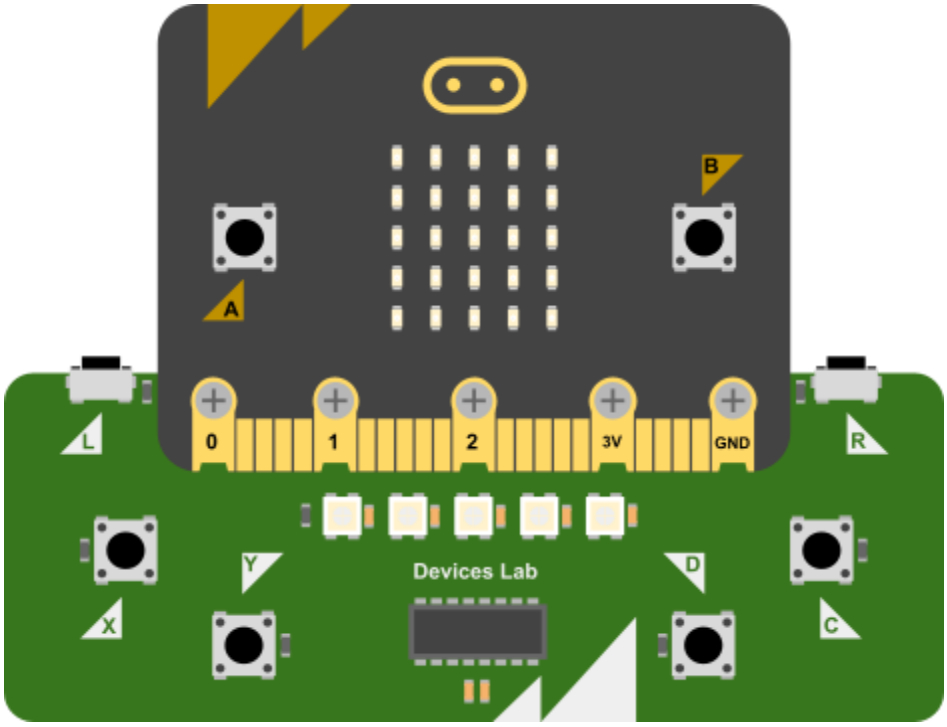

Memory game

Memorise the image on the micro:bit LED matrix display, and then recreate it row by row.

After the image is displayed on the LED matrix for 5 seconds, the matrix will clear. Each row of the image will be edited on the NeoPixel row, and when ready, the row can be “submitted” to the LED matrix. When all 5 rows are complete, the micro:bit will display whether the image was correct, or not. If correct, all NeoPixels will flash green. If incorrect, the NeoPixels will flash red, and the player can try again.

Controls

X	select the next pixel on the NeoPixel row
Y	select the previous pixel on the NeoPixel row
C	confirm, or “submit” the row to the LED matrix
D	toggle the pixel on/off
A	reset current image
B	continues to the next image

Trailing lights

Catch the falling light trails!

Light beams will come down on the micro:bit matrix display and the play must catch the light pixels by moving the correct pixel “bucket” on the NeoPixel row. Catch all light trails, and the game will move on to the next, faster, level. Use the power-up (indicated by the microphone LED) to make your “bucket” wider.

Controls

Y	move “bucket” left
D	move “bucket” right
X/C	use power-up
A	reset

With shoulder buttons

L	move “bucket” left
R	move “bucket” right

Inserve Tetris

Tetris, but upside down and the shapes are flat.

Possible shapes will be 1 pixel, 2 pixels, or 3 pixels long. The next shape will be shown on the NeoPixel row. The shape will then move up to the LED matrix. As in a Tetris game, the objective is to align shapes so that you clear rows. Align the shapes, clear the rows, and receive points for each row.

Controls

X/Y	move shape left
C/D	move shape right
A	reset game

With shoulder buttons

L	move shape left
R	move shape right

NeoPixel attack

Shoot the enemies coming at you!

Enemies (single pixels) will appear at the top of the micro:bit LED matrix. The player must prevent them from crawling to the bottom of the matrix. The player must shoot them by moving the weapon on the row of NeoPixels. Use the power-up (indicated by the microphone LED) to destroy all visible enemies at once.

Controls

Y move “bucket” left
D move “bucket” right
X/C use power-up

With shoulder buttons
L move weapon left
R move weapon right

micro:bit says

Just like Simon, but it’s the micro:bit speaking.

Similar to "Simon Says", the NeoPixels flash in a sequence and the player must replicate the sequence using the buttons. Each round adds a new step to the sequence. The NeoPixel row will flash all green if correct, or red if incorrect.

Controls (top left LED is at [1,1])

X corresponds to LED at [1,2]
Y corresponds to LED at [2,3]
C corresponds to LED at [5,2]
D corresponds to LED at [4,3]

With shoulder buttons
L corresponds to LED at [1,1]
R corresponds to LED at [5,1]

Whack-a-mole

A random NeoPixel lights up, and the player must press the corresponding button as quickly as possible. Add shoulder buttons for more complexity.

Controls

X	leftmost NeoPixel
Y	center-left NeoPixel
D	center-right NeoPixel
C	rightmost NeoPixel
C+D	centre NeoPixel

With shoulder buttons (and C or D only correspond to the centre NeoPixel)

L	leftmost NeoPixel
R	rightmost NeoPixel

micro:reaction

How will you *react*?

On the micro:bit matrix a letter appears (C/D/X/Y/L/R), and the player must press the corresponding button as quickly as possible. Measure and display reaction times on the NeoPixel row. Add levels of difficulty with faster lights or double lights requiring simultaneous button presses.