香港教育大學
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2022-2023 Quality Education Fund Thematic Network - Tertiary Institutes
STEM Project Team

SCHOOL:東華三院鄺錫坤伉儷中學TWGHs Mr & Mrs Kwong Sik Kwan College

TOPIC: Fish Tank Sensor

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Topic

- To monitor different condition of fish tank

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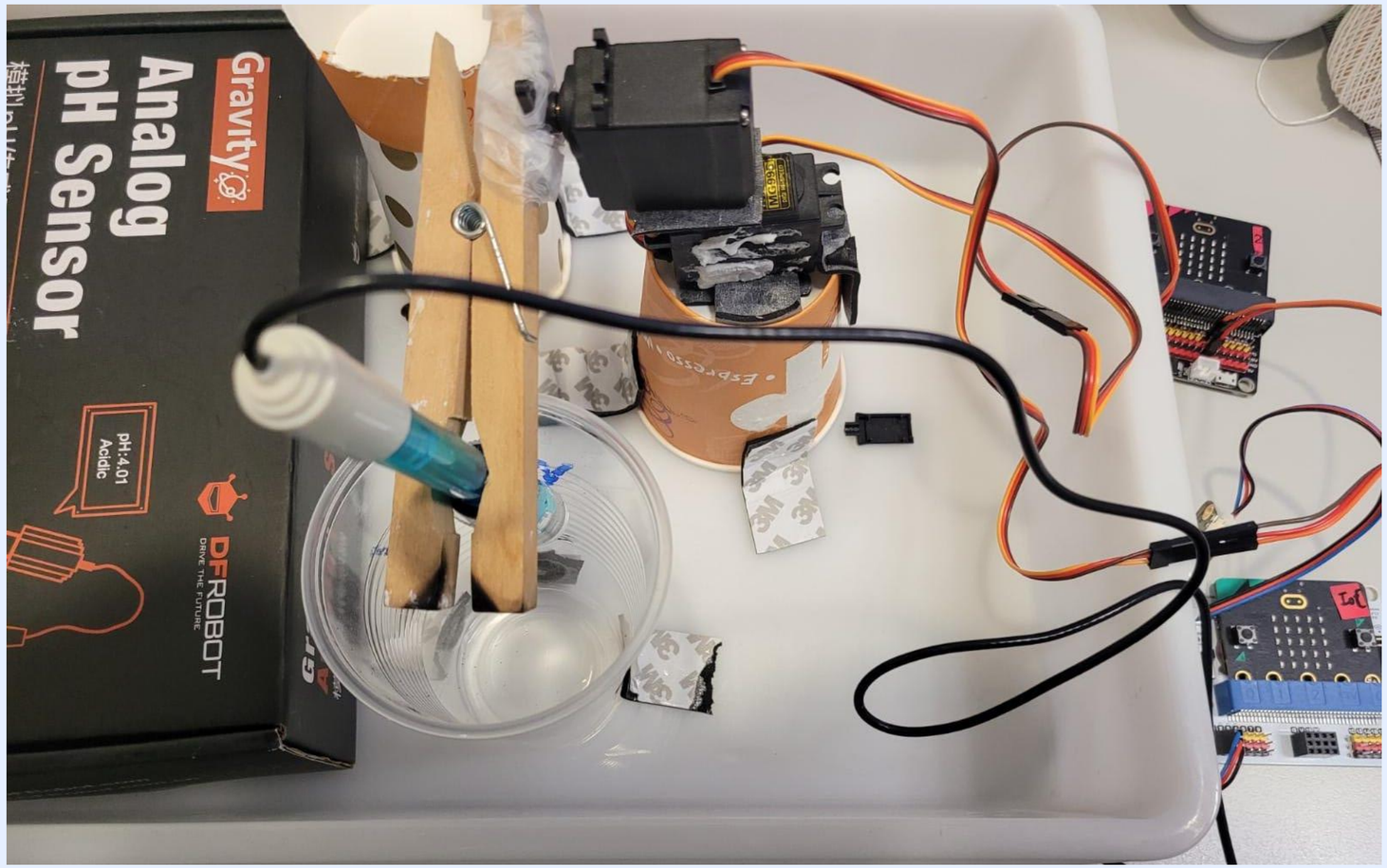
Experiment 1 material

- 2 mg996r
- 2 microbit
- 1 IoT bit
- 1 extension board (5V)
- 1 test tube holder
- 1 gravity: analog pH sensor



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Objectives of Experiment 1

- To washing the pH sensor after take the pH reading of the fisk tank water
- Upload the pH value to ThingSpeak everyday

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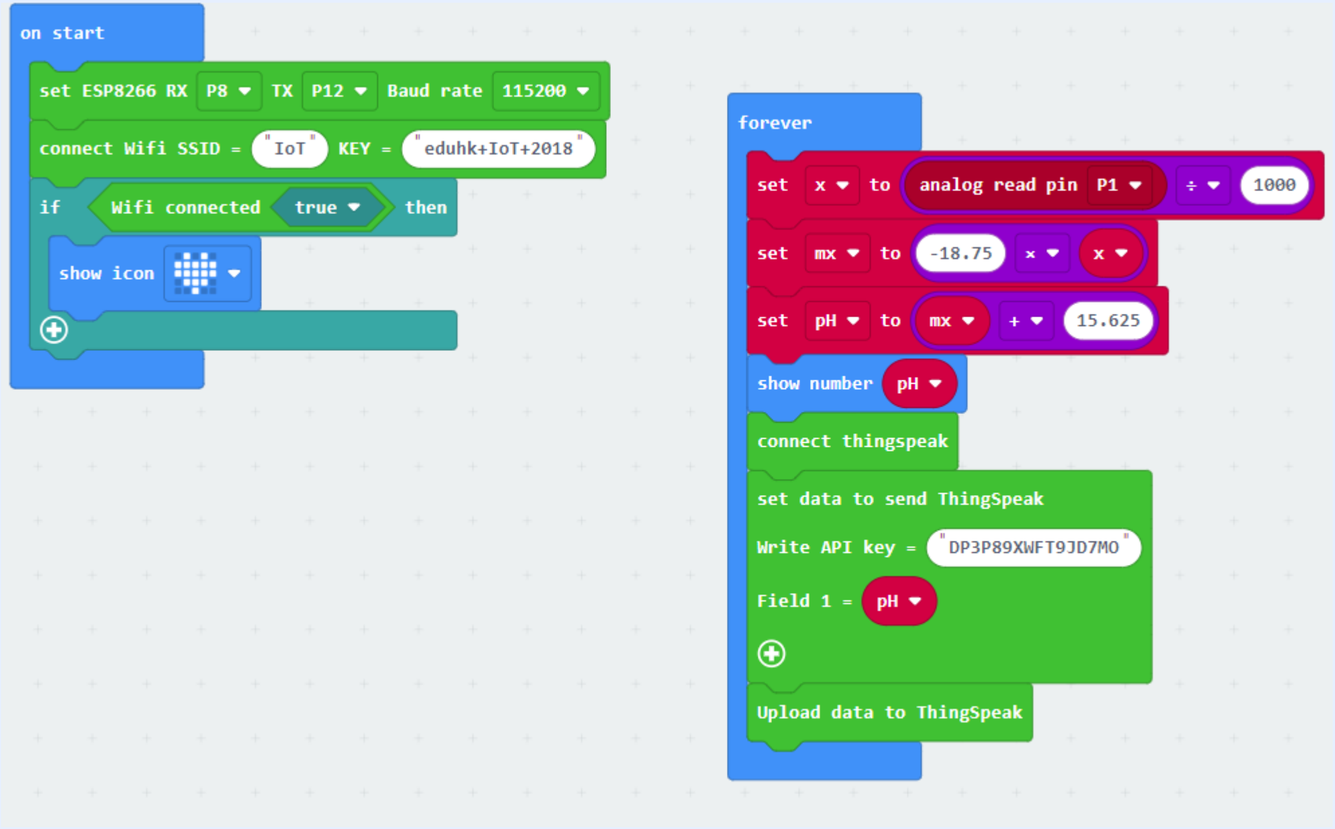
Coding for pH sensor



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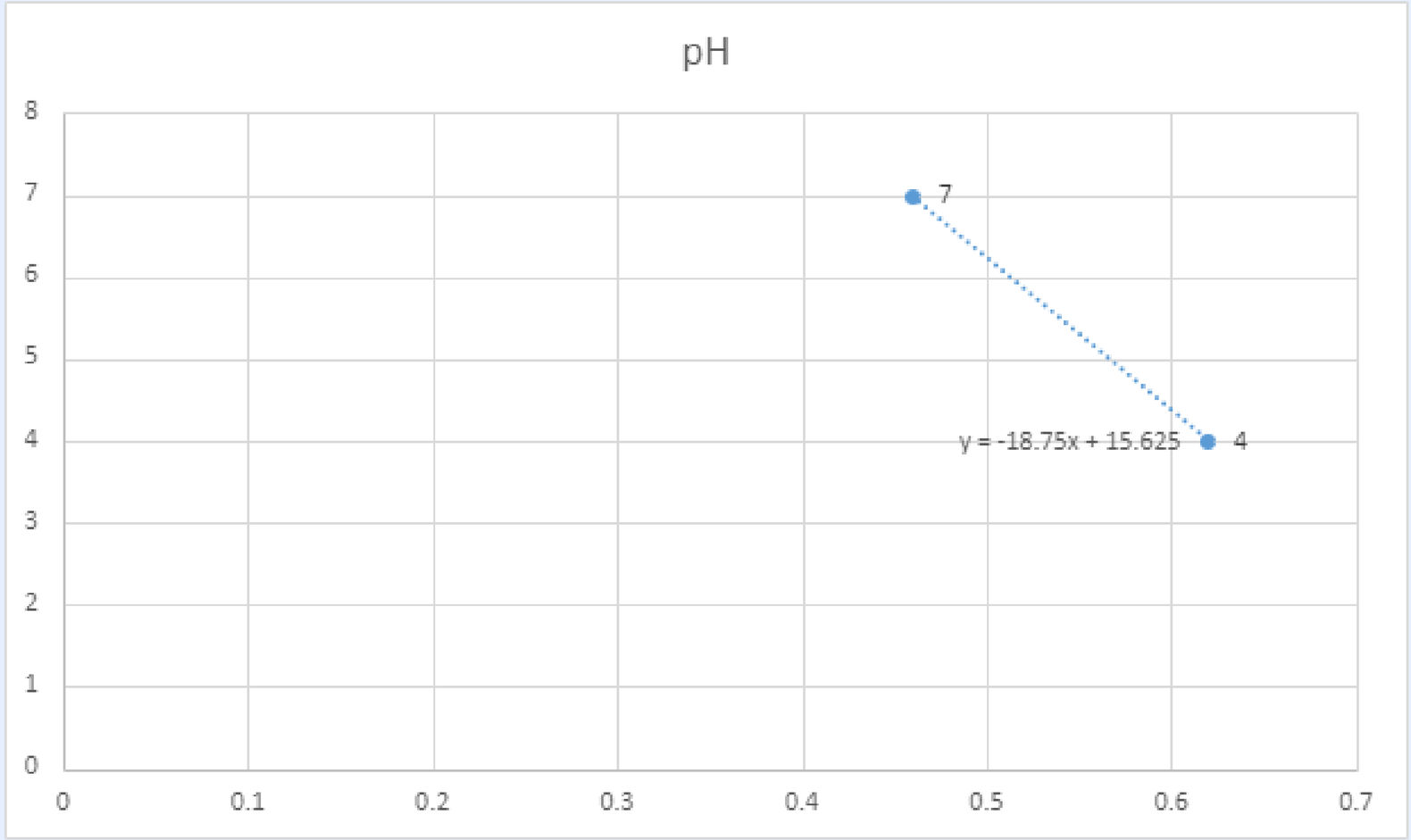
Calibration

reading	pH
0.46	7
0.62	4



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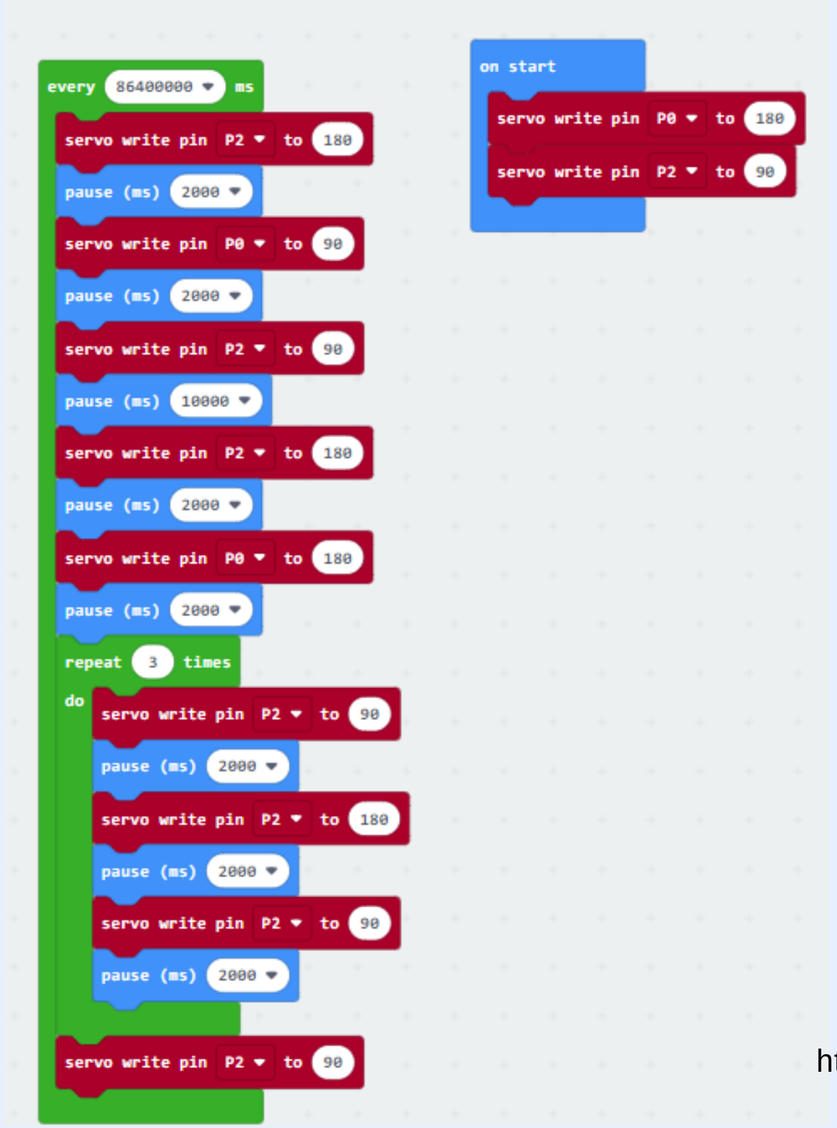
Coding for washing the pH sensor



https://makecode.microbit.org/_YF4ffUdgsab1

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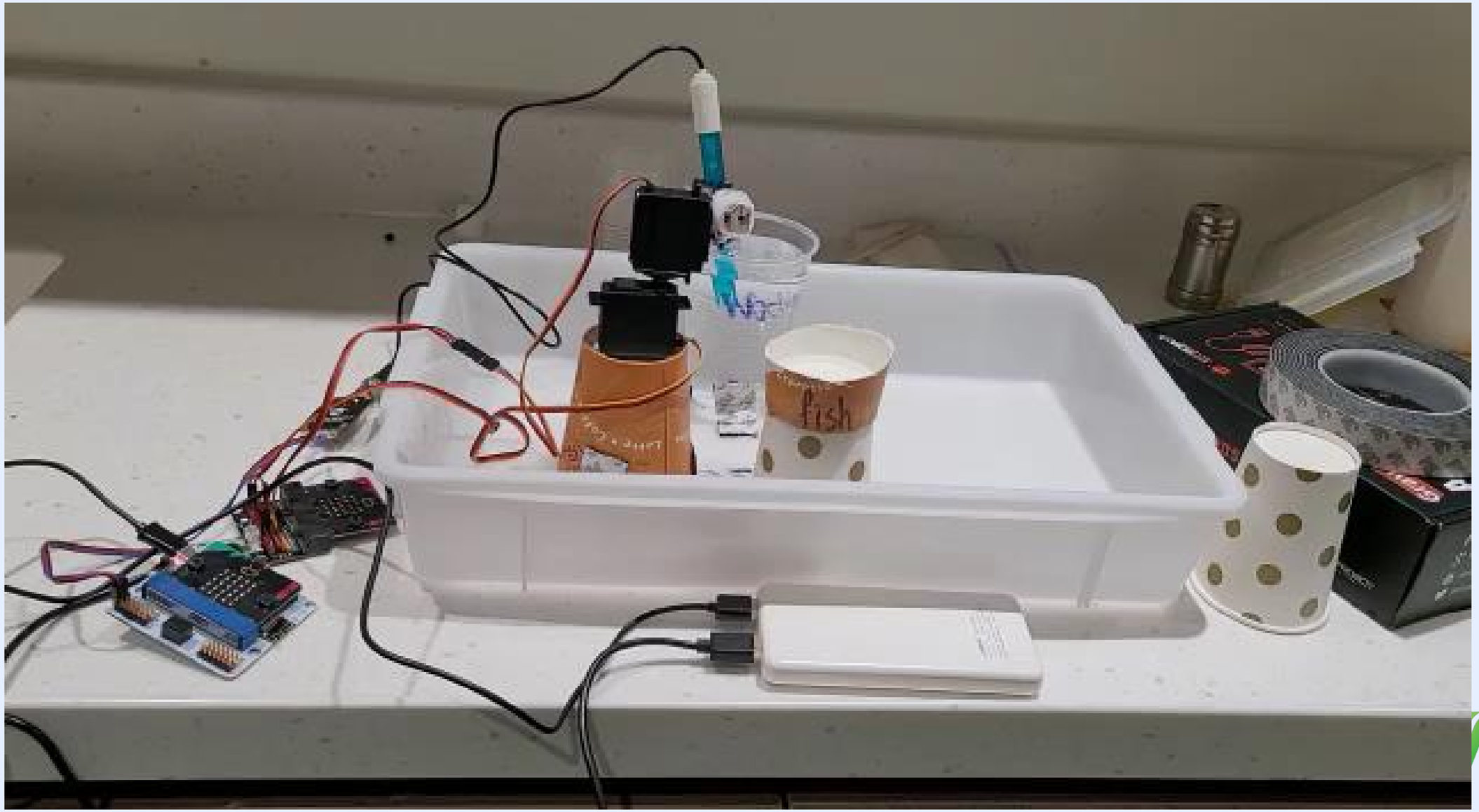
Demo



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Objectives of Experiment 2

- Upload the pH value, temperature and turbidity to ThingSpeak everyday

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Experiment 2 material

- 1 microbit
- 1 IoT bit
- 1 gravity: analog pH sensor
- 1 Temperature Sensor DS18B20
- 1 SEN0189 (Turbidity)

https://thingspeak.com/channels/1898190

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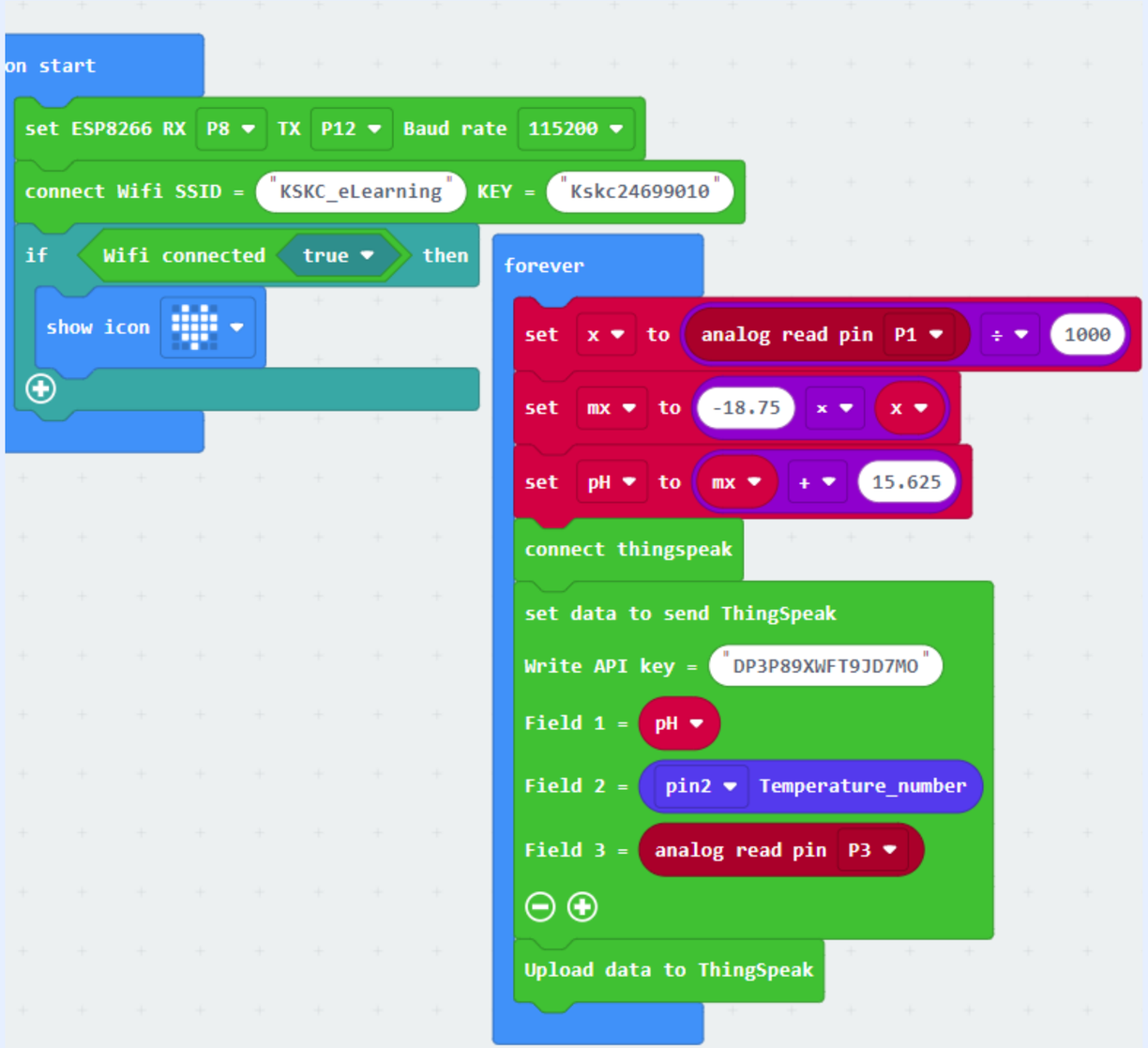
Coding for pH, temperature and turbidity



https://makecode.microbit.org/_FvHKqx5XsMzH

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