Digi-Wonderland Coding Projects

Wigan♡ Council

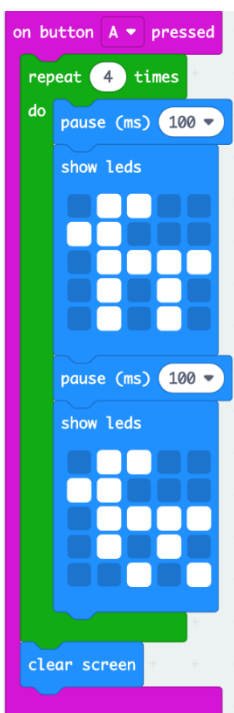## Introduction

- Visit the Micro:Bit MakeCode website (external link)

- In the 'My Projects' section of this webpage, click on the words 'New Project' in the purple box.

- Or you can use one of our Micro:Bit projects;
  Open the Running Reindeer project (external link)
  Open the Winter Wonderland Ferris Wheel project (external link)
  Open the Winter Wonderland Message project (external link)

- When using the Micro:Bit MakeCode website, the menu is located next to the Micro:Bit preview on the left of the screen. You will find 11 options, including the blocks (or code command) we will be using today - basic, input and loop.

- Don't have a Micro:Bit, don't worry! You can still make the code on the Micro:Bit MakeCode webpage and preview your code using the on screen Micro:Bit.
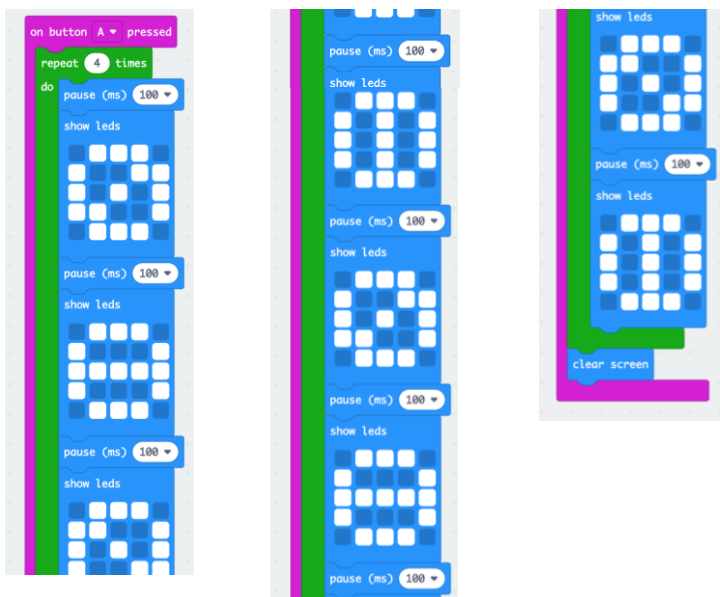
The Running Reindeer Project Code

1. In Input - Drag the block **on button A pressed** into the workspace on the right-hand side.
2. In Loops - Drag the block **repeat 4 times, do** and drop it inside the on button A pressed block.
3. In Basics - Drag the block **pause (ms) 100** and drop it inside the repeat 4 times, do block.
4. In Basics - Drag the block **show leds** and drop it inside the repeat 4 times, do block and underneath the pause (ms) 100 block.
5. In Basics - Drag the block **pause (ms) 100** and drop it inside the repeat 4 times, do block and underneath the show leds block.
6. In Basics - Drag the block **show leds** and drop it inside the repeat 4 times, do block and underneath the last pause (ms) 100 block.
7. In Basics - Drag the block **clear screen** and drop it inside the **on button A pressed** block and underneath the repeat 4 times, do block.
8. Click on the squares in each **show led** block to create your animated led design.
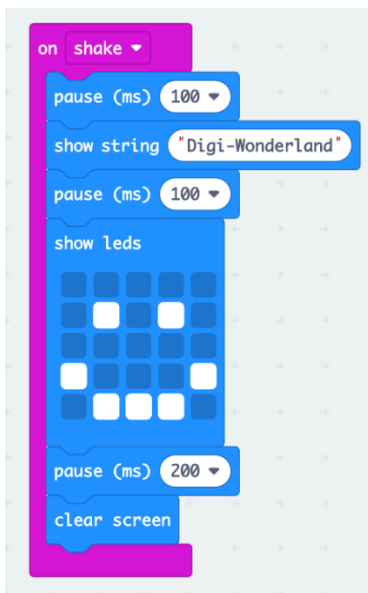
The Winter Wonderland Ferris Wheel Code

1. In Input - Drag the block **on button A pressed** into the workspace on the right-hand side.

2. In Loops - Drag the block **repeat 4 times, do** and drop it inside the **on button A pressed** block.

3. In Basics - Drag the block **pause (ms) 100** and drop it inside the **repeat 4 times, do** block.

4. In Basics - Drag the block **show leds** and drop it inside the **repeat 4 times, do** block and underneath the **pause (ms) 100** block.

5. Repeat step 3 and step 4 seven times.

6. In Basics - Drag the block **clear screen** and drop it inside the **on button A pressed** block and underneath the repeat 4 times, do block.

7. Click on the squares in each **show led** block to create your animated led design. To make the led look like it is moving like a wheel, click on the led squares to make a circle on each **show led** block, then make a line that moves around like the hands on a clock.

The Winter Wonderland message

1. In Input - Drag the block **on shake** into the workspace on the right-hand side.

2. In Basics - Drag the block **pause (ms) 100** and drop it inside the **on shake** block.

3. In Basics - Drag the block **show string** and drop it inside the **on shake** block and underneath the **pause (ms) 100** block. Inside this block type a message next to the words show string.

4. In Basics - Drag the block **pause (ms) 100** and drop it inside the **on shake** block.

5. In Basics - Drag the block **show leds** and drop it inside the **on shake** block and underneath the last pause (ms) 100 block.

6. In Basics - Drag the block **pause (ms) 100** and drop it inside the **on shake** block and underneath the show leds block. In this block, click on 100 and change it to 200 ms.

7. In Basics - Drag the block **clear screen** and drop it inside the **on shake** block and underneath the **pause (ms) 200** block.

8. Click on the squares in the **show led** block to create your led design. We chose to make a smiley face, but you can make your own design.

Extra activity

★ Bring your coding projects to life by making a Winter Wonderland of your own.

★ You will need some pens or pencils and two pieces of card or cardboard.

★ Draw houses, winter trees, a fairground or snowman to decorate your own Winter Wonderland.

★ You can also try building our Scratch Snowman (external link)