makecode.adafruit.com/>

<https://makecode.adafruit.com/#editor>

What to do prior to first workshop:

Nothing

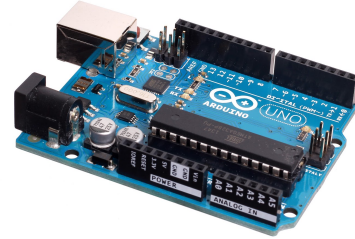
Materials list:

Item	URL	SKU	Price
Circuit Playground Express	<a href="https://www.adafruit.com/products/3333">https://www.adafruit.com/products/3333</a>	3333	\$24.95
Servo - Generic (Sub-Micro Size)	<a href="https://www.sparkfun.com/products/9065">https://www.sparkfun.com/products/9065</a>	ROB-09065	\$8.95
Alligator Clip with Pigtail (10 Pack)	<a href="https://www.sparkfun.com/products/14303">https://www.sparkfun.com/products/14303</a>	CAB-14303	\$6.95
Alligator Test Leads - Multicolored (10 Pack)	<a href="https://www.sparkfun.com/products/12978">https://www.sparkfun.com/products/12978</a>	PRT-12978	\$3.25

## Arduino

Hardware requirements:

- Windows 7 or higher computer with a USB port and internet connection
- Or
- Mac OS X 10.10 or higher computer with a USB port and internet connection



Software requirements:

- Arduino IDE 1.8.13 (download here: <https://www.arduino.cc/en/Main/Software>)
- Web browser such as Safari, Edge or Chrome

What to do prior to first workshop:

- Download and install the Arduino IDE 1.8.13 (<https://www.arduino.cc/en/Main/Software>)
- Connect your arduino to your computer, install the board drivers, and upload a sample sketch by following the directions on <https://www.arduino.cc/en/Guide/ArduinoUno>.

Websites to be accessed:

<https://create.arduino.cc/editor>

<https://www.arduino.cc/en/Guide/ArduinoUno>

Materials list:

Item	URL	SKU	Price
Arduino Uno	<a href="https://www.sparkfun.com/products/11021">https://www.sparkfun.com/products/11021</a>	DEV-11021	\$22.95
Breadboard	<a href="https://www.sparkfun.com/products/12002">https://www.sparkfun.com/products/12002</a>	PRT-12002	\$4.95
Servo - Generic (Sub-Micro Size)	<a href="https://www.sparkfun.com/products/9065">https://www.sparkfun.com/products/9065</a>	ROB-09065	\$8.95
Mini Speaker - PC Mount 12mm 2.048kHz	<a href="https://www.sparkfun.com/products/7950">https://www.sparkfun.com/products/7950</a>	COM-07950	\$1.95
Jumper Wires Standard 7" M/M - 30 AWG (30 Pack)	<a href="https://www.sparkfun.com/products/11026">https://www.sparkfun.com/products/11026</a>	PRT-11026	\$2.25
LED and Resistor Kit	<a href="https://www.sparkfun.com/products/15754">https://www.sparkfun.com/products/15754</a>	COM-15754	\$7.95
Mini Photocell	<a href="https://www.sparkfun.com/products/9088">https://www.sparkfun.com/products/9088</a>	SEN-09088	\$1.50
Potentiometer	<a href="https://www.sparkfun.com/products/9806">https://www.sparkfun.com/products/9806</a>	COM-09806	\$0.95