

# SCRATCH

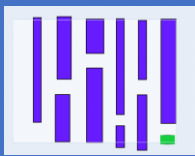
## MAZE GAME – Lesson 1

In this tutorial you are going to build the basic blocks of a MAZE GAME

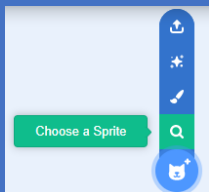
Watch the Tutorial on: [https://www.youtube.com/watch?v=ux\\_0sSW-VyM](https://www.youtube.com/watch?v=ux_0sSW-VyM) OR  
<https://www.compshaw.co.uk/index.php/key-stage-2/>

### STAGE 1 – Background, Sprites and Variables

1. Create a simple Maze on ONE BACKGROUND (example below):

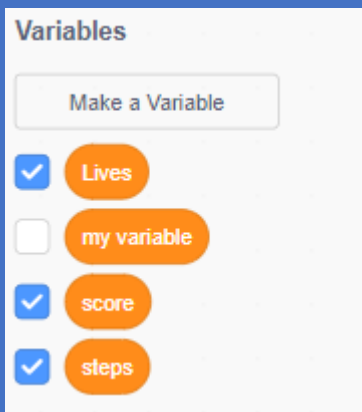


2. Create a BALL sprite (or your character) by click on



Create or SELECT a SPRITE character.

3. CREATE the following VARIABLES (Click Variables and select Make a Variable)



## STAGE 2 – Code for CHARACTER / BALL



```
when clicked
  set Lives to 3
  set steps to 0
  go to x: -216 y: 148
  repeat until touching color green ?
    if touching color black ? then
      move -10 steps
      change Lives by -1
    if key up arrow pressed? then
      point in direction 0
      move 5 steps
    if key down arrow pressed? then
      point in direction 180
      move 5 steps
    if key right arrow pressed? then
      point in direction 90
      move 5 steps
    if key left arrow pressed? then
      point in direction -90
      move 5 steps
  broadcast game over
```

### Code Guidance

- Set Variables at the beginning
- Initialise position of BALL / CHARACTER
- Create REPEAT LOOP for detecting KEY STROKES and bumping into WALLS. Loop stops when SPRITE hits GREEN (make sure EXACTLY the same COLOUR as your END MARKER. Use COLOUR SELECT MARKER).
- IF hit wall (BLACK) then deduct a LIFE and MOVE back -10.
- Detect each KEY (Up, Down, Left, Right) and move SPRITE accordingly.
- Broadcast GAME OVER when HIT GREEN MARKER

RUN and TEST Program

NEXT LESSON

- Add Notices for GAME OVER and NO LIVES
- Add Steps / Use Score
- Detect whether COMPLETED GAME or LOST ALL LIVES