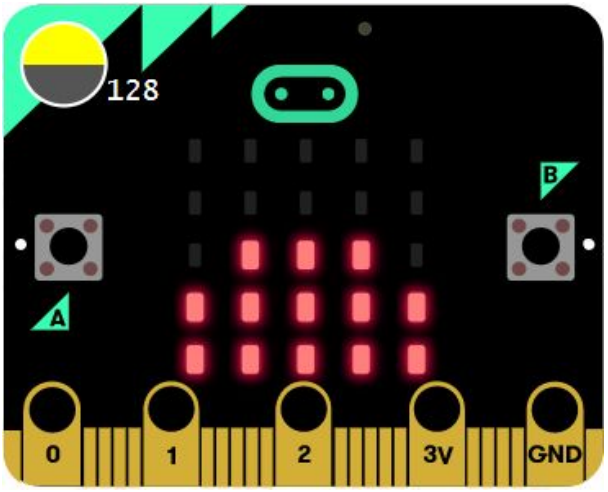
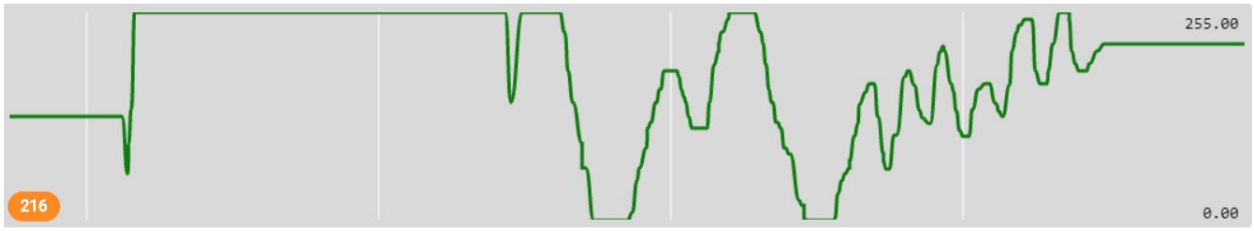
Micro:Bit Sensor Project

The Micro:Bit has a lot of different sensors that we can play around with. The Micro:Bit simulator in the top-left corner of the editor allows us to change certain parameters to see if our code is working before we download it onto our Micro:Bit.

In the example below, code has been added to graph the amount of light hitting the Micro:Bit sensor (we will do this ourselves very soon!). The simulator allows us to adjust the light level using the yellow/grey button on the top left of the Micro:Bit simulator.



The Micro:Bit editor also has a graphing simulator that we can use to see how these sensors behave when the input parameters are changed. Below is an example of the graphing simulator in the Micro:Bit Editor. It is graphing the amount of light we have set on the Micro:Bit simulator.



As you can see, the graph is going up and down between 0 and 255. Why do you think that this is?

When we load our code onto the actual Micro:Bit we can no longer use the graphing simulator, so we must look at the LEDs which will go up and down, depending on the input parameter.

Graphing Light Level

Firstly, we are going to take advantage of the light sensor on the Micro:Bit by graphing the amount of light hitting the light sensor.

Tasks

1. Copy the code blocks that can be seen above.
2. Download the code.

Extra Tasks

1. Graph the acceleration of the Micro:Bit (do this multiple times, changing the direction of the acceleration each time).
2. Graph the compass heading of the Micro:Bit.
3. Graph the temperature of the Micro:Bit.
4. Graph the magnetic force between a magnet and the Micro:Bit (only if you have a magnet!).

Note: If you are unsure about the maximum value that the graph should go up to, put in 1023. This is the largest value that the graphs cans have.