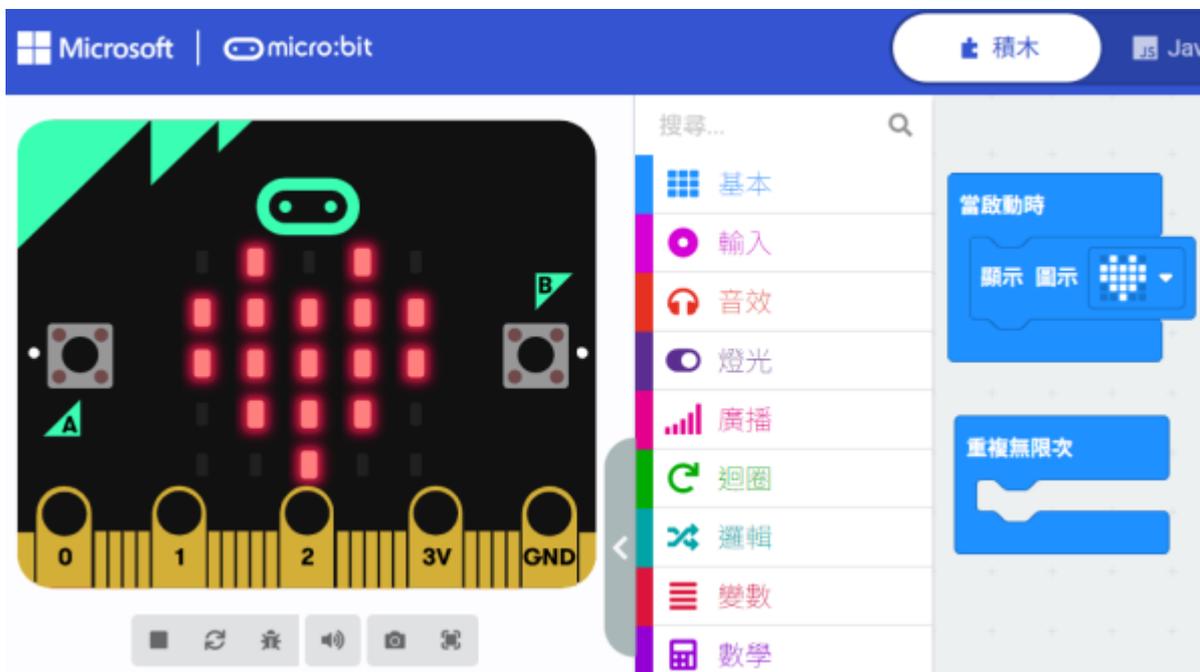
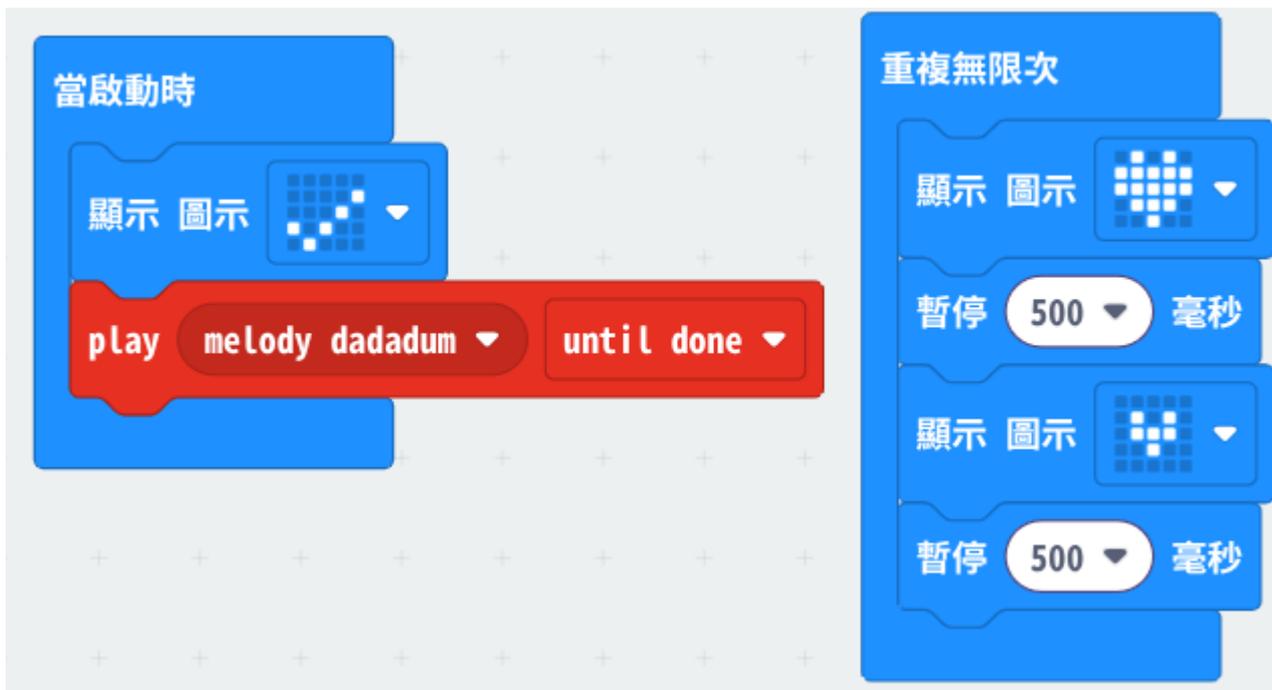




簡單輸出/入練習



程式結構



罐頭效果

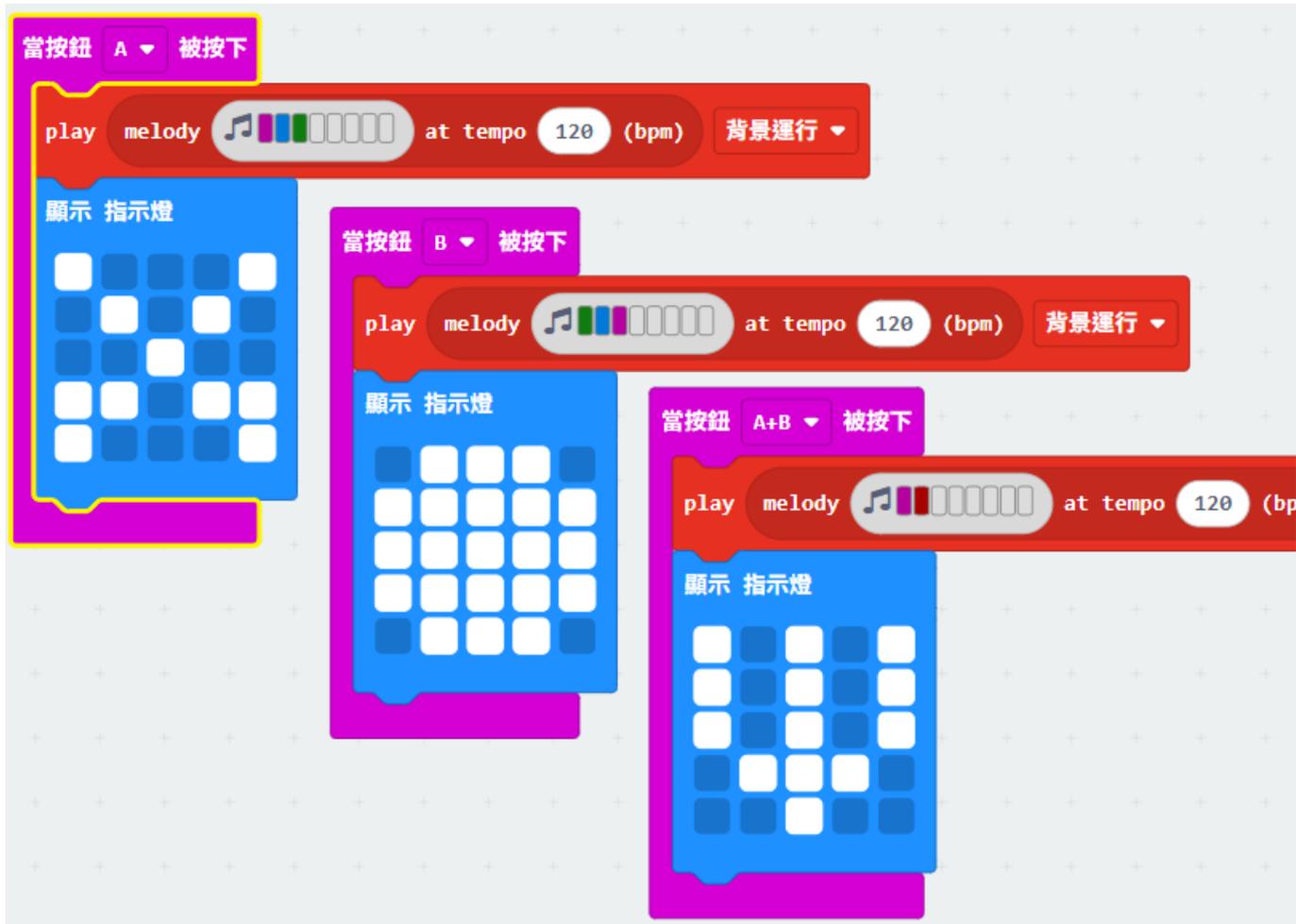
Scratch code for 'Can Effect':

- Event block: 當按鈕 A 被按下
- Display block: 顯示 圖示 (grid icon)
- Sound block: play melody entertainer (background play)

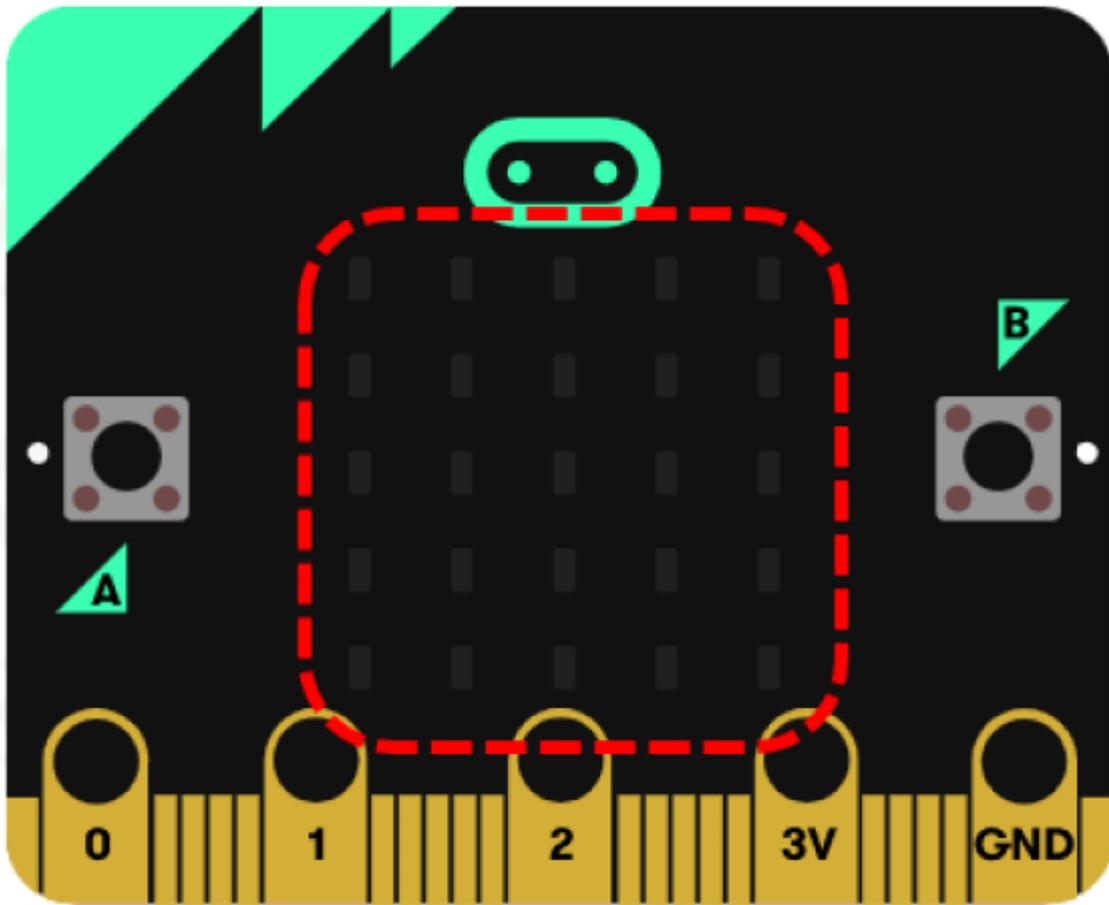
猜拳

Scratch code for 'Rock Paper Scissors':

- Event block: 當姿勢 晃動 發生
- Variable block: 變數 n 設為 隨機取數 1 到 3
- Conditional block 1: 如果 n = 1 那麼 (then)
- Conditional block 2: 如果 n = 2 那麼 (then)
- Conditional block 3: 如果 n = 3 那麼 (then)
- Display block: 顯示 指示燈 (grid icon)

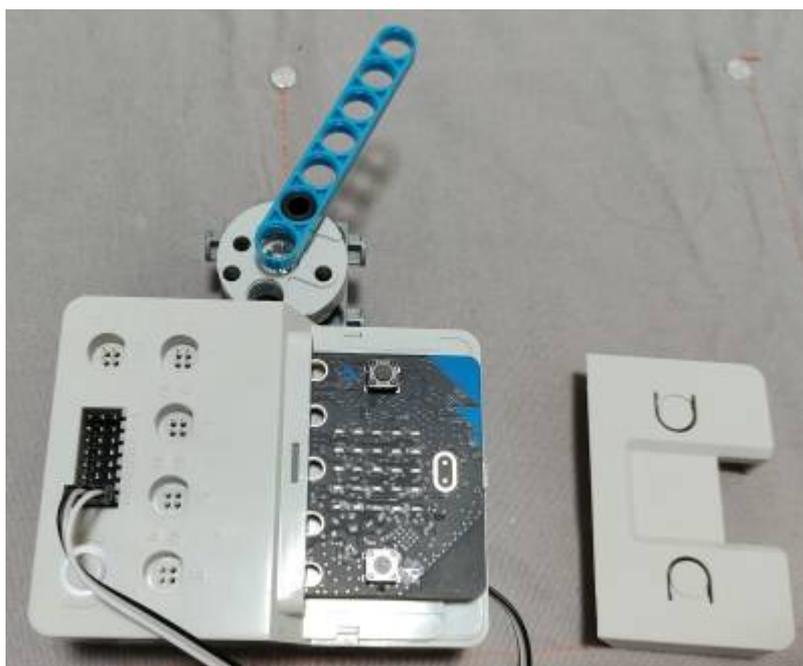


光感應器



光線感應器在5X5 LED區域內

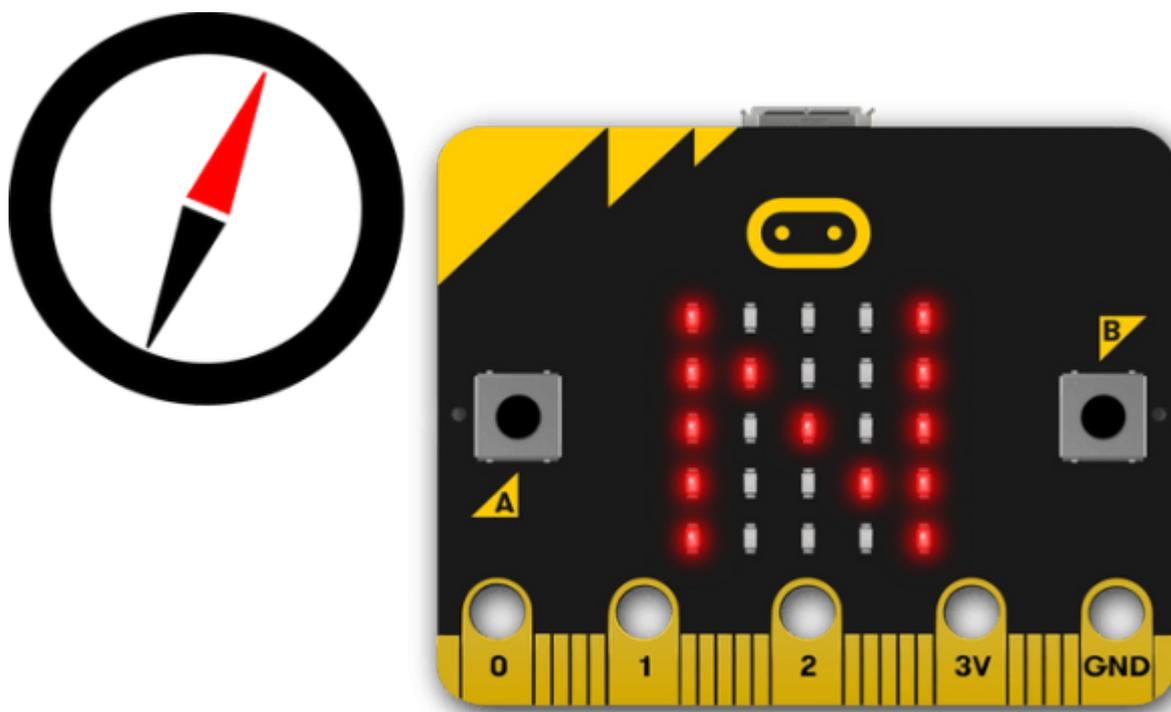
光感應-伺服馬達指針



光感應-指針程式



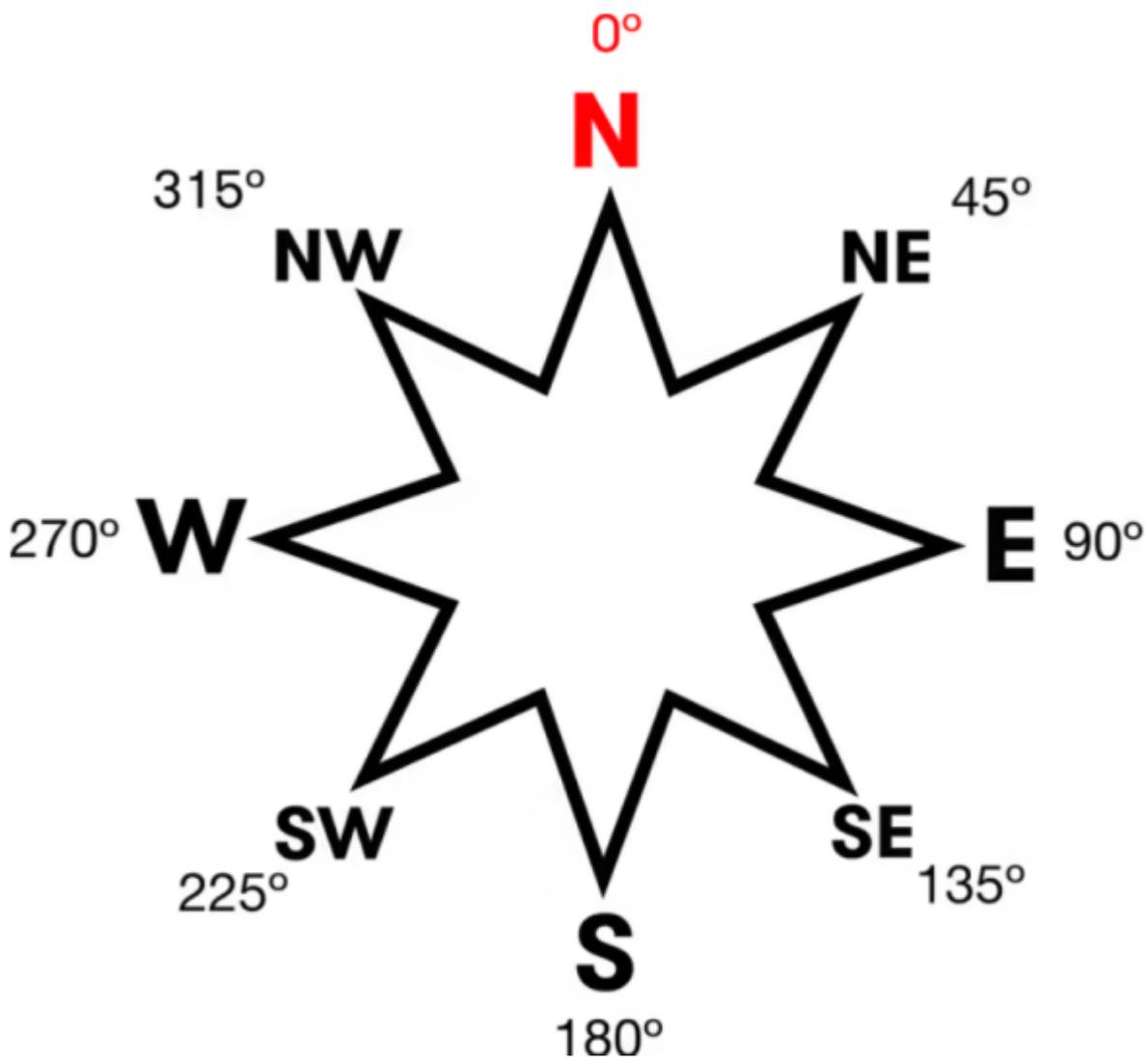
指北針



指北針-校準

- 第一次使用羅盤，你得校正它 首次使用micro:bit指南針時，必須先校準。
- 螢幕上會出現一個小遊戲，您必須傾斜micro:bit點亮每個LED接著就可以開始使用了。

指北針-角度



指北針-程式



A Scratch code block titled "重複無限次" (Repeat indefinitely). It starts with a "變數 bearing 設為 方位感測值 (°)" block. This is followed by an "如果" (if) block with two conditions: "bearing < 45" or "bearing > 315". If true, it shows the text "N". Otherwise, it shows an empty text box. There are plus and minus icons for expanding and collapsing the code block.

磁力感測



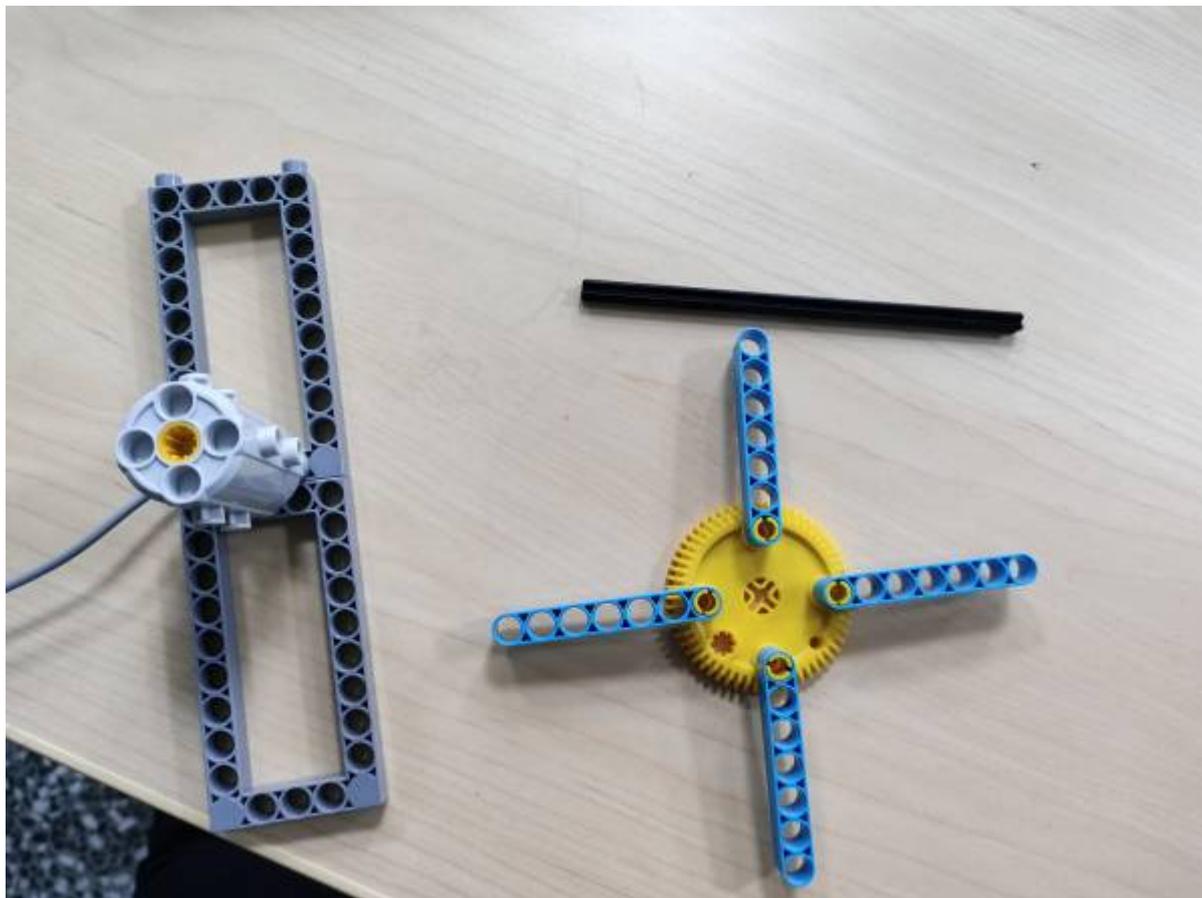
A Scratch code block titled "重複無限次" (Repeat indefinitely). It contains three blocks: 1. "變數 n 設為 磁力感測值 (μT) 強度". 2. "play tone n for 1/8 拍 until done". 3. "plot bar graph of n / 10 up to 0". There are plus and minus icons for expanding and collapsing the code block.

彩虹燈

The code starts with a '當啟動時' (When started) block containing a '變數 RGBLED 設為 腳位 P0' (Set variable RGBLED to pin P0) block. This is followed by a '重複無限次' (Repeat indefinitely) loop containing seven blocks, each consisting of an 'RGBLED 呈現顏色' (RGB LED show color) block and a '暫停 1000 毫秒' (Pause 1000 ms) block. The color values for the seven iterations are: (Red: 255, Green: 0, Blue: 0), (Red: 255, Green: 128, Blue: 0), (Red: 255, Green: 255, Blue: 0), (Red: 0, Green: 128, Blue: 0), (Red: 0, Green: 0, Blue: 255), (Red: 255, Green: 0, Blue: 255), and (Red: 0, Green: 0, Blue: 0). A tooltip 'Converts value to red, green, blue channels' is visible over the third iteration.

聲音儀表

The code features a '重複無限次' (Repeat indefinitely) loop containing a 'plot bar graph of 聲音響度 / 100 up to 0' (Plot bar graph of sound volume / 100 up to 0) block and a '暫停 100 毫秒' (Pause 100 ms) block. A '+' icon is located below the plot bar graph block.



音樂編輯

小星星

.....

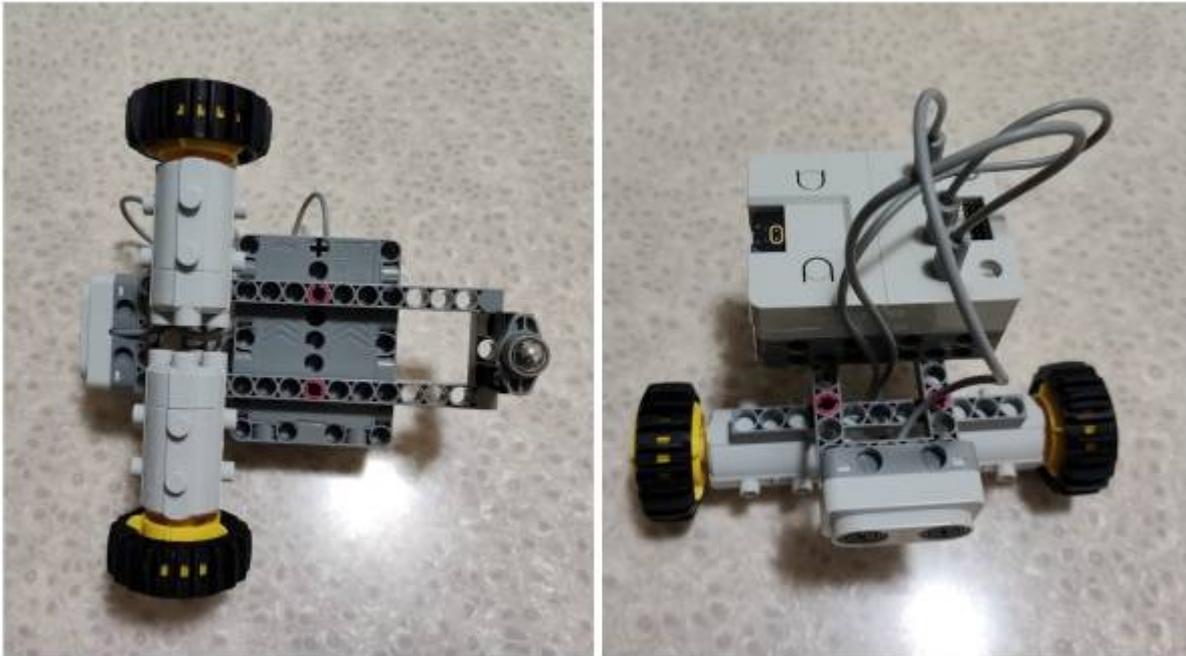
1=C 1 1 5 5 6 6 5 — 4 4 3 3 2 2 1 —
 一 闪 一 闪 亮 晶 晶， 满 天 都 是 小 星 星，

5 5 4 4 3 3 2 — 5 5 4 4 3 3 2 —
 挂 在 天 上 放 光 明， 它 是 我 们 的 小 眼 睛。

1 1 5 5 6 6 5 — 4 4 3 3 2 2 1 —
 一 闪 一 闪 亮 晶 晶， 满 天 都 是 小 星 星。

計數器/測距輪

小車控制



避障車

The diagram shows a Scratch-style block structure for controlling two motors. It starts with a blue 'Repeat Infinite Times' block. Inside the loop is a green 'Repeat Judgment' block with the following settings: Trigger Pin: P16, Feedback Pin: P0, Unit: cm, and a comparison operator '>' with the value 20. Below the judgment block is an 'Execution' block containing three sub-blocks: Motor Channel A (speed 30, direction 0), Motor Channel B (speed 30, direction 1), and a 'Pause 100 ms' block. This entire loop structure is followed by a green horizontal bar. Below the bar are three separate execution blocks: 1) Motor Channel A (speed 0, direction 1), Motor Channel B (speed 0, direction 1), and a 'Pause 100 ms' block. 2) Motor Channel A (speed 31, direction 1), Motor Channel B (speed 32, direction 1), and a 'Pause 300 ms' block.

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