



射 箭  
Archery

# 魅力四射

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# 創作動機



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射箭著重眼明手快和全身穩定性，舉凡站位、搭射、扣弦、預拉、開弓、瞄準、脫弦、放鬆，正確的基礎動作非常重要，而且要一氣呵成。本作品分成兩個部分，第一，著重在基礎動作於**Rabboni**感測裝置相關參數的設計和運用，透過科技的導入穿戴在手腕，可以調整與修正動作。第二，結合神話故事「后羿射日」，設計遊戲訓練眼明手快、迅速反應的能力。最終，本作品希望能藉由科技融入課程，讓本校全體學生都有機會可以嘗試體驗使用，達到全校推廣目的。

# 遊戲設計流程圖

學校特色



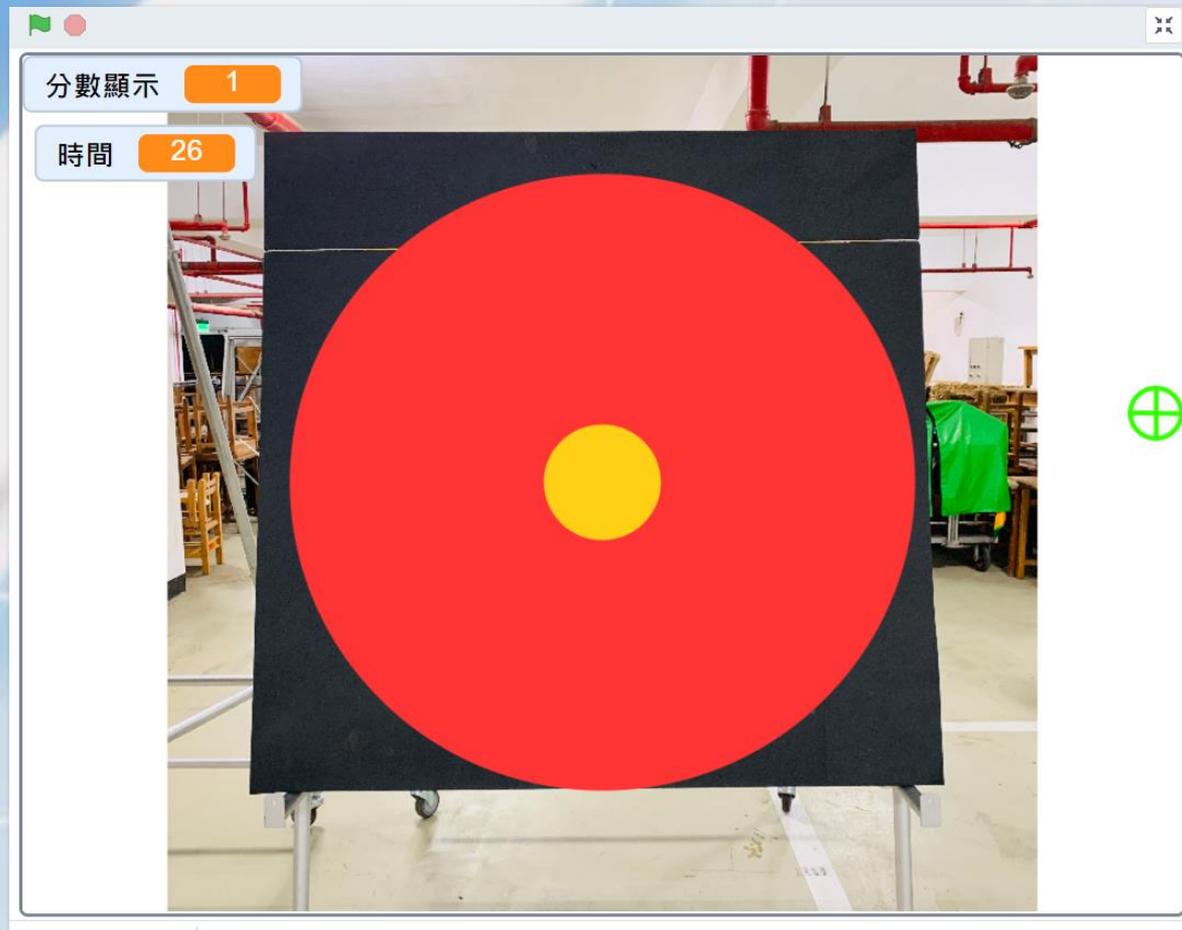
射箭



第一關：先求穩再求準  
(師生合作產出)

第二關：射箭小學堂  
(學生小組合作)

# 第一關：先求穩再求準遊戲畫面



# 第一關：先求穩再求準程式碼

The image displays a Scratch project interface. On the left is the code editor, and on the right is the stage showing a target game.

**Code Editor:**

- When clicked (當被點擊) → Show (顯示)
- Repeat (重複無限次) loop:
  - If (如果) RABL Acceleration X > -0.3 and RABL Acceleration Y < -0.5 then:
    - Change y by 2 (y 改變 2)
    - Collision (碰到邊緣就反彈)
  - If (如果) RABL Acceleration X < -0.3 and RABL Acceleration Y > -0.5 then:
    - Change y by -2 (y 改變 -2)
    - Collision (碰到邊緣就反彈)
  - If (如果) RABL Acceleration X < -0.3 and RABL Acceleration Z < 0.7 then:
    - Change x by -2 (x 改變 -2)
    - Collision (碰到邊緣就反彈)
  - If (如果) RABL Acceleration X > 0.3 and RABL Acceleration Z > 0.7 then:
    - Change x by 2 (x 改變 2)
    - Collision (碰到邊緣就反彈)

**Stage:**

- Score display (分數顯示): 1
- Time (時間): 26
- Target: A red circle with a yellow center on a black background.
- Character (角色): 第一關準星 (First Level Target)
- Position: x: 229, y: 29
- Size (尺寸): 100
- Direction (方向): -102
- Stage (舞台): 2
- Background (背景): 第一關... (First Level...)

# 第二關：射箭小學堂遊戲畫面



# 第二關：射箭小學堂程式碼

The image displays the Scratch code editor for a game level titled "第二關：射箭小學堂" (Level 2: Archery School). The code is written in Chinese and uses Scratch's visual programming blocks. The main logic is contained within a "當收到訊息 成功" (When I receive the message '成功') event block, followed by a "重複無限次" (Repeat forever) loop.

The code logic is as follows:

- Initial State:** The character's X and Z acceleration values are checked. If  $RABR \text{ 加速度 } X < 0.7$  and  $RABR \text{ 加速度 } Z > 0.5$ , and the character has collided with the "地上的書" (Book on the floor) object, the character will wait for 0.3 seconds and broadcast the "地上的書題目" (Book on the floor question) message.
- Collision Detection:** A "重複直到" (Repeat until) block checks for the same acceleration conditions and a collision with a red color. If these conditions are met, the character's Y position is changed by 2 units and the collision response is "碰到邊緣就反彈" (Bounce off the edge).
- Acceleration Control:** Two "如果" (If) blocks control the character's acceleration. The first checks if  $RABL \text{ 加速度 } X > -0.3$  and  $RABL \text{ 加速度 } Y < -0.5$ ; if true, Y is changed by -2. The second checks if  $RABL \text{ 加速度 } X < -0.3$  and  $RABL \text{ 加速度 } Y > -0.5$ ; if true, Y is changed by -2.
- Position Control:** An "如果" (If) block checks if  $RABL \text{ 加速度 } X < -0.3$  and  $RABL \text{ 加速度 } Z < 0.7$ ; if true, X is changed by -2.
- Final State:** A final "如果" (If) block checks if  $RABL \text{ 加速度 } X > 0.3$  and  $RABL \text{ 加速度 } Z > 0.7$ ; if true, X is changed by 2.

The right side of the editor shows the stage area with a green wall and brown floor. The character "第二關準星" (Level 2 Aim) is positioned at x: -47, y: 50. The score is 1 and the time is 26. The asset palette includes various objects like "第一關...", "第二關...", "彈孔", "失敗", "壘", "大盆栽", "桌子", "地上的書", "小盆栽", "書架", "地毯", "地毯題目", "書題目", "小盆栽...", "地上的...", "過關畫面", "第一關...", and "第二關...".



# 開始遊戲操作

## 敬請指教!



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