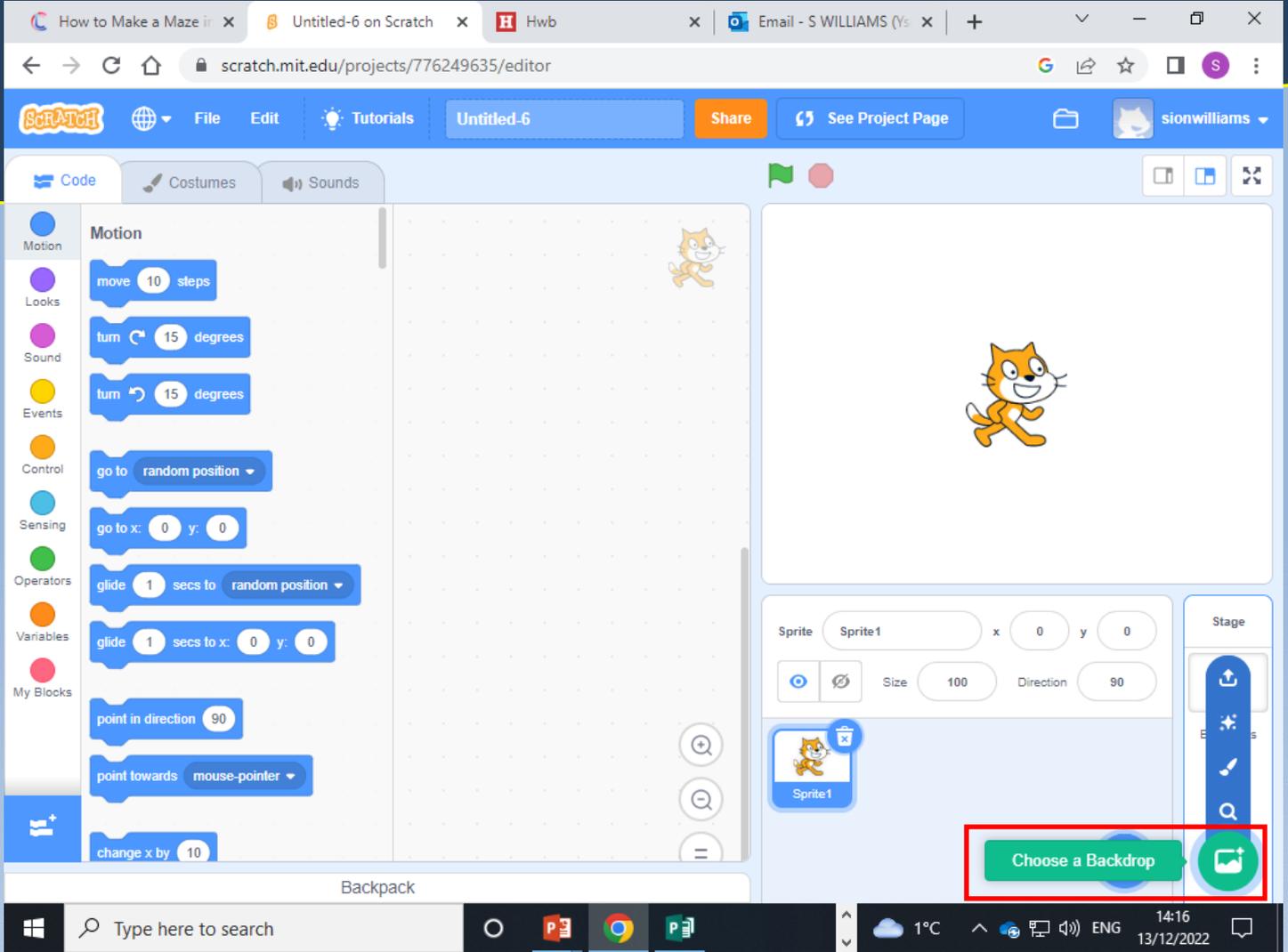




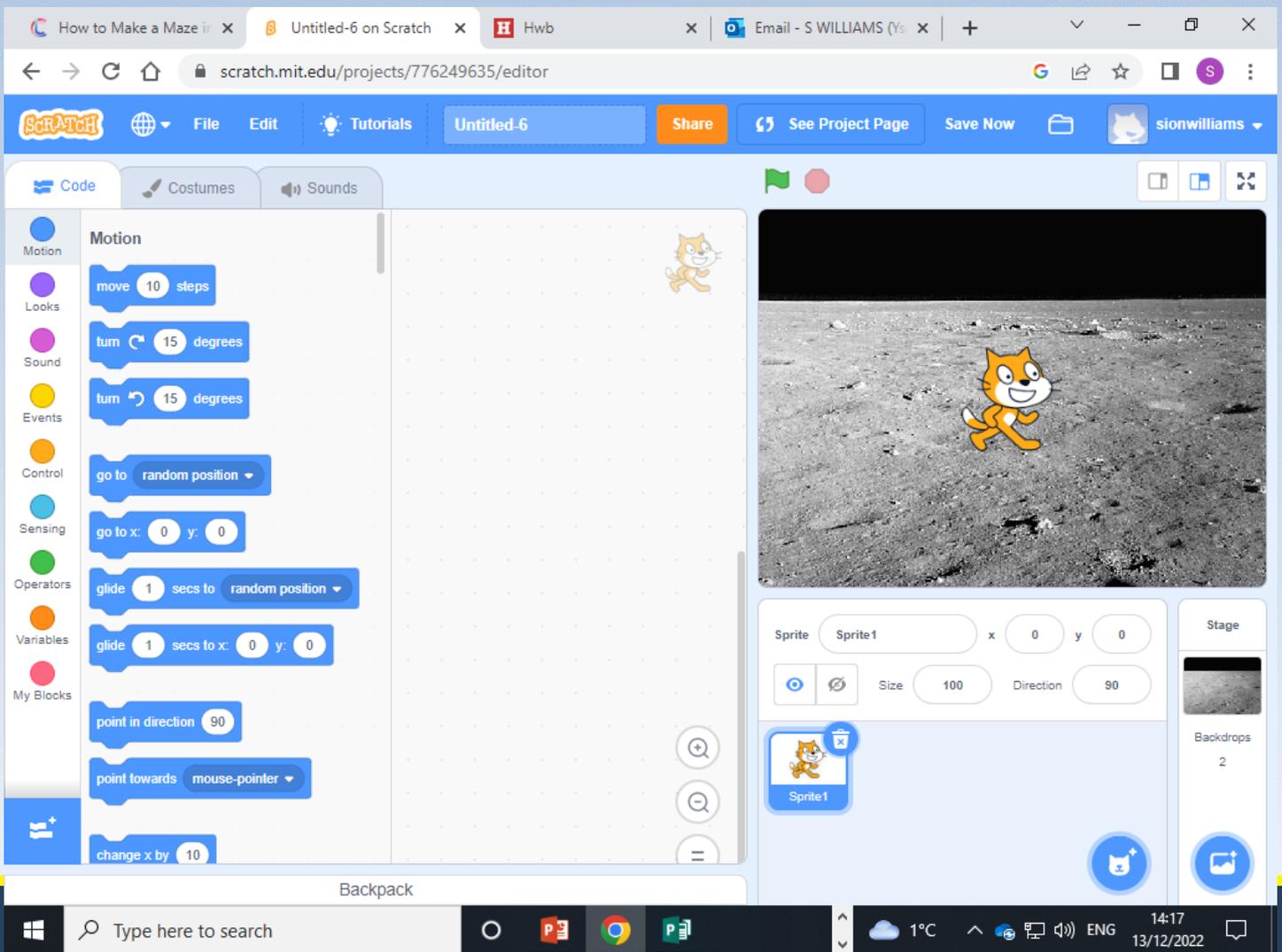
# TGCh Cam wrth gam Scratch

The screenshot shows the Scratch website interface. The top navigation bar includes 'Create', 'Explore', 'Ideas', and 'About'. The user 'sionwilliams' is logged in, and a dropdown menu is open, showing options: 'Profile', 'My Stuff' (highlighted with a red box), 'Account settings', and 'Sign out'. The main content area is divided into 'What's Happening?' and 'Scratch News'. The 'What's Happening?' section contains a message: 'This is where you will see updates from Scratchers you follow. Check out some Scratchers you might like to follow'. The 'Scratch News' section features three articles: '2022: A Scratch Year', 'Wiki Wednesday!', and 'New Scratch Design Studio!'. Below the news is the 'Featured Projects' section, displaying five project thumbnails: 'Design a Plant...', 'D.I.Y Gingerbread...', 'Mount Fuji', 'Satisfying Clone...', and 'Dodge #games #a... OverShadow...'. The Windows taskbar at the bottom shows the search bar, task view, and system tray with the date 13/12/2022 and time 14:15.

Scratch editor interface showing the Code tab. The left sidebar contains categories: Motion, Looks, Sound, Events, Control, Sensing, Operators, Variables, and My Blocks. The main workspace is empty. The right panel shows the Sprite area with 'Sprite1' selected, and the Stage area. A red box highlights the 'Choose a Backdrop' button in the Stage area.



Scratch editor interface showing the same Code tab. The main workspace now displays a grey, rocky moon surface backdrop. The right panel shows the Stage area with the 'Backdrops' list containing 2 items. The 'Choose a Backdrop' button is no longer highlighted.



Scratch editor interface showing the 'Code' tab. The 'Motion' category is selected in the left sidebar. The main workspace contains a grid with a Scratch cat sprite. The right sidebar shows the 'Sprite' panel with 'Sprite1' selected, and the 'Paint' button is highlighted with a red box. The Windows taskbar at the bottom shows the search bar and system tray with the date 13/12/2022.

Scratch editor interface showing the 'Backdrops' tab. The 'backdrop2' panel is active, displaying a grid for drawing. The 'Paint' button in the left sidebar is highlighted with a red box. The right sidebar shows the 'Stage' panel with 'Sprite1' and 'Backdrop3' visible. The Windows taskbar at the bottom shows the search bar and system tray with the date 13/12/2022.

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Code Backdrops Sounds

backdrop2

Fill Outline 4 Copy Paste Delete Flip Horizontal Flip Vertical

Convert to Bitmap

Sprite Name x x y y Size Direction

Sprite1

Stage Backdrops 2

Type here to search 1°C 14:26 13/12/2022

Detailed description: This screenshot shows the Scratch editor interface. The 'Backdrops' tab is active, displaying a maze backdrop named 'backdrop2'. The backdrop is a black and white maze on a light blue grid. A cat sprite named 'Sprite1' is positioned in the center of the maze. The 'Sprite' panel on the right shows the cat sprite selected, with its name 'Sprite1' and a red box around it. The 'Stage' panel on the right shows the maze backdrop selected. The Windows taskbar at the bottom shows the search bar, taskbar icons, and system tray with a temperature of 1°C and the date 13/12/2022.

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Code Costumes Sounds

costume1

Fill Outline 4 Copy Paste Delete Flip Horizontal Flip Vertical

Convert to Bitmap

Sprite Sprite1 x -186 y 114 Size 20 Direction 90

Stage Backdrops 2

Type here to search FTSE... 14:30 13/12/2022

Detailed description: This screenshot shows the Scratch editor interface. The 'Costumes' tab is active, displaying a cat costume named 'costume1'. The costume is a cartoon cat with orange fur and a white belly. The 'Sprite' panel on the right shows the cat sprite selected, with its name 'Sprite1' and a red box around it. The 'Stage' panel on the right shows the maze backdrop selected. A red arrow points to the top-left corner of the maze backdrop. The Windows taskbar at the bottom shows the search bar, taskbar icons, and system tray with a temperature of 14:30 and the date 13/12/2022.

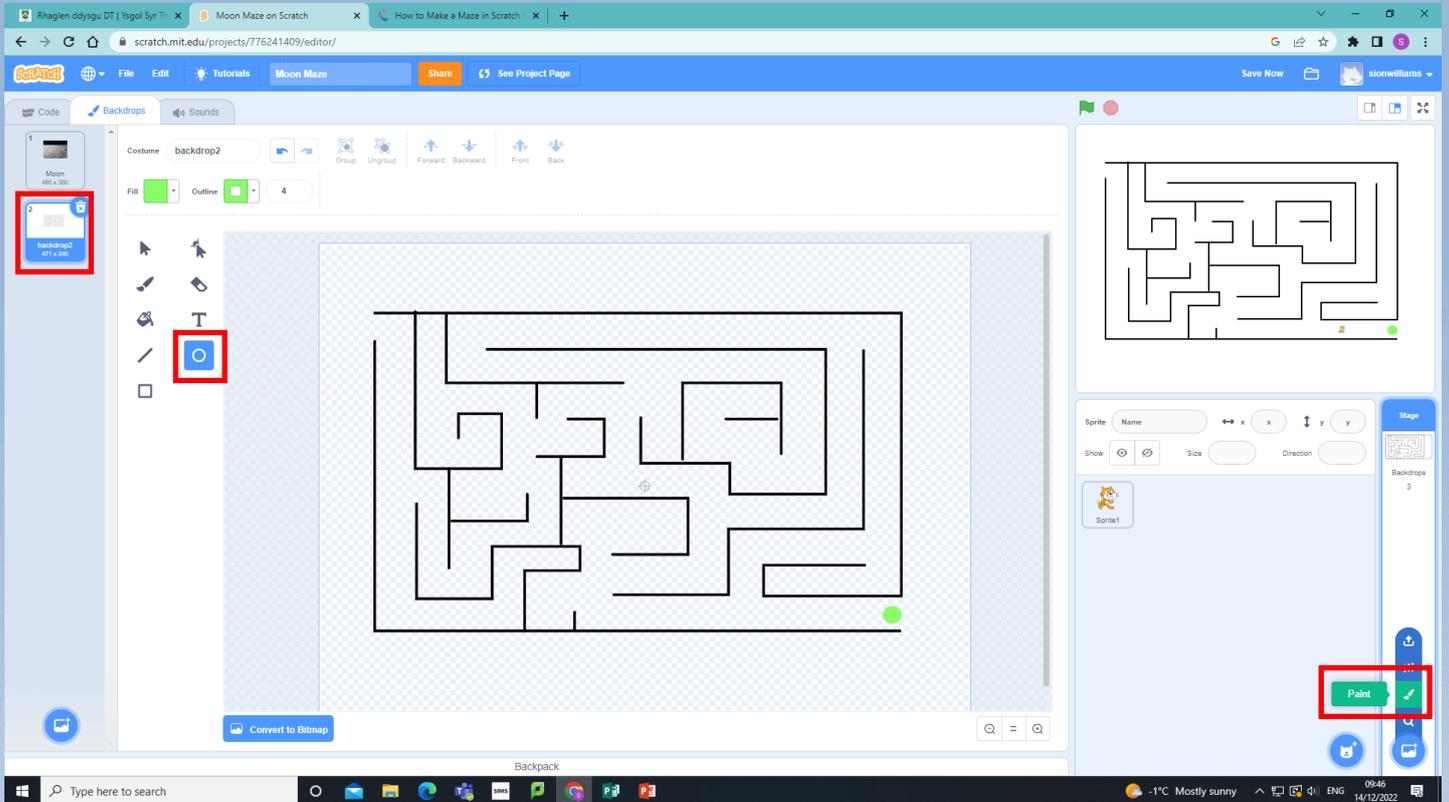
The first block we want is “when green flag clicked” from **Events**. Underneath, we want the “go to x, y” **Motion** block. We can fill in the blanks with the values for the top left position. For us, x is -186 and 114. This allows us to reset the game every time we hit the green flag.

The image displays five Scratch code blocks arranged in two rows. The top row contains three blocks: a 'when green flag clicked' block with a 'go to x: -186 y: 114' block; a 'when right arrow key pressed' block with a 'change x by 10' block and an 'if touching color [black]?' block containing a 'go to x: -184 y: 115' block; and a 'when left arrow key pressed' block with a 'change x by -10' block and an 'if touching color [black]?' block containing a 'go to x: -184 y: 115' block. The bottom row contains two blocks: a 'when up arrow key pressed' block with a 'change y by 10' block and an 'if touching color [black]?' block containing a 'go to x: -184 y: 115' block; and a 'when down arrow key pressed' block with a 'change y by -10' block and an 'if touching color [black]?' block containing a 'go to x: -184 y: 115' block. Two red arrows point from the text 'Send the sprite back to the start.' to the 'go to x: -184 y: 115' blocks in the bottom row.

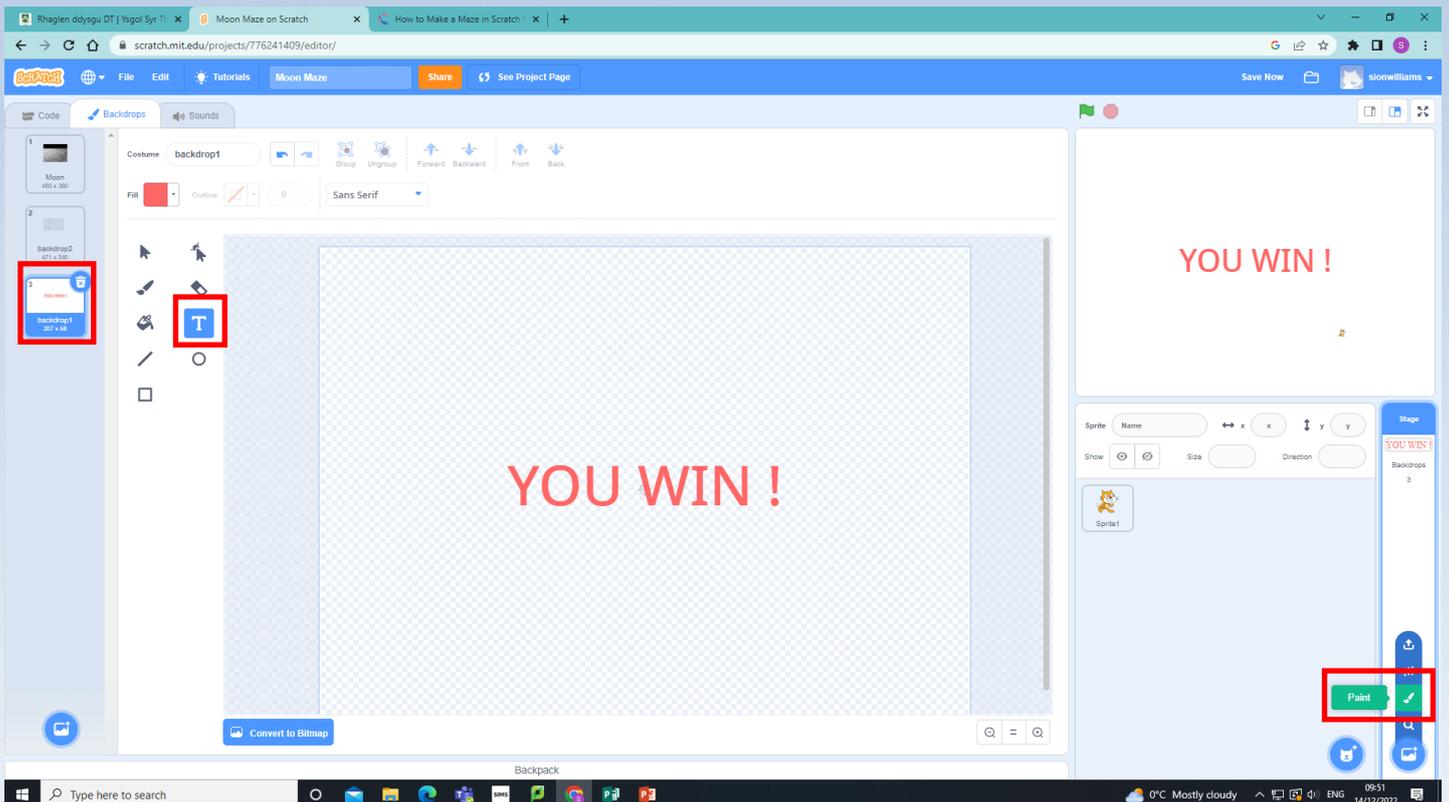
Send the sprite back to the start.

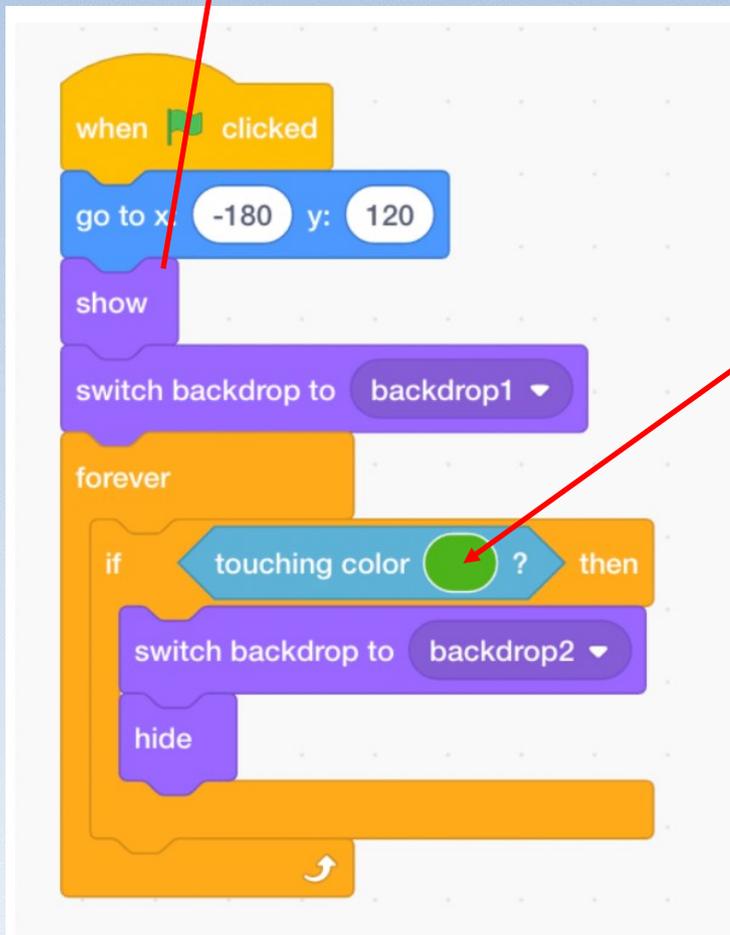
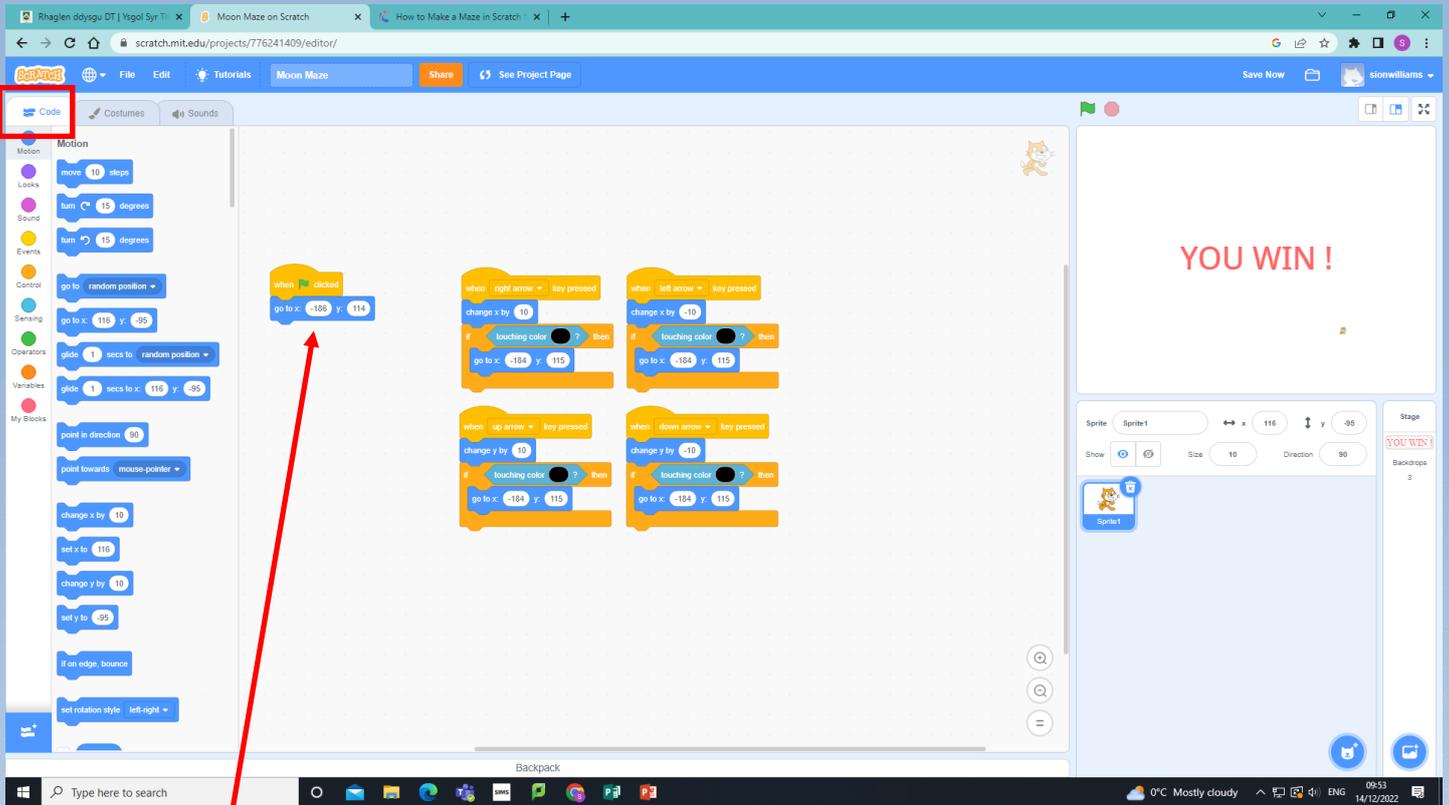
The rest of the coding is to move your sprite around the maze. The Touching colour code is to move your sprite back to the start if it touches the walls. Remember to choose the same colour as the walls of the maze!

Go to Backdrop then chose the circle tool and the colour green. Create a n end point for your maze.



Go to Backdrop then chose the text tool. Type a winning message.





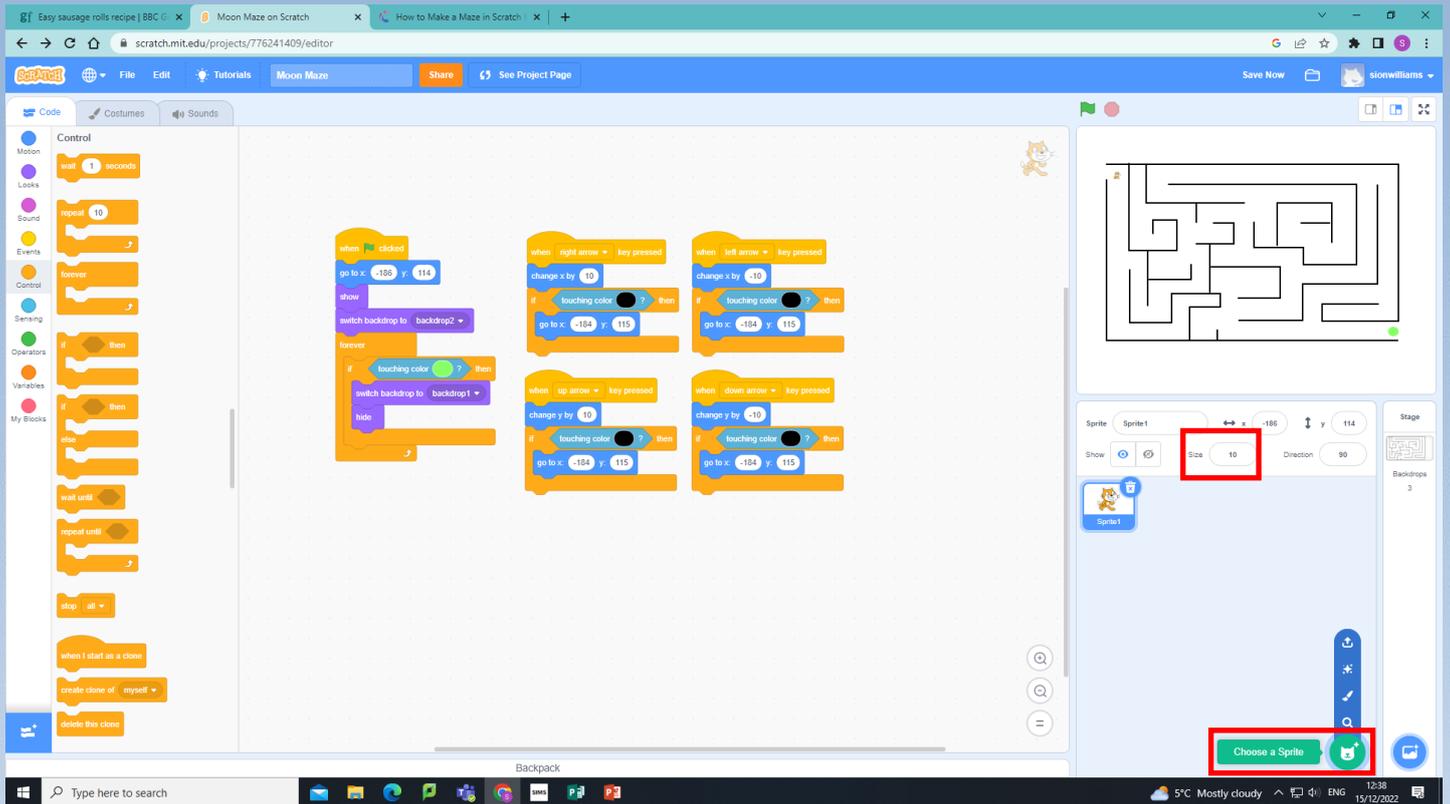
Add the coding on the left to the coding for the sprite as shown. This will make the winning message appear.

Remember to select the correct colour in the Touching colour code. This needs to match the end point in the maze.

Customize the maze.

- You can add extra levels to the game using the coding you have used already.
- Add obstacles to the maze and make the sprite go back to the start.

Choose a new sprite then change the size of the sprite and put it where you want it.



Add the below code to the sprite.

This is the start position.

This This is where the sprite moves to. You can get the X and Y coordinates by moving your sprite to where you want it to go and looking here.

This then sends the sprite back.

The screenshot shows the Scratch editor interface. The code area contains a 'when clicked' event block followed by a 'forever' loop. Inside the loop, there are three 'go to x: 53 y: -18' blocks, each preceded by a 'glide 1 secs to x: 145 y: -18' block. The 'go to x: 53 y: -18' block is highlighted with a red box. A red arrow points from the text 'This This is where the sprite moves to...' to the 'go to x: 53 y: -18' block. Another red arrow points from the text 'This then sends the sprite back.' to the 'forever' loop. A third red arrow points from the text 'This is the start position.' to the 'go to x: 53 y: -18' block. On the right, the stage shows a maze with a bat sprite. The bat's position is indicated by a red arrow pointing to its coordinates (x: 53, y: -18) in the sprite control panel.

The screenshot shows the Scratch editor interface with a more complex code structure. The code area contains a 'when clicked' event block followed by a 'forever' loop. Inside the loop, there are several 'if touching' blocks. One 'if touching Bat?' block is highlighted with a red box. A red arrow points from the text 'Add the above code to the sprite.' to this block. Another red arrow points from the text 'Add the above code to the sprite.' to another 'if touching Bat?' block. The stage shows a maze with a bat sprite. The bat's position is indicated by a red arrow pointing to its coordinates (x: -186, y: 114) in the sprite control panel.

Add the above code to the sprite.

Once you have completed the coding you can then share your game with others. Click share at the top of the page then copy and paste the web address to send to others.

The screenshot displays the Scratch editor interface for a project titled "Moon Maze". The browser address bar shows the URL [scratch.mit.edu/projects/776241409/editor/](https://scratch.mit.edu/projects/776241409/editor/). A red box highlights the "Share" button in the top navigation bar. The code area contains several scripts:

- when clicked:** go to x: -186 y: 114, show, switch backdrop to: backdrop2, and a forever loop containing:
  - if touching color: green? then switch backdrop to: backdrop1, hide
  - if touching: Bat? then go to x: -184 y: 115
- when right arrow key pressed:** change x by: 10, if touching color: black? then go to x: -184 y: 115
- when left arrow key pressed:** change x by: -10, if touching color: black? then go to x: -184 y: 115
- when up arrow key pressed:** change y by: 10, if touching color: black? then go to x: -184 y: 115
- when down arrow key pressed:** change y by: -10, if touching color: black? then go to x: -184 y: 115
- if touching: Bat? then:** go to x: -184 y: 115

The stage area shows a maze with a starting point and a goal point. The sprite area shows a bat sprite.

If you would like the sprite to not go back to the start when touching the walls, use the coding below.

The image displays the Scratch code editor for a maze game. The code is organized into several sections:

- Initialization:** A sequence of blocks including `go to random position`, `go to x: -75 y: 35`, `glide 1 secs to random position`, and `glide 1 secs to x: -75 y: 35`.
- Control:** A `hide` block followed by a `point in direction 90` block.
- Event Listeners:** Four `when key pressed` blocks for the right arrow, left arrow, up arrow, and down arrow.
- Logic for Wall Avoidance:** Each arrow key listener includes a `change x/y by` block, a `switch costume to` block, and an `if touching color` block. The `if touching color` blocks are designed to prevent the sprite from reversing direction when it hits a wall.

Two red boxes highlight the `when key pressed` event listener blocks, and a red arrow points to the `if touching color` block within the right arrow listener.

The right side of the image shows the game's visual interface, featuring a maze on a stone wall background. A cat sprite is positioned in the center, and a blue dragon is on the right. The Stage area shows the sprite's current position at x: -75 and y: 35, with a direction of 90 degrees. The sprite list includes `Sprite1`, `Bat`, and `Dragon`.