

# **Putnam County Microcomputer Initiative (PCMI) / micro:bit FAQ**

## **Who is getting the micro:bit devices?**

All 6th graders in Putnam County in the 2019-2020 school year. All 4 school systems in Putnam County along with Putnam County Public Library have agreed to help Castlemakers distribute the devices.

## **What is a micro:bit?**

It is a small hand-held easy to use microcomputer that has a variety of sensors. The micro:bit is a stand alone device that operates by itself, but can interact with the Internet and other micro:bits using a USB cable or Bluetooth.

## **What can I do with a micro:bit?**

Detect motion, sense direction, measure light and temperature, play music, play games and even scroll text on the display. The buttons and Bluetooth allow it to interact with other devices. It is extremely easy to program with an online website or downloadable apps for computers, tablets, and phones.

## **Do I have to give the micro:bit back to anyone?**

No, the device belongs to the 6th grader it was given to.

## **Will I need to bring my micro:bit to school?**

We certainly would like you to if asked! How they are used in the schools will be up to each individual school system - however the micro:bit remains property of the child it was given to. We also would encourage you to use it with others or to try things on your own.

## **Is there an on/off button?**

No there's not. But there is a reset button on the back of the device. We recommend you don't store the device with the battery pack plugged in, although the batteries should last a long time. It can be powered by a USB cable, which also lets you connect the micro:bit to other devices.

## **Does the micro:bit have a case?**

A cloth bag is included to hold all of the device components. The micro:bit is very durable; we do not use cases at the Makerspace. You can find cases to purchase or you can make your own if you'd like.

## **Can the micro:bit connect to other devices?**

Yes, the easiest/most used connections use the micro-usb connector and using the built in Bluetooth. There's a lot of information online for these connections. There are also connection pads on the bottom of the device where you can use the alligator clip jumpers we've included to hook it up to earbuds or even computer speakers to hear sound.

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More advanced users can also use the connection pads at the bottom of the device to control LEDs and even mechanical devices like relays and servo motors. You can also combine the micro:bit with other microcontroller boards for more complex projects using an Arduino or Raspberry Pi.

## Where can I go for more information?

<http://microbit.org> is a pretty good place to start for general information. There's a lot of other information on the Internet. If you're reading this you probably already discovered the links/info we've set up for the Putnam County program at <http://castlemakers.org/microbit> .

## What computer languages can you use to program the micro:bit?

MakeCode is available online (and as an App) and was designed to work for the micro:bit. MakeCode now supports other microcomputers besides the micro:bit; it even can create code for Minecraft. MakeCode also has a Javascript tab so you can see the code it's creating or program the micro:bit directly in Javascript.

Another popular language for the micro:bit is Python, and there is an editor specifically designed for the micro:bit on their website under "Let's Code." There are a wide variety of other software editors available for the micro:bit, including C++ and Scratch, see the alternate code editor webpage at <https://microbit.org/code-alternative-editors/> .

## I learned how to program using Scratch. Can I use it with my micro:bit?

Scratch 3.0 can be used to talk to the micro:bit. You will also need to download Scratch Link, an extension that allows you to use the bluetooth with the micro:bit. Scratch Link is a downloaded program designed for Macintosh and Windows computers, right now it doesn't work on tablets, phones, linux, or Chromebooks. MakeCode is an alternative that runs through a browser and will work with most any device that has a web browser.

## What do I do if something goes wrong with my device?

All of these devices were tested and were working before they were distributed.

Using your favorite search engine can also be helpful with the micro:bit. There is a lot of online information to help troubleshoot and program the device; that is the best place to start.

## Do have any extra micro:bits or accessories that you could sell?

Castlemakers is a non-profit organization that has been able to provide these devices through a grant from the Putnam County Community Foundation. All of the money they provided (and more) was used in purchasing and distributing the kits. Castlemakers is not a retailer, but there are firms that sell the micro:bit and various accessories for the device.