

# Whack a Mole / Quickest reaction Game

Make a 'Whack a Mole' Quickest Reaction' game using cardboard, aluminium foil, 4 crocodile clip cables. and of course your micro:bit!

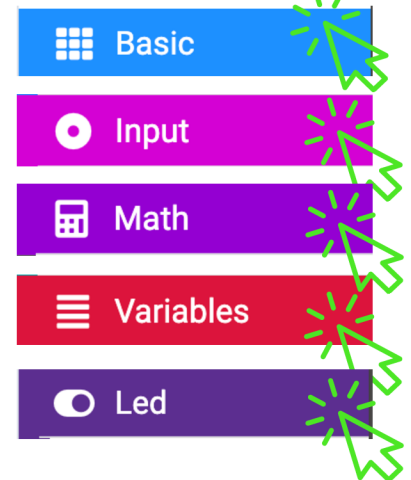
Log into MakeCode and Let's get coding!

<https://makecode.microbit.org/>

Start by Making 4 variables called:  
running, falseStart, end and start.

```

on start
  set running to false
  set falseStart to false
  set end to 0
  set start to 0
  
```



```

on pin P0 pressed
  show number 3
  show number 2
  show number 1
  clear screen
  set running to false
  set falseStart to false
  pause (ms) pick random 1000 to 3000
  if not falseStart then
    set start to running time (ms)
    set running to true
    plot x pick random 0 to 4 y pick random 0 to 4
  
```

When a player presses the 'pin 0' mat, a count down starts on the LED display output. The program then waits a random time between 1 and 5 seconds and shows a random LED. This is the mole!

Boolean logic stops any cheating!  
Boolean variables can only have two values: True or False. The 'running' variable only checks which button is pressed while the game is running.



# Whack a Mole / Quickest reaction Game



```
on pin P1 pressed
  if running then
    set end to running time (ms)
    show leds
    play melody power up in background
    set running to false
    repeat 2 times
      do
        show number end - start / 1000
  else
    set falseStart to true
    show leds
    play melody wawawawaa in background
```

This is the code for Player 1.  
Player 1 whacks (touches) the foil  
'button' connected to pin 1 (left).



These LEDs display to indicate  
that player 1 was quickest.

These LEDs indicate that player 1  
touched the foil button too quickly.

If you are playing by yourself, this  
will work as a one player game. If  
you want to compete against another  
player, add the code on the next  
page...



# Whack a Mole / Quickest reaction Game



```
on pin P2 pressed
  if running then
    set end to running time (ms)
    show leds
    play melody power up in background
    set running to false
    repeat 2 times
      do
        show number end - start / 1000
  else
    set falseStart to true
    show leds
    play melody wawawawaa in background
```

This is the code for Player 2.

Player 2 whacks (touches) the foil 'button' connected to pin 2 (right).

These LEDs display to indicate that player 2 was quickest.



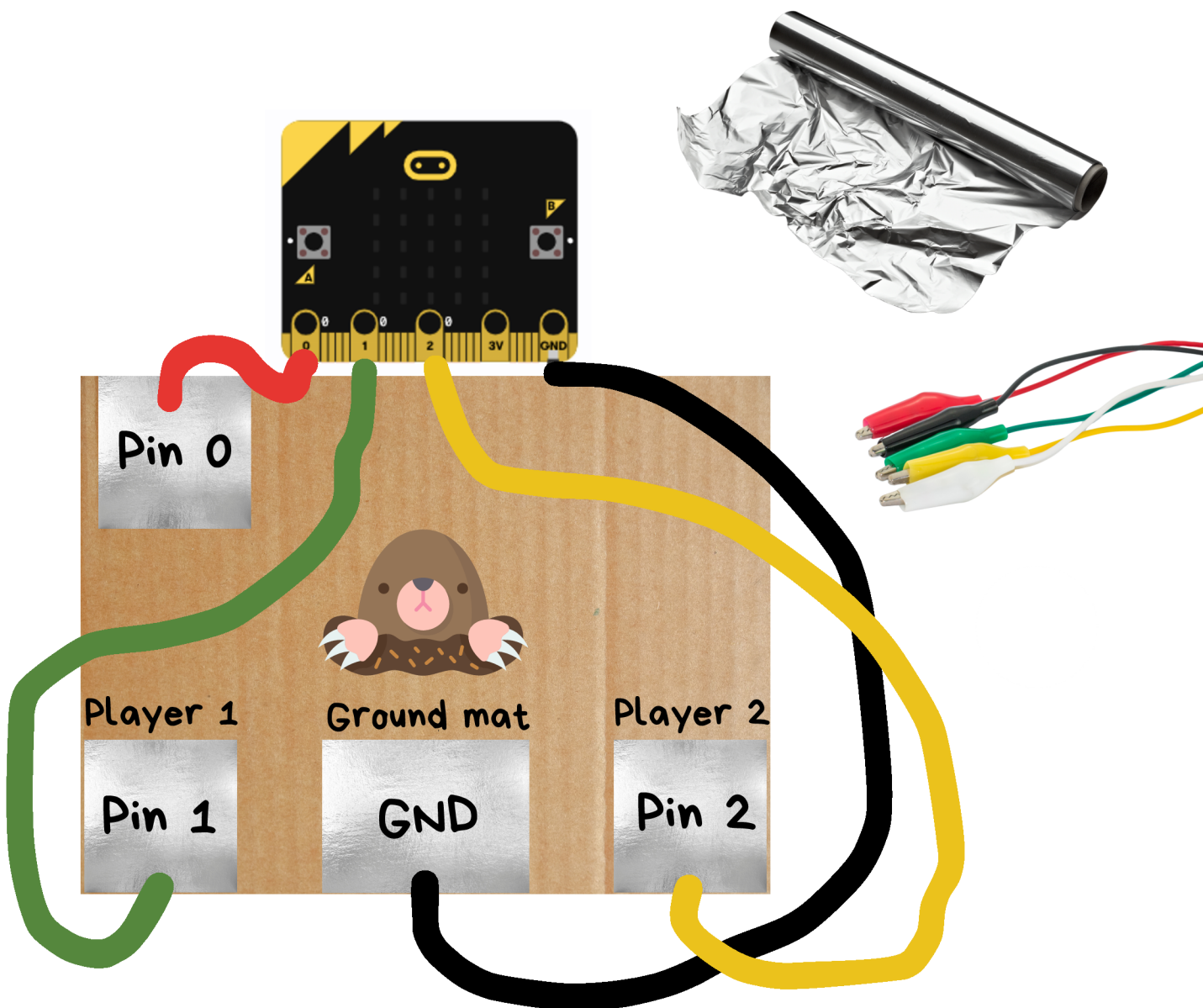
These LEDs indicate that player 2 touched the foil button too quickly.

Now make the game board - shown on the next page.



# Quickest Reaction Game continued

Make the game board using cardboard and foil then connect the pins using crocodile cables.



## Challenge your family to a game!

- Decide who is player one and who is player two.
- Both players must place one hand on the 'ground' (GND) mat.
- Player 1 touches the Pin 0 mat to start.
- When you see an LED light up on the micro:bit, touch your pin mat as quickly as you can, but don't touch it before the light appears!
- The LEDs will indicate which player was quickest and how many seconds it took.
- Can you beat your quickest time?