

The Education University of Hong Kong
2021-2022 Quality Education Fund Thematic Network – Tertiary Institutes
STEM Project Team

SCHOOL: TWGHs C.Y. MA MEMORIAL COLLEGE (S1)

TOPIC: TEMPERATURE MONITORING SYSTEM WITH
SMART SCIENCE IoT KIT

Temperature Sensor DS18B20

4.7k



Micro:bit IoT Extension Board



Elecfreaks micro:bit Smart Science IoT Kit (須另購micro:bit) (行貨1年保養)
Elecfreaks micro:bit Smart Science IoT Kit 物聯網科學套件 (不含主板)

【產品規格】

1. 人眼紅外線感應器 *1
2. 分頻(開關)板測器 *1
3. 光敏測器 *1
4. BME280 *1
5. 懸浮粒子(灰塵)感測器 *1
6. 土壤溫度感測器 *1
7. 水位感測器 *1
8. OLED 螢幕 *1
9. 超音波感測器 *1
10. IoT:Bit擴充板 *1
11. 180度旋轉開關 *1

出貨方式 專取 / 沽賣

定價 HK\$668

價錢 **HK\$628** 6% off

數量

Smart Science IoT Kit
~HKD 628

Home / micro:bit enhancement products / MuseLab micro:bit WiFi Booster



MuseLab micro:bit WiFi Booster
 USD \$ 82.90

a WiFi-IoT-Robotic shield that will extend the capabilities of the micro:bit.

Start with real IoT and cloud-based projects!

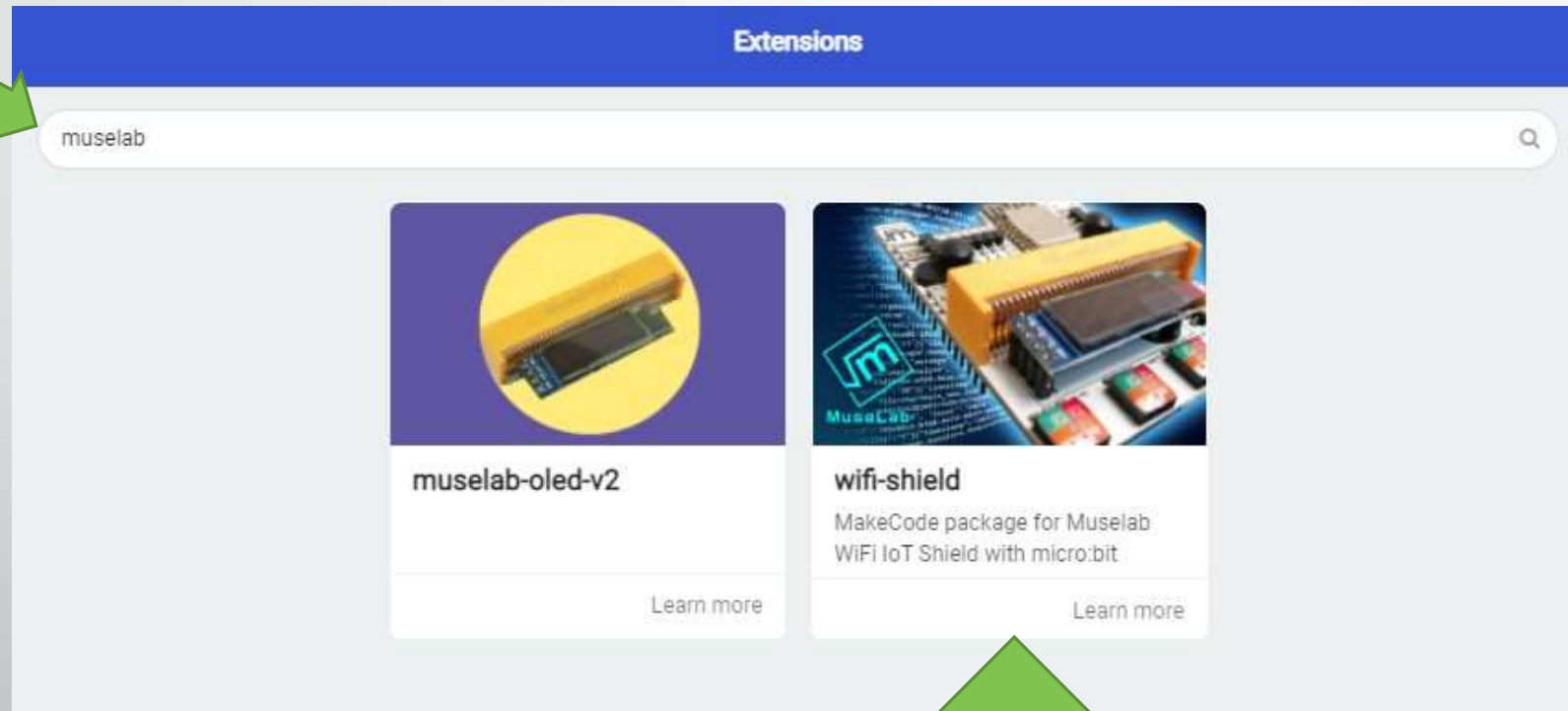
Minimum Qty: 1

CATEGORY: [micro:bit enhancement products](#)

MuseLab
~HKD 646

Extensions (1)

MuseLab



The screenshot shows a web interface titled "Extensions". At the top, there is a blue header bar with the word "Extensions" in white. Below the header is a search bar containing the text "muselab" and a magnifying glass icon on the right. Below the search bar, there are two extension cards. The first card is titled "muselab-oled-v2" and features a circular image of a yellow OLED display module. The second card is titled "wifi-shield" and features an image of a micro:bit board with a yellow WiFi shield attached. Below the title of each card is a "Learn more" link.



Extensions (2)

lot-environment-kit



iot-environment-kit



iot-environment-kit

Environment and Science IoT Kit for
micro:bit

[Learn more](#)

mi:node

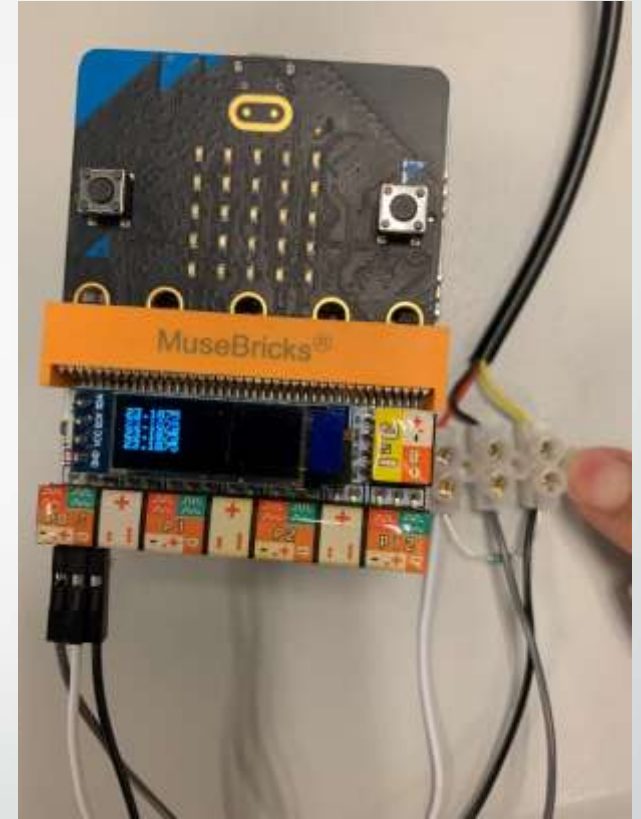
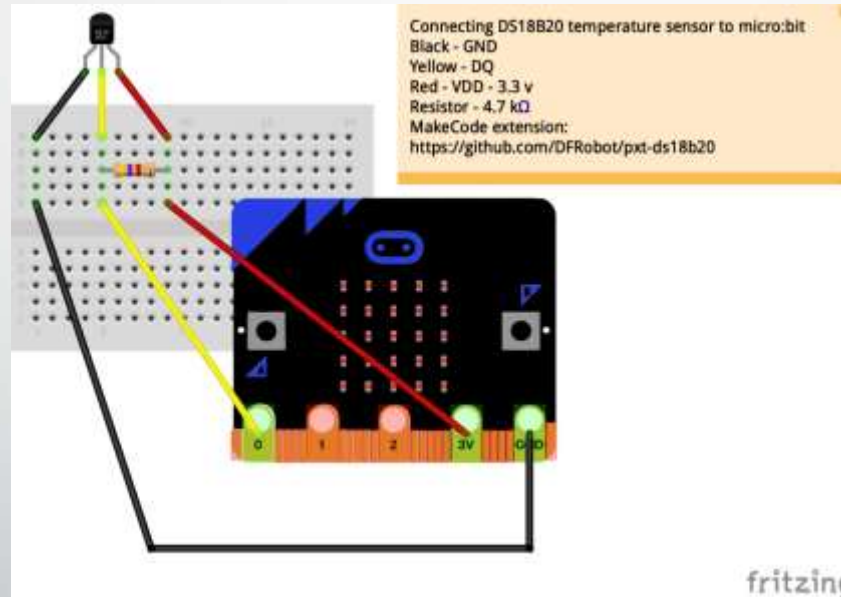
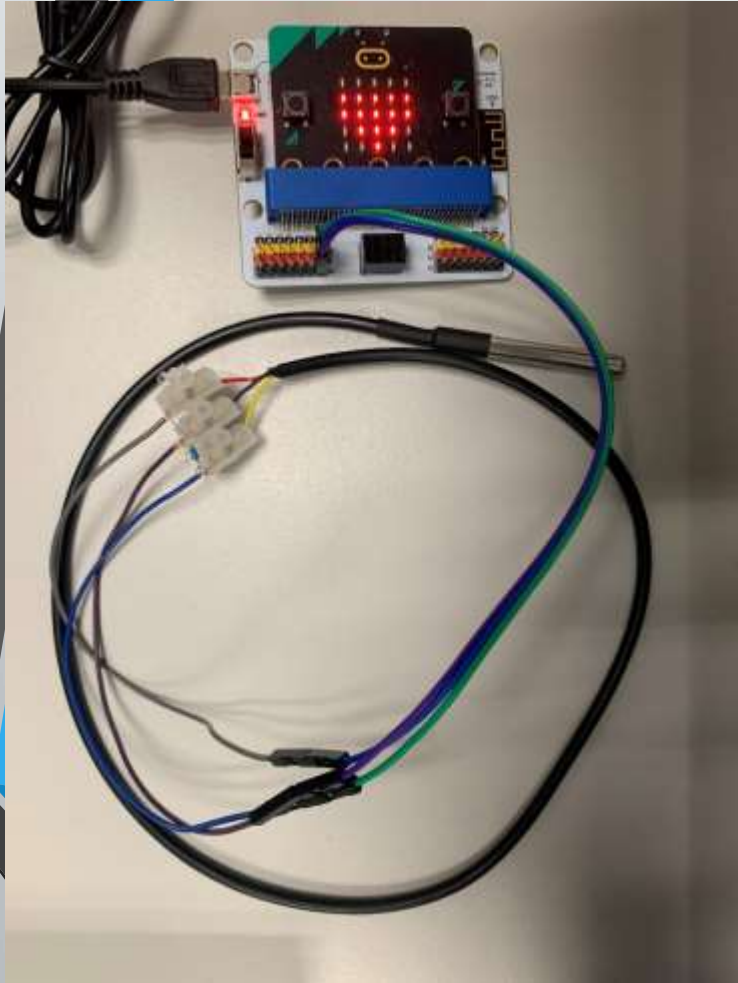
minode

mi:node kit(micro:bit IoT Starter Kit
by element14) driver package for

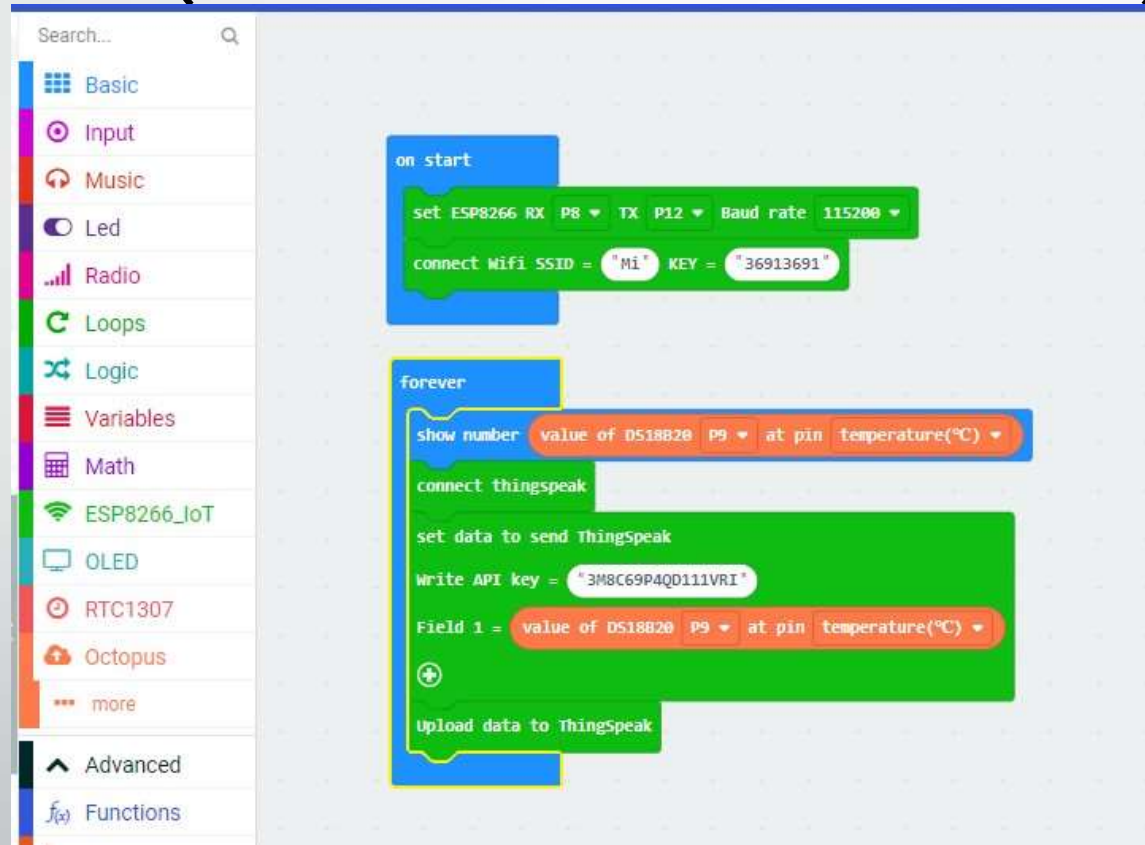
[Learn more](#)



Circuit



Code (Smart Science IoT Kit)

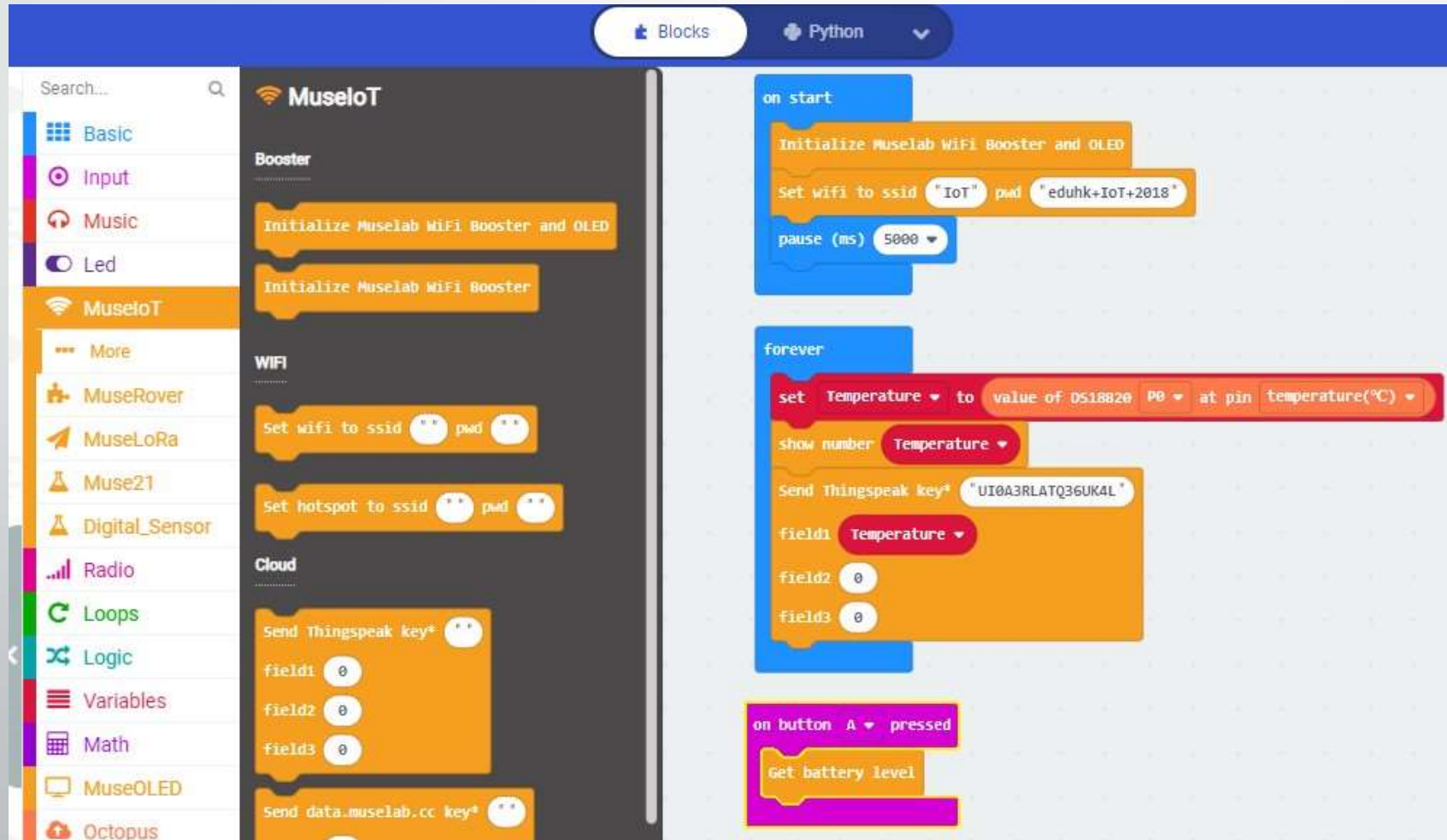


```
Search...  
Basic  
Input  
Music  
Led  
Radio  
Loops  
Logic  
Variables  
Math  
ESP8266_IoT  
OLED  
RTC1307  
Octopus  
more  
Advanced  
Functions
```

```
on start  
  set ESP8266 RX P8 TX P12 Baud rate 115200  
  connect Wifi SSID = "Mi" KEY = "36913691"
```

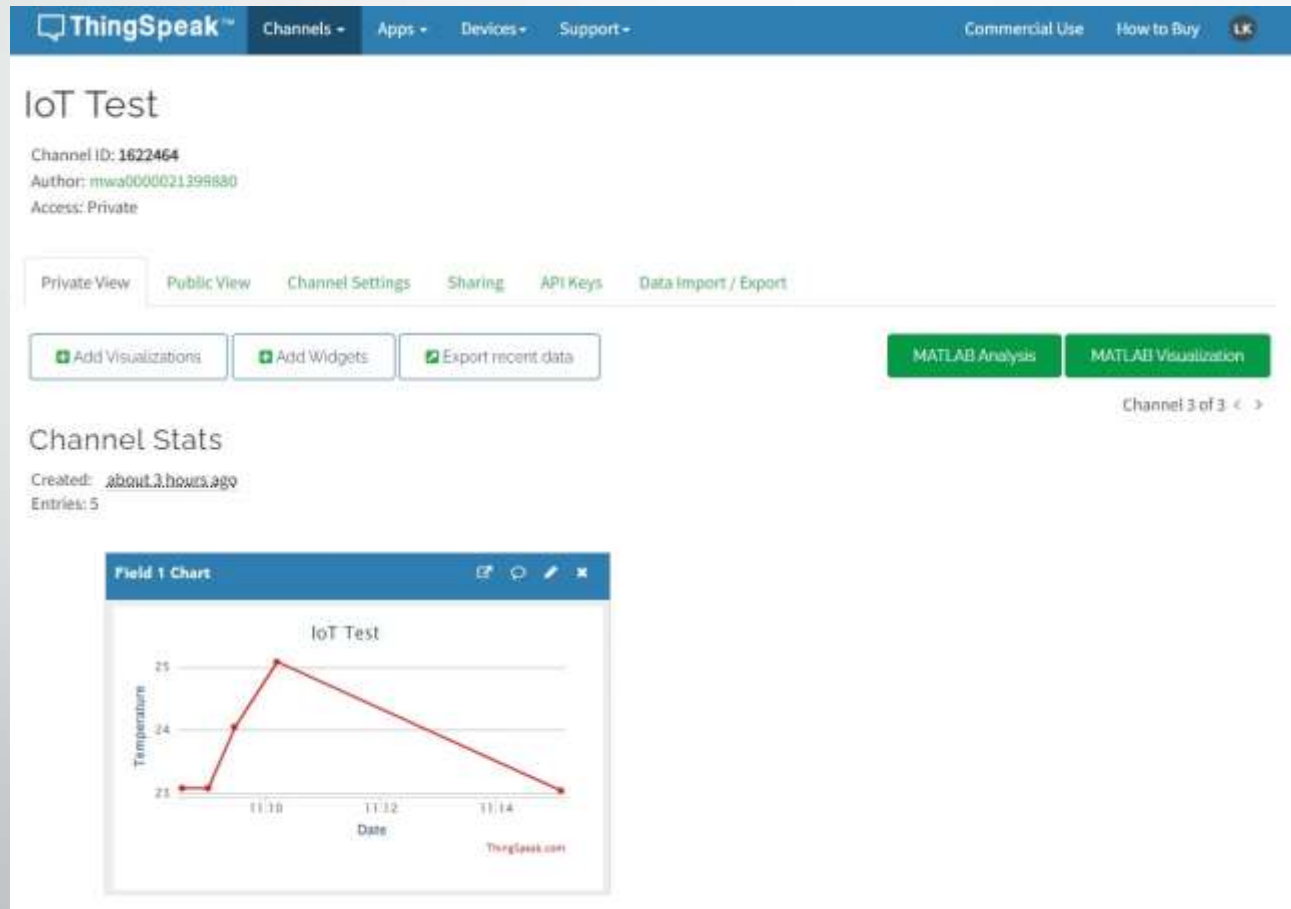
```
forever  
  show number value of DS18B20 P9 at pin temperature(°C)  
  connect thingspeak  
  set data to send ThingSpeak  
  Write API key = "3M8C69P4QD111VRI"  
  Field 1 = value of DS18B20 P9 at pin temperature(°C)  
  Upload data to ThingSpeak
```

Code (MuseLab)



The screenshot displays the MuseLab code editor interface. On the left, a sidebar contains a search bar and a categorized list of blocks: Basic, Input, Music, Led, MuseIoT, More, MuseRover, MuseLoRa, Muse21, Digital_Sensor, Radio, Loops, Logic, Variables, Math, MuseOLED, and Octopus. The main workspace is divided into two panes. The left pane shows the 'MuseIoT' library with sub-sections for 'Booster', 'WIFI', and 'Cloud'. The 'Booster' section includes 'Initialize Muselab WiFi Booster and OLED' and 'Initialize Muselab WiFi Booster'. The 'WIFI' section includes 'Set wifi to ssid' and 'Set hotspot to ssid'. The 'Cloud' section includes 'Send Thingspeak key*', 'field1', 'field2', 'field3', and 'Send data.muselab.cc key*'. The right pane shows the main code blocks: an 'on start' block containing 'Initialize Muselab WiFi Booster and OLED', 'Set wifi to ssid "IoT" pwd "eduhk+IoT+2018"', and a 'pause (ms) 5000' block; a 'forever' loop containing 'set Temperature to value of DS18B20 P0 at pin temperature(°C)', 'show number Temperature', 'Send Thingspeak key* "UI0A3RLATQ36UK4L"', 'field1 Temperature', 'field2 0', and 'field3 0'; and an 'on button A pressed' block containing 'Get battery level'.

Q & A



The screenshot shows the ThingSpeak interface for a channel named "IoT Test". The channel ID is 1622464, the author is mwa0000021398880, and the access is private. The page includes navigation tabs for Private View, Public View, Channel Settings, Sharing, API Keys, and Data Import / Export. There are buttons for "Add Visualizations", "Add Widgets", "Export recent data", "MATLAB Analysis", and "MATLAB Visualization". The "Channel Stats" section shows the channel was created "about 3 hours ago" and has 5 entries. A line chart titled "Field 1 Chart" displays temperature data over time.

Field	Value
Channel ID	1622464
Author	mwa0000021398880
Access	Private
Created	about 3 hours ago
Entries	5

Date	Temperature
11:08	23.0
11:10	24.0
11:12	25.0
11:14	23.0