

# 捷豹小勇士

——新竹縣湖口鄉中興國民小學——

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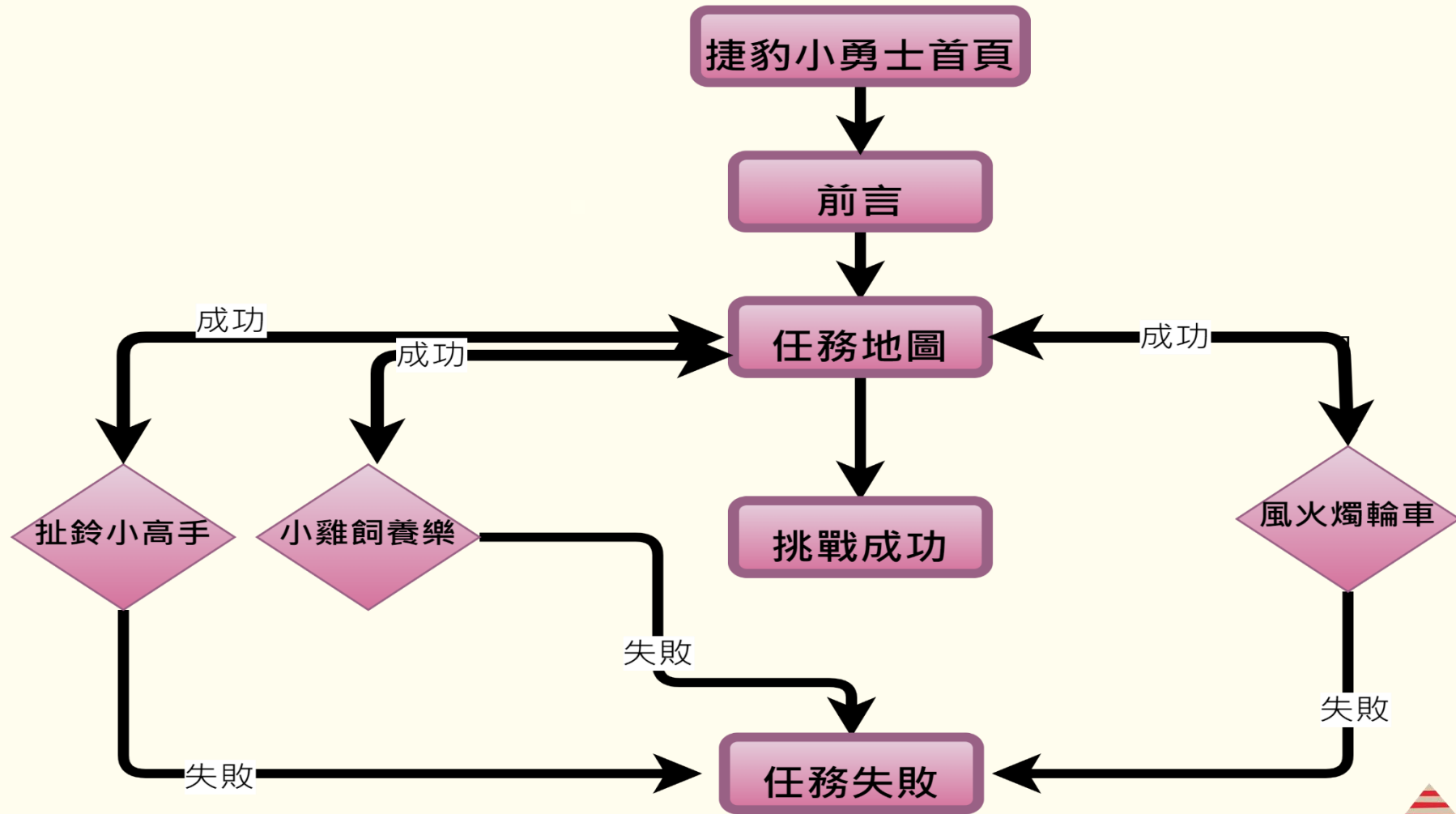
# 創作動機



我們在學校看到獨輪車隊、扯鈴隊的精采表演和校園農場可愛的小雞，激發創作動機。我們決定以學校吉祥物捷豹為主角來創作我們的作品…



# 遊戲設計流程圖



# 遊戲任務

1

扯鈴小高手

2

小雞飼養樂

3

風火獨輪車

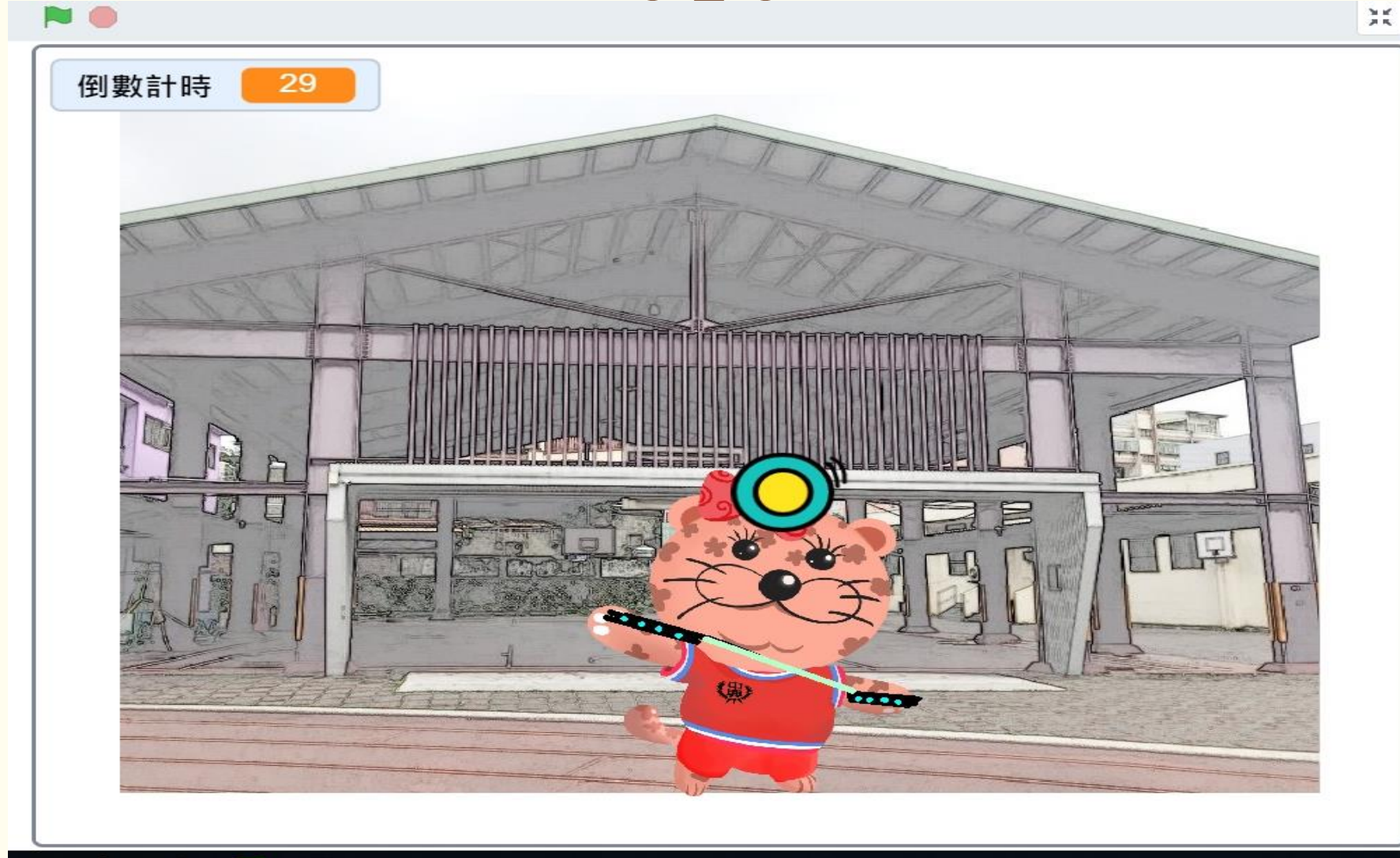




# 任務一：扯鈴小高手遊戲畫面

1

扯鈴小高手



# 任務一：扯鈴小高手(捷豹)程式碼

1

扯鈴小高手

The image displays the Scratch programming environment. On the left, the code editor shows the following logic:

- When green flag clicked:**
  - Hide variable '倒數計時'.
  - Hide the character.
- When '扯鈴' message received:**
  - Show the character.
  - Change costume to '豹(紅)2'.
  - Position at x: 1, y: -80.
  - Set '倒數計時' to 30.
  - Show '倒數計時'.
  - Repeat 30 times:
    - Wait 1 second.
    - Change '倒數計時' by -1.
- When '扯鈴' message received (Loop):**
  - Repeat indefinitely:
    - If 'csps 加速度 X' < -0.7:
      - Face 90 degrees.
      - Move 5 units.
      - Turn left.
    - If 'csps 加速度 X' > 0.7:
      - Face -90 degrees.
      - Move 5 units.
      - Turn left.
- When '扯鈴遊戲成功' message received:**
  - Hide the character.

On the right, the game preview shows a red tiger character on a stage. A '倒數計時' timer at the top right shows 29. The character is positioned at x: 1, y: -80, facing -90 degrees. The stage background is a school building. The bottom right shows the Scratch interface with the character '扯鈴豹(紅)2' selected.

利用rabboni 控制角色左右移動接拋扯鈴



# 任務一：扯鈴小高手(扯鈴)程式碼

1

扯鈴小高手

The image displays a Scratch project titled "扯鈴小高手" (Paper Airplane Expert). The code is organized into three columns:

- Column 1 (Left):** Contains the main game loop. It starts with a "當綠旗被點擊" (When green flag clicked) event, followed by "y 改變 -8" (Change y by -8), "造型換成下一個" (Change costume to next), and a "等待 0.1 秒" (Wait 0.1 seconds) block. An "如果 觸到顏色 7 那麼" (If touches color 7 then) block triggers a series of actions: "變數 x 速度 設置 隨機取數 -3 到 3" (Set x speed to random number -3 to 3), "變數 y 速度 設置 20" (Set y speed to 20), "播放音效 pop" (Play sound effect pop), "造型換成紙式" (Change costume to paper plane), "x 改變 x 速度" (Change x by x speed), "造型換成下一個" (Change costume to next), "等待 0.1 秒" (Wait 0.1 seconds), "變數 y 速度 改變 -1" (Change y speed by -1), "y 改變 y 速度" (Change y by y speed), and another "如果 觸到顏色 7 那麼" (If touches color 7 then) block. This second "if" block triggers "廣播訊息 接到" (Broadcast message received), "播放音效 pop" (Play sound effect pop), and "停止 繼續程式" (Stop and continue script). A final "如果 觸到 邊緣 7 那麼" (If touches edge 7 then) block triggers "隱藏" (Hide) and "廣播訊息 重新開始" (Broadcast message restart).
- Column 2 (Middle):** Contains a "當收到訊息 扯鈴" (When I receive message Paper Airplane) block. It triggers "顯示" (Show), "定位到 x 隨機取數 -100 到 100 y 90" (Go to x random number -100 to 100 y 90), "廣播移到 鼻上 圖" (Broadcast to nose image), "顯示" (Show), and "扯鈴上升" (Paper Airplane rises).
- Column 3 (Right):** Contains a "當收到訊息 接到" (When I receive message received) block. It triggers "顯示" (Show), "變數 x 速度 設置 隨機取數 -3 到 3" (Set x speed to random number -3 to 3), "變數 y 速度 設置 20" (Set y speed to 20), "廣播訊息 倒數計時 = 0" (Broadcast message countdown = 0), "x 改變 x 速度" (Change x by x speed), "造型換成下一個" (Change costume to next), "等待 0.1 秒" (Wait 0.1 seconds), "變數 y 速度 改變 1" (Change y speed by 1), "y 改變 y 速度" (Change y by y speed), and an "如果 觸到顏色 7 那麼" (If touches color 7 then) block. This block triggers "播放音效 pop" (Play sound effect pop), "廣播訊息 接到" (Broadcast message received), and another "如果 觸到 邊緣 7 那麼" (If touches edge 7 then) block. This final "if" block triggers "隱藏" (Hide), "廣播訊息 重新開始" (Broadcast message restart), and "停止 繼續程式" (Stop and continue script). A "播放音效 成功2" (Play sound effect success2) block is also present.

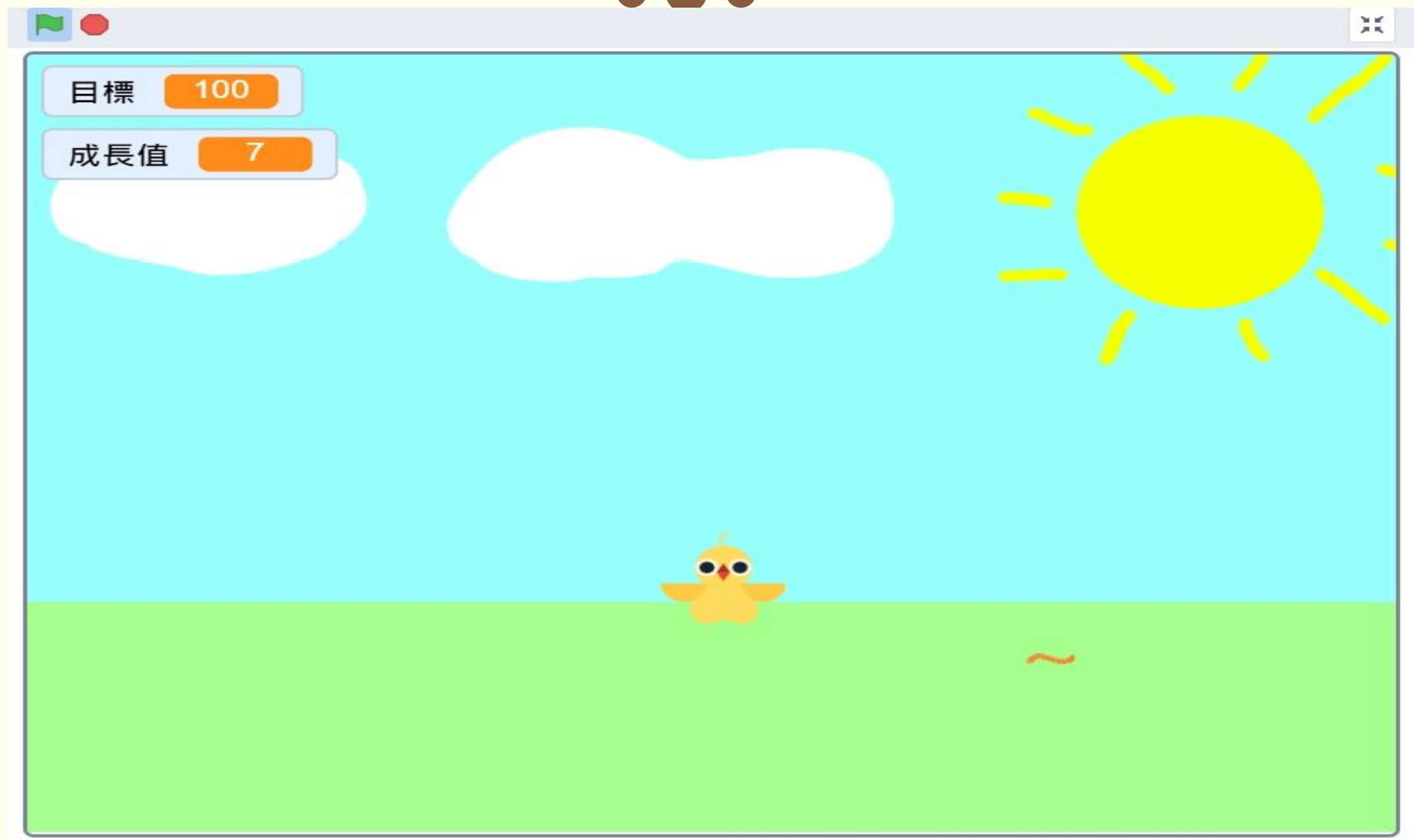
The stage view on the right shows a 3D scene of a school building with a paper airplane character in the foreground. A "倒數計時 29" (Countdown 29) timer is visible. The character's position is set to x: 49, y: -14, with a size of 100 and a direction of 90 degrees. The background is labeled "學校背景" (School background).

利用拋物線程式讓扯鈴上升落下產生變化

# 任務二：小雞飼養樂遊戲畫面

2

小雞飼養樂





# 任務二：小雞飼養樂(小雞)程式碼

2

小雞飼養樂

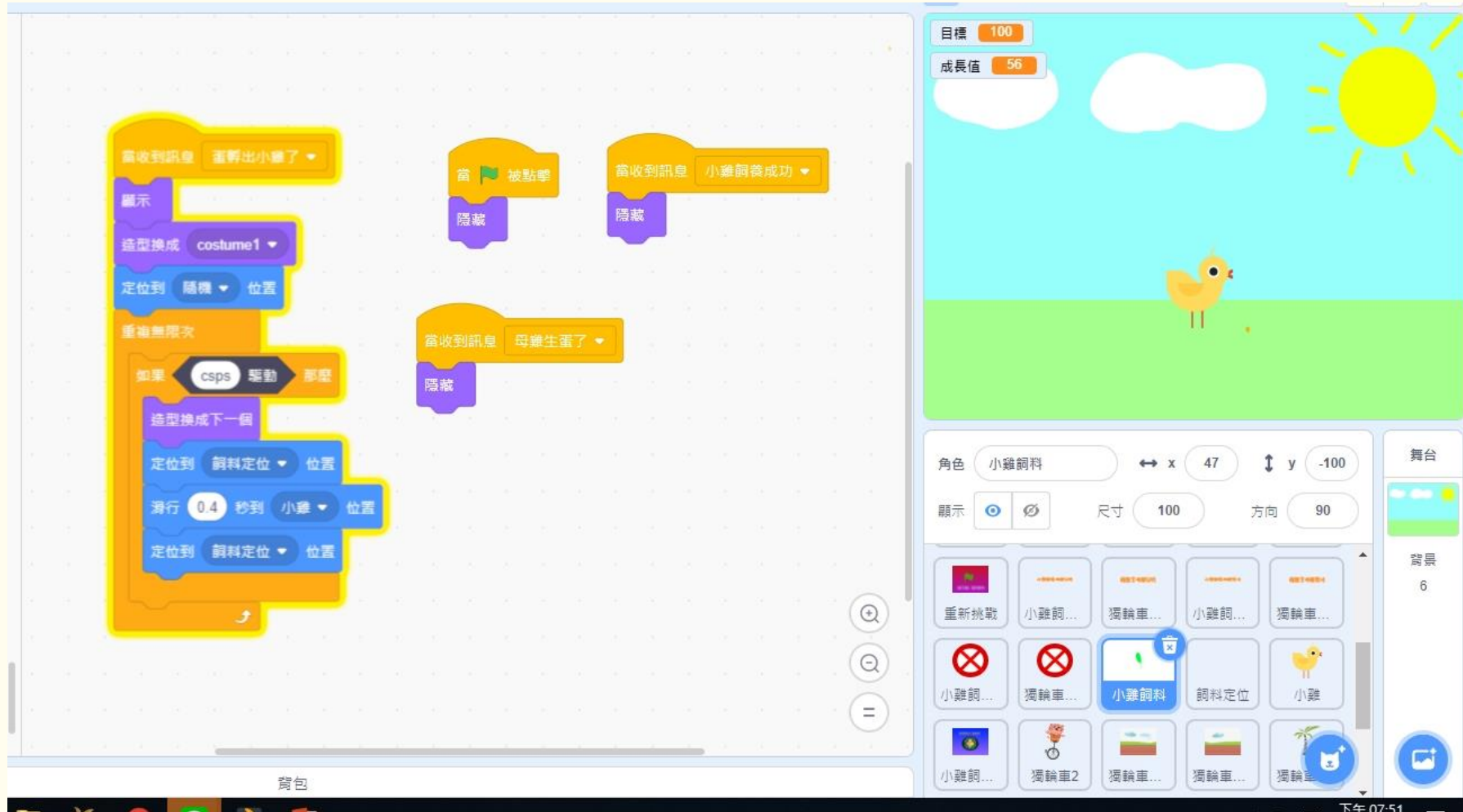
The image displays the Scratch programming environment. On the left, the code editor shows a script for a chicken character. The script starts with a 'when green flag clicked' event, followed by a 'hide' block, a 'set score to 0' block, and a 'set score to 100' block. A 'when score reaches 100' block triggers a 'play sound' block (Tropical Birds), a 'wait 3 seconds' block, a 'change costume to Hatchling-c' block, a 'play sound' block (Hello), and a 'say Hello! for 0.7 seconds' block. Another 'when score reaches 100' block triggers a 'when green flag clicked' block (score reset to 0), a 'change score by 1' block, a 'wait 0.5 seconds' block, and a 'change score by 50' block. On the right, the stage shows a white chicken character with a red comb, a yellow chick, and a speech bubble saying '成功'. The stage background is a simple landscape with a sun and clouds. The bottom right shows the Scratch interface with the chicken character selected and its properties (x: 4, y: -63, size: 100, direction: 90) visible.

利用成長值變化，呈現小雞不同的成長面貌

# 任務二：小雞飼養樂(飼料)程式碼

2

小雞飼養樂

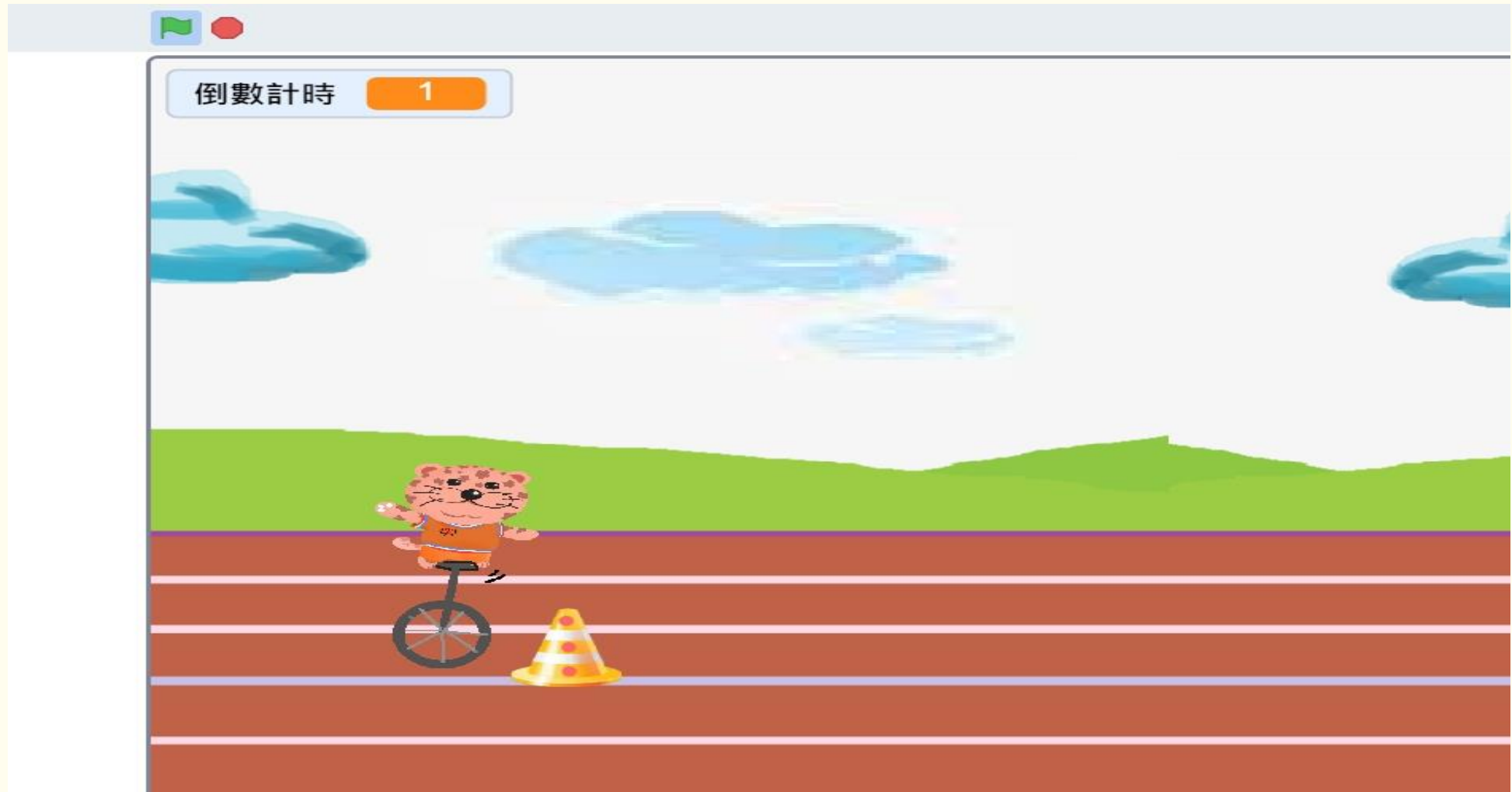


利用甩動robboni產生飼料，增加小雞的成長值

# 任務三：風火獨輪車遊戲畫面

3

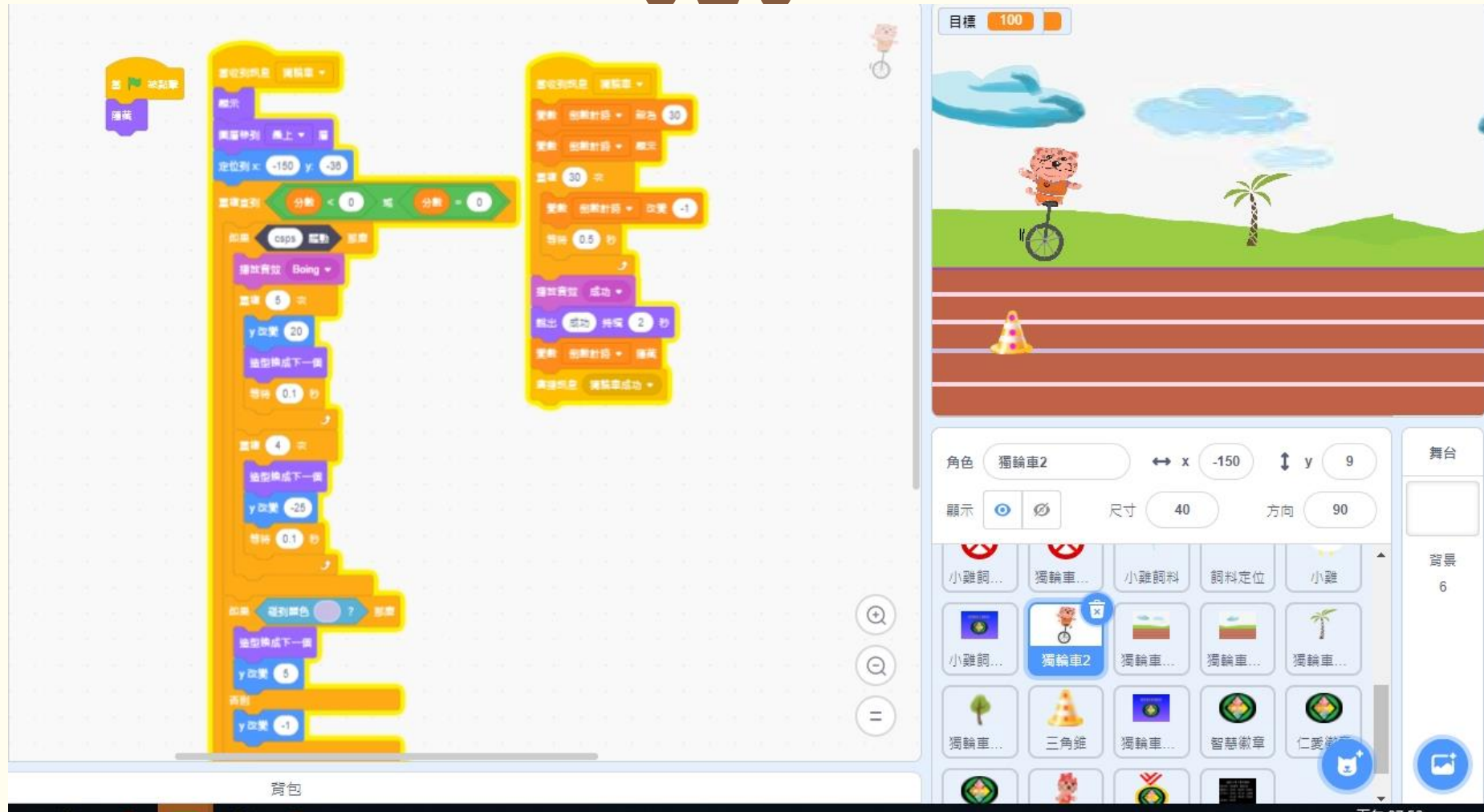
風火獨輪車



# 任務三：風火獨輪車(獨輪車)程式碼

3

風火獨輪車



利用甩動robboni產生獨輪車跳躍躲避障礙物



# 任務三：風火獨輪車(障礙物)程式碼

3

風火獨輪車

The image displays the Scratch code editor and stage for a game titled "風火獨輪車" (Wind Fire Unicycle). The code is organized into three main sections:

- Click to Run:** A "當被點擊" (When clicked) event block followed by a "隱藏" (Hide) block.
- Start Game:** A "當收到訊息 獨輪車" (When I receive the message 'Unicycle') event block followed by a "隱藏" (Hide) block, a "重複直到 倒數計時 < 2" (Repeat until countdown < 2) loop containing "建立 自己 的分身" (Create myself a clone) and "造型換成下一個" (Switch to next costume) blocks, and a "等待 隨機取數 2 到 5 秒" (Wait random number 2 to 5 seconds) block.
- Clone Movement:** A "當分身產生" (When clone created) event block followed by a "顯示" (Show) block, a "定位到 x: 200 y: -110" (Go to x: 200 y: -110) block, a "重複無限次" (Repeat forever) loop containing an "x 改變 -5" (x change -5) block, an "如果 碰到 邊緣? 或 碰到" (If hit edge? or hit) conditional block with a "等待 0.25 秒" (Wait 0.25 seconds) block and a "分身刪除" (Delete clone) block.

The stage shows a unicycle character on a red track with a yellow and black obstacle. The "倒數計時" (Countdown) is set to 22. The stage properties panel shows the character is a "三角錐" (Triangle) with x: 75, y: -110, size: 20, and direction: 90. The stage is titled "舞台" (Stage) and has a "背景" (Background) of 5.

利用分身的程式並隨機2到5秒產生障礙物

開始遊戲操作  
敬請指教!

