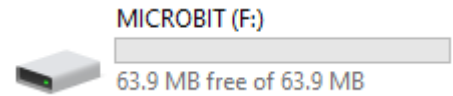micro:bit images
Monday 4/25/22

Unpack and connect your micro:bit. Plug it in to your computer.

Open the micro:bit in the Windows explorer. Double click on the MICROBIT.HTM file to visit the micro:bit website. This is the home base for all things micro:bit. I just asked you to do this so you see how you can easily get back here on your own. For now, close the browser.

There are several ways to program micro:bits including a block-based interface that works a lot like Scratch. Instead of using these web-based methods we're going to use an IDE (integrated development environment.)

Open the Mu Editor. You may or may not be faced with a window asking you to select the mode of use. Select the top item, BBS micro:bit.
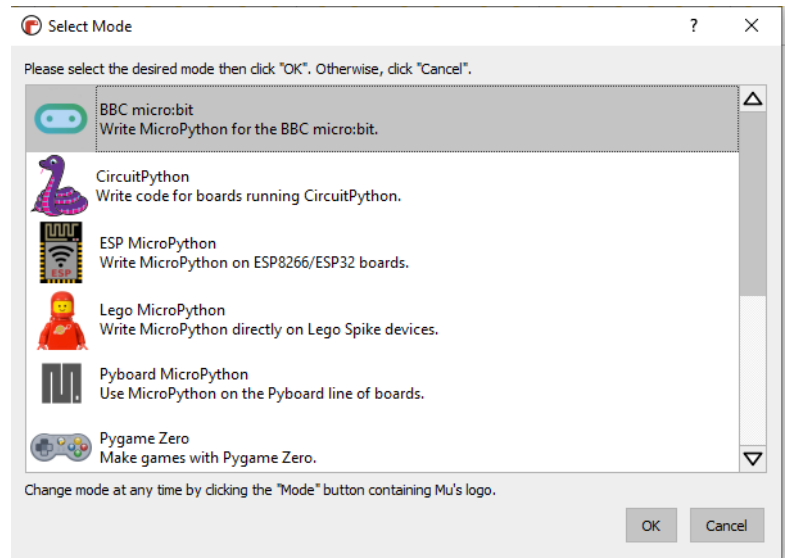
In the editor type the following program:

```
from microbit import *

while True:
    display.scroll("Mr. Hays")
    sleep(1000)
```

Change the text inside the quotes to be your first name. Load the program to the micro:bit by clicking the Flash button. Make sure it loaded by looking at the lights and seeing your name go by. If it didn't load, call me over to help you figure out what happened.

Save today's program by clicking the Save button, name it with your name and "images". Save it to the Desktop or to the folder where you've been saving your Arduino programs (that would be best).

We're now going to work through a tutorial that covers how images work with the micro:bit. Click on the following link to open the Images tutorial:

https://microbit-micropython.readthedocs.io/en/latest/tutorials/images.html

Work your way through this page. Flash the code to try things out. This page assumes you don't know anything about Python, so it should be a helpful review for us, since most of you DO know a thing or two about Python (or you once did, right? :-)

After reading through and experimenting with the material on this page, you have an assignment to complete for today:

Write and load a program that does the following:

1. Scrolls your first name to start things off.

2. Displays two of the pre-defined images for 2 seconds each.

3. Shows an image that you created using the same method they show in the boat example. Show this image for 5 seconds. It can't be anything like the boat example. I want something that is recognizable and that you personally have created.

4. Animates a sequence of images (your own, or pre-defined, I don't care) using a list that you create and populate with at least 5 images. Please do not use Image.ALL_ARROWS or Image.ALL_CLOCKS. I'm asking you to create a list variable containing at least 5 images and then animate it as shown in the example code. Play with the animation timing so that you are happy with the "show."

5. The whole process repeats forever.

6. Your name is in a comment at the top of the program. Remember, Python comments start with a # symbol. Turn your program in on the Google Classroom.

If we have time, I'd love to see your program in action.

When you are done, feel free to play around with the microbit, exploring other tutorials, trying out the block coding environment (via the web site), or otherwise figuring out some other cool things that we can do with these. They each have two buttons, for example, plus a three axis accelerometer, not to mention Bluetooth functionality in them. There is a lot we can do with these!