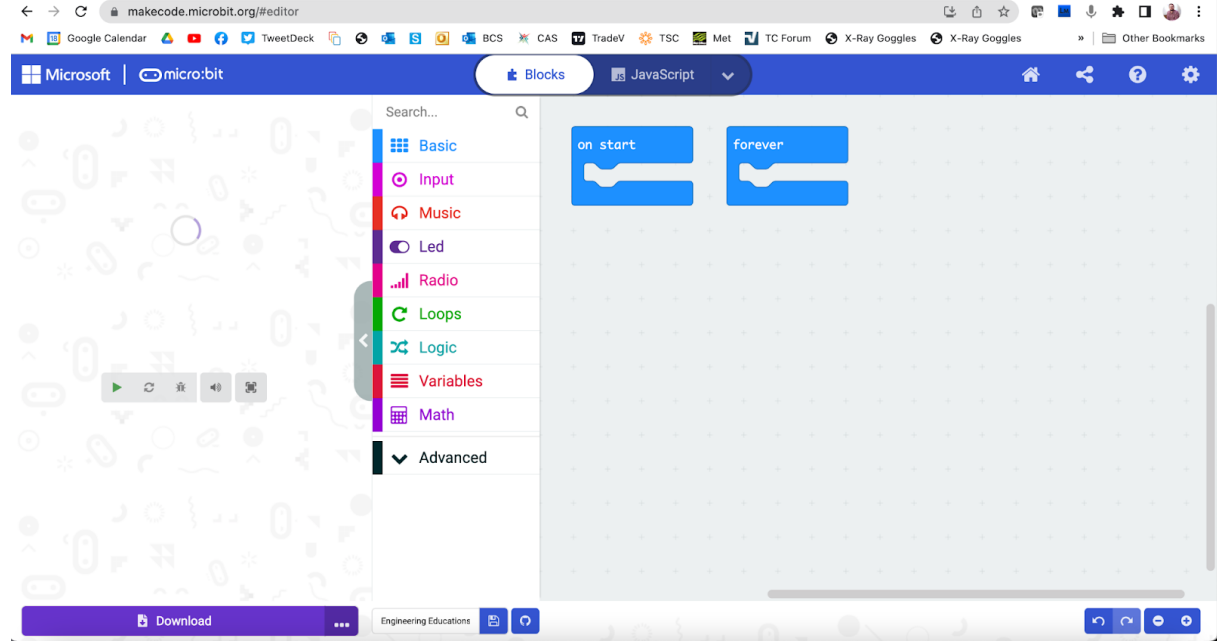
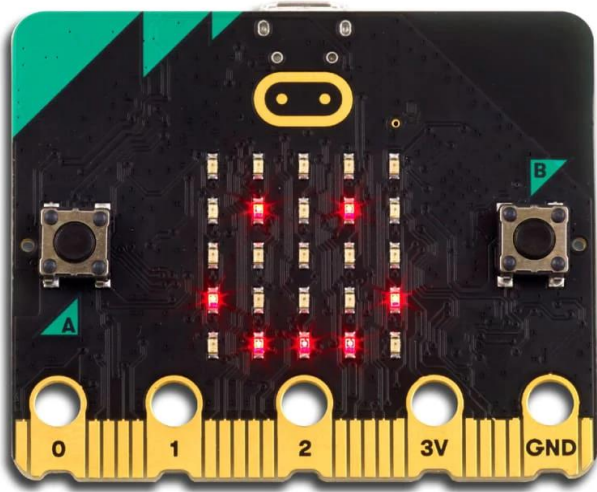




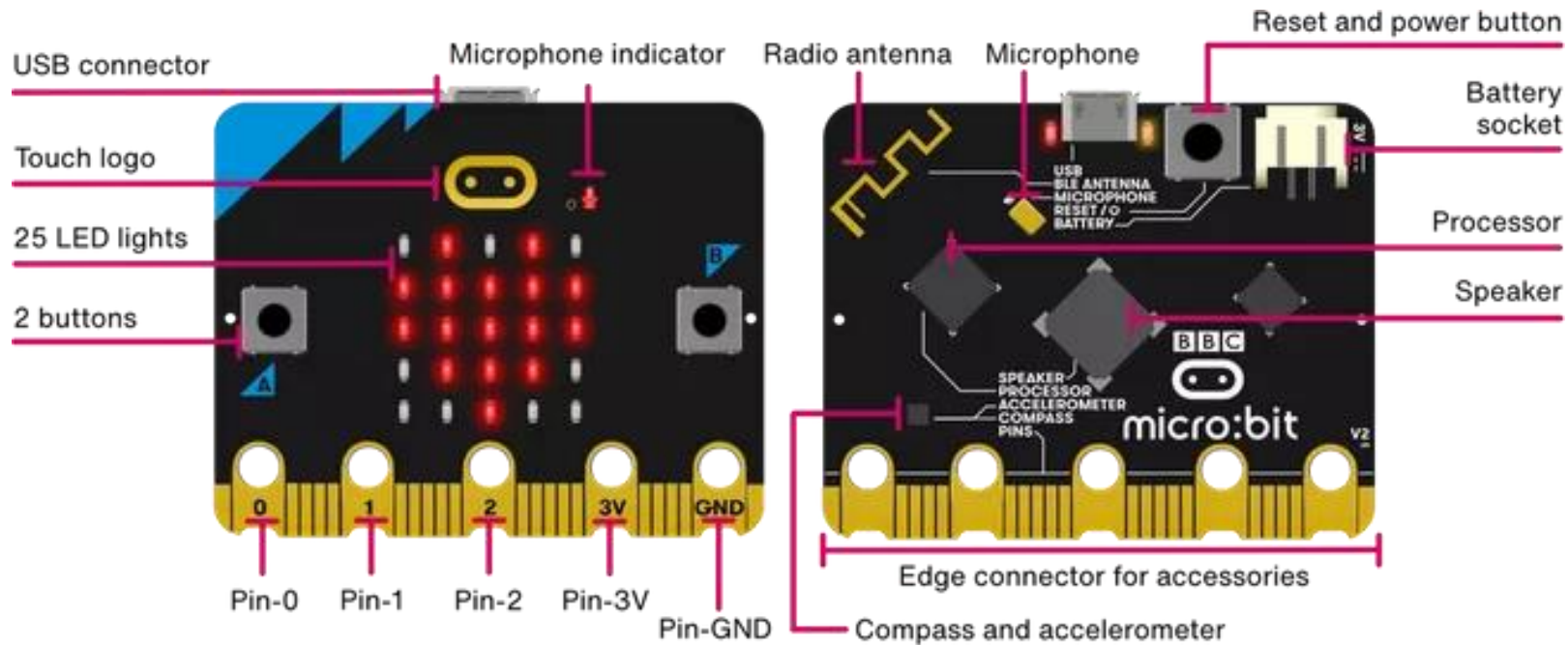
## SESSION 5

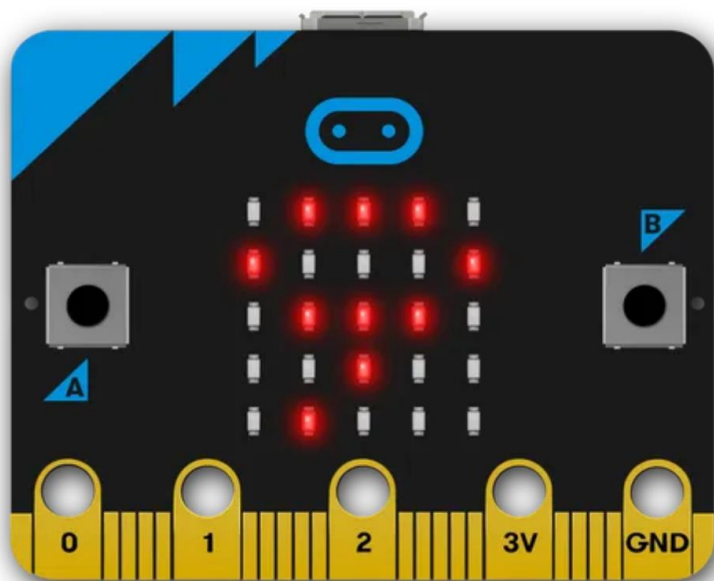
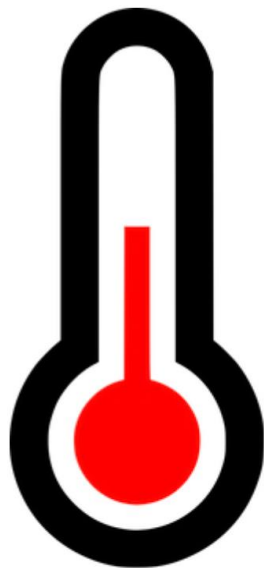
How does farming benefit from automation?











on button  pressed

show number



Microsoft | micro:bit

Blocks JavaScript

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on start

forever

Download

Temperature



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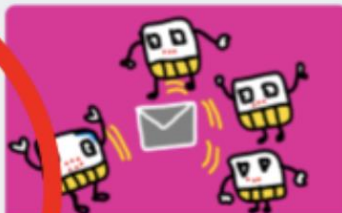
Recommended

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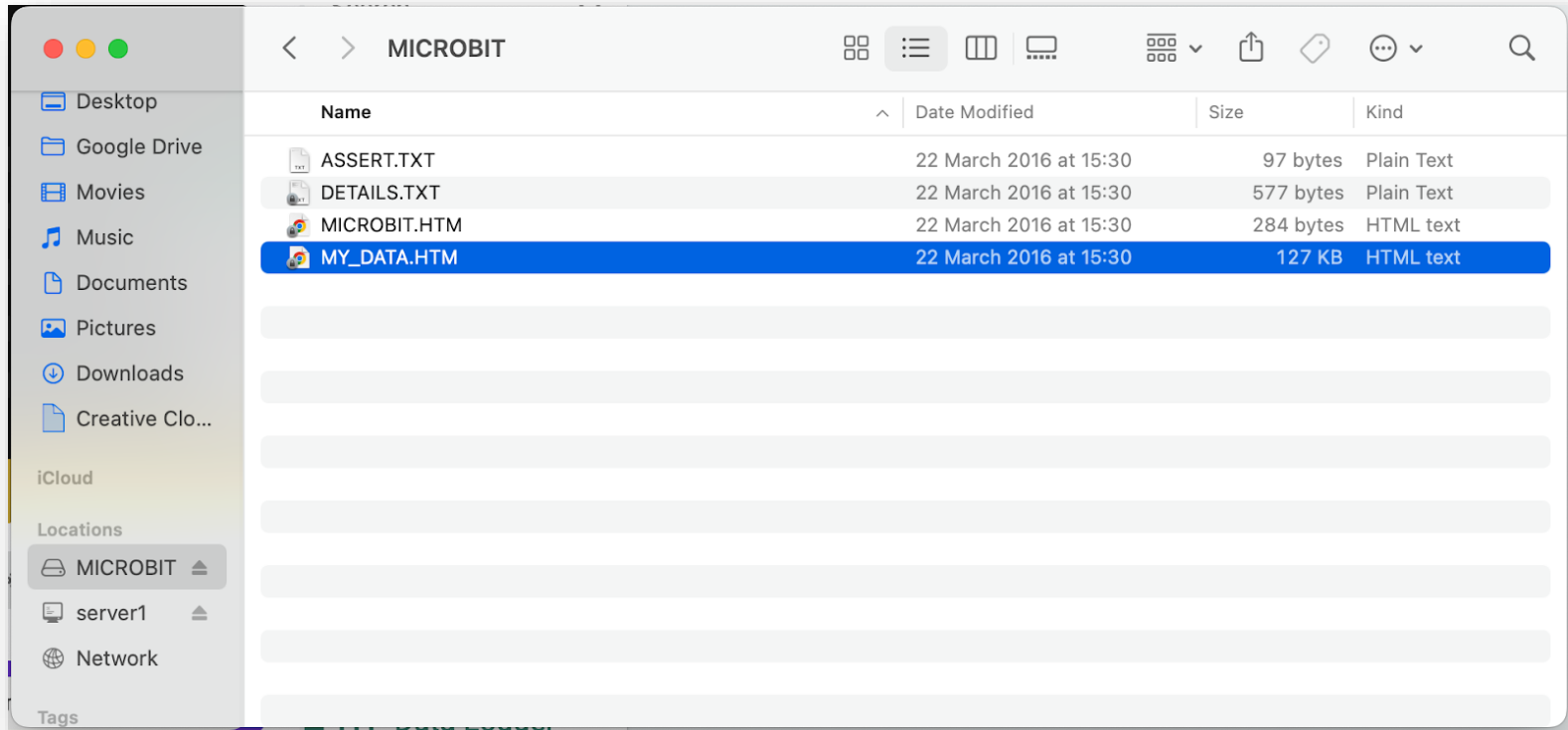
on start

set columns "temperature" 

on button  pressed

log data column "temperature" value "temperature (°C)" 





## micro:bit data log

[Download](#)[Copy](#)[Update data...](#)[Clear log...](#)[Visual preview](#)

This is the data on your micro:bit. To analyse it and create your own graphs, transfer it to your computer. You can copy and paste your data, or download it as a CSV file which you can import into a spreadsheet or graphing tool. [Learn more about micro:bit data logging.](#)

Time (seconds)	temperature
13.48	32
15.94	32
16.32	32
21.00	32
21.37	32
21.66	32
28.46	33



Download

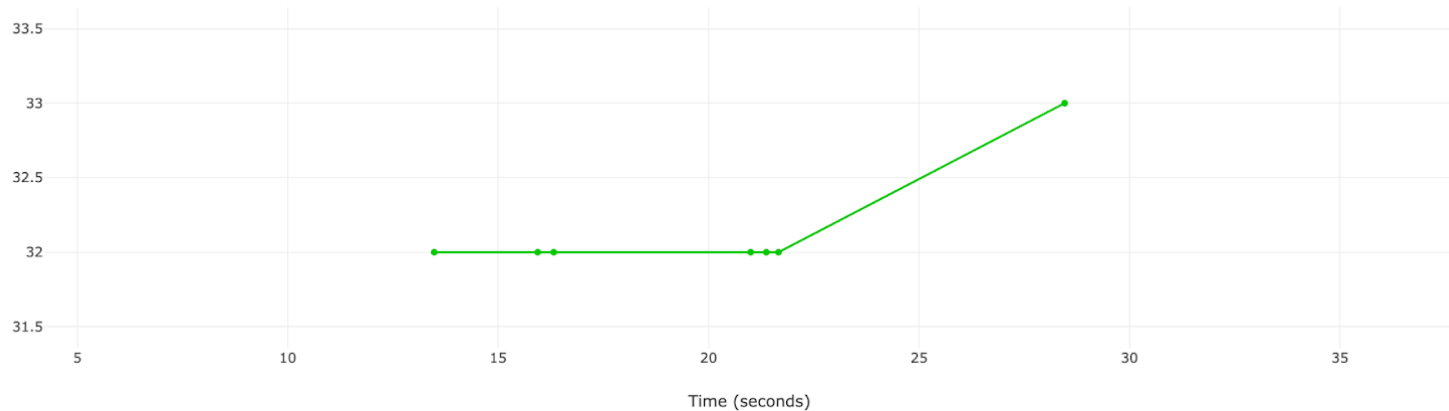
Copy

Update data...

Clear log...

Close visual preview

This is a visual preview of the data on your micro:bit. To analyse it in more detail or create your own graphs, transfer it to your computer. You can copy and paste your data, or download it as a CSV file which you can import into a spreadsheet or graphing tool. [Learn more about micro:bit data logging.](#)



```
on start
  set columns "temperature"
```

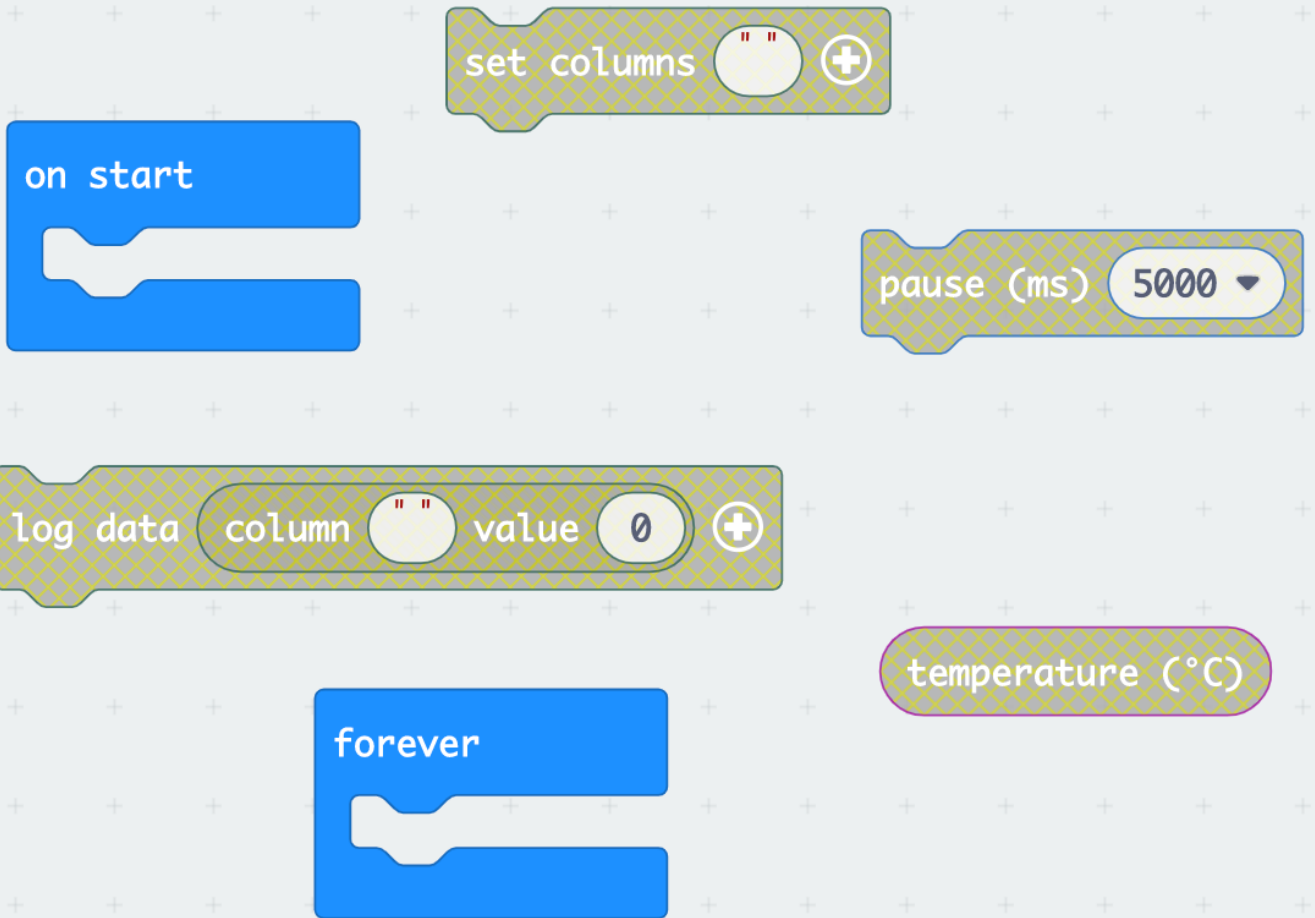
This code names the column in the data table for storing data. You can add more columns. Here we just have one which we have named 'Temperature' as that is what we wish to record.

```
on button A pressed
  log data column "temperature" value temperature (°C)
```

This command triggers the logging of data when button A is pressed.

This command tells the computer which column in the data table to store the reading in. In this program we are storing it to our one column called 'Temperature'.

We are using the thermometer to input the value of temperature.

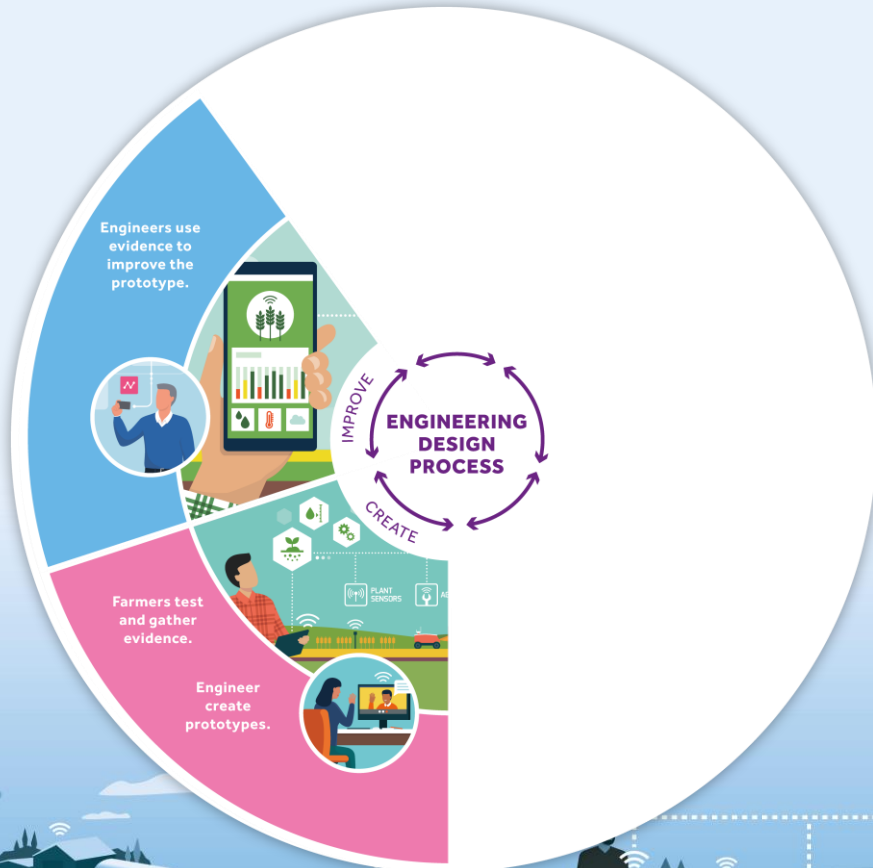


```
on start
  set columns "Temperature"
```

Sets column heading in data table to 'Temperature' as this is what we plan to record.

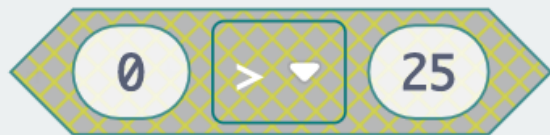
```
forever
  log data column "Temperature" value temperature (°C)
  pause (ms) 5000
```

Repeats forever whilst the program is running that:  
  
Temperature is measured and stored in the 'Temperature' column, followed by a 5 second pause before the next reading is taken.



In this challenge we have worked like agricultural engineers by **creating** and **improving** a computer programme to make a micro:bit logs environmental data on the farm.





The image shows a Scratch script on a light gray grid background. It consists of a blue 'forever' loop block. Inside the loop is a green 'if' block with a speech bubble icon on the left. The 'if' block's condition is 'temperature (°C)' in a pink rounded rectangle, followed by a greater-than sign '>' in a teal rounded rectangle, and the number '30' in a white circle. To the right of the condition is the word 'then'. Below the 'if' block is a blue 'show string' block with the text 'Watering required' in a white rounded rectangle. Below the 'show string' block is a teal block with a white plus sign icon, which is currently empty. A yellow tooltip box with a teal border and a trash icon in the top right corner is positioned to the right of the 'if' block. A thin teal line connects the top-left corner of the tooltip to the top-left corner of the 'if' block. The tooltip contains the following text:

This 'selection' block evaluates if the condition that temperature > 30 is true.  
If it is, then the warning message is displayed.

# SUSTAINABLE FARMS

