STEM Showdown

An Adelaide University, School of Education
STEMpire program

Little Bit of Trouble

Name:_____

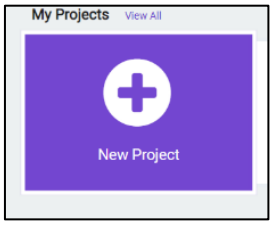
The STEM Showdown is a series of STEM challenges to solve by the end of the season. You can complete the tasks individually or in small groups (up to 3 people). Make sure you write all the names of the people in your group above. The student with the most tasks completed over the season will be crowned the Adelaide University STEM Showdown Champion. Good Luck.

Little Bit of Trouble

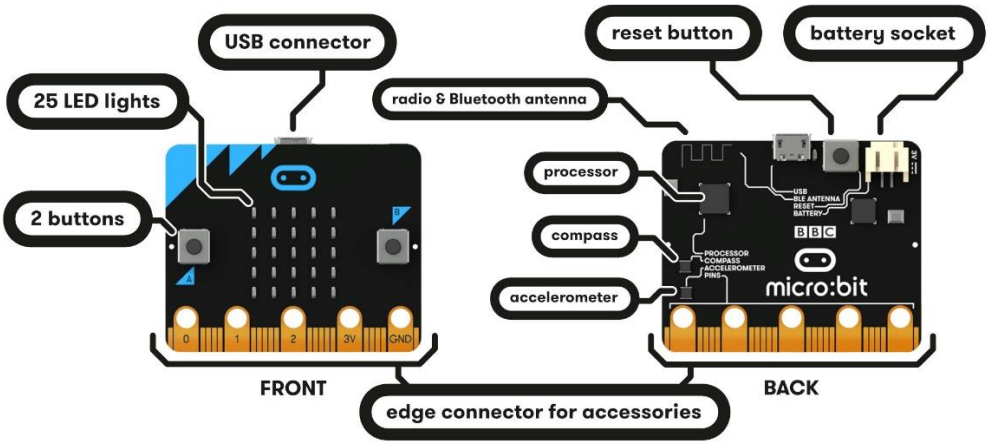
National science week is Australia's annual celebration of science and technology which runs in August every year. Using technology you need to vote, should your class set up a science week display? You decide!

Your Task

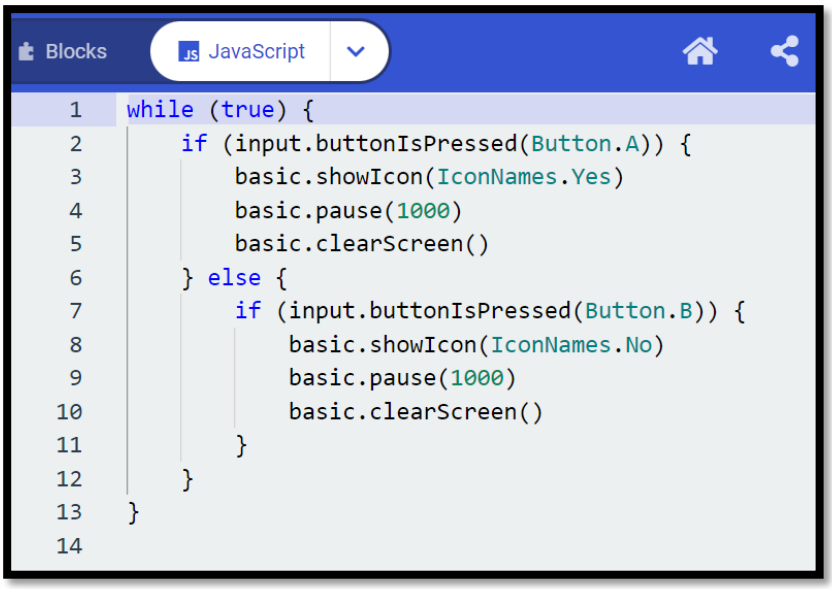
- Google search **MakeCode for micro:bit** and select **Create New Project**



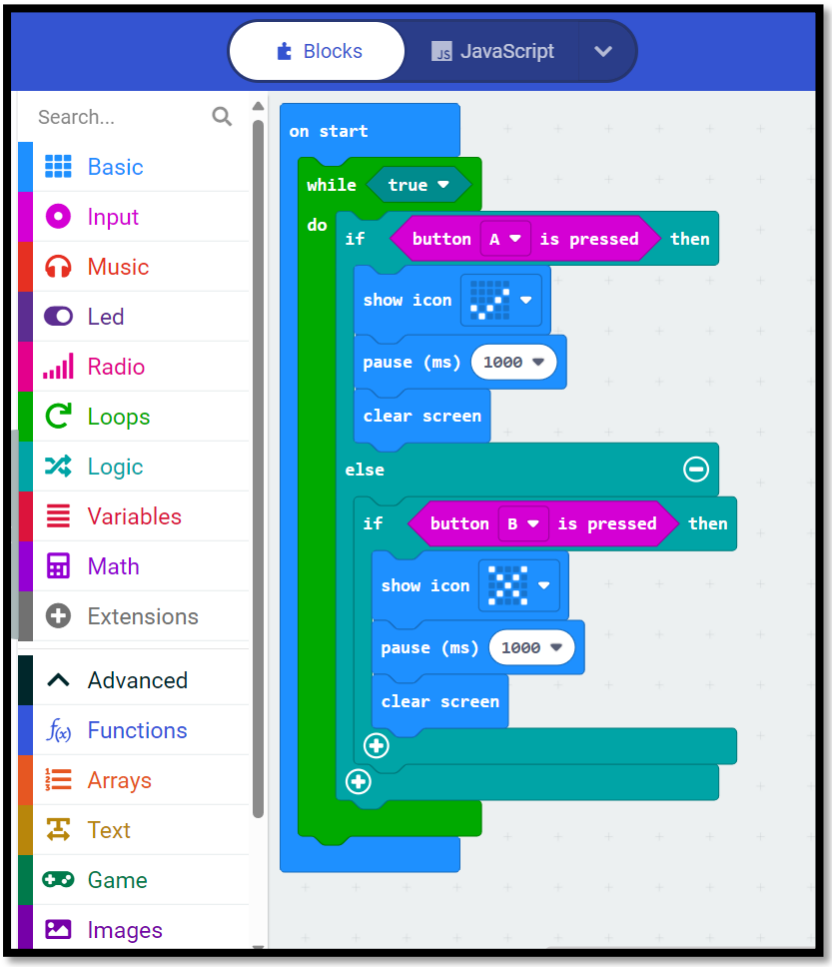
- Follow the instructions on the next page to make the micro:bit light up with a tick when button A is pressed and a cross when button B is pressed

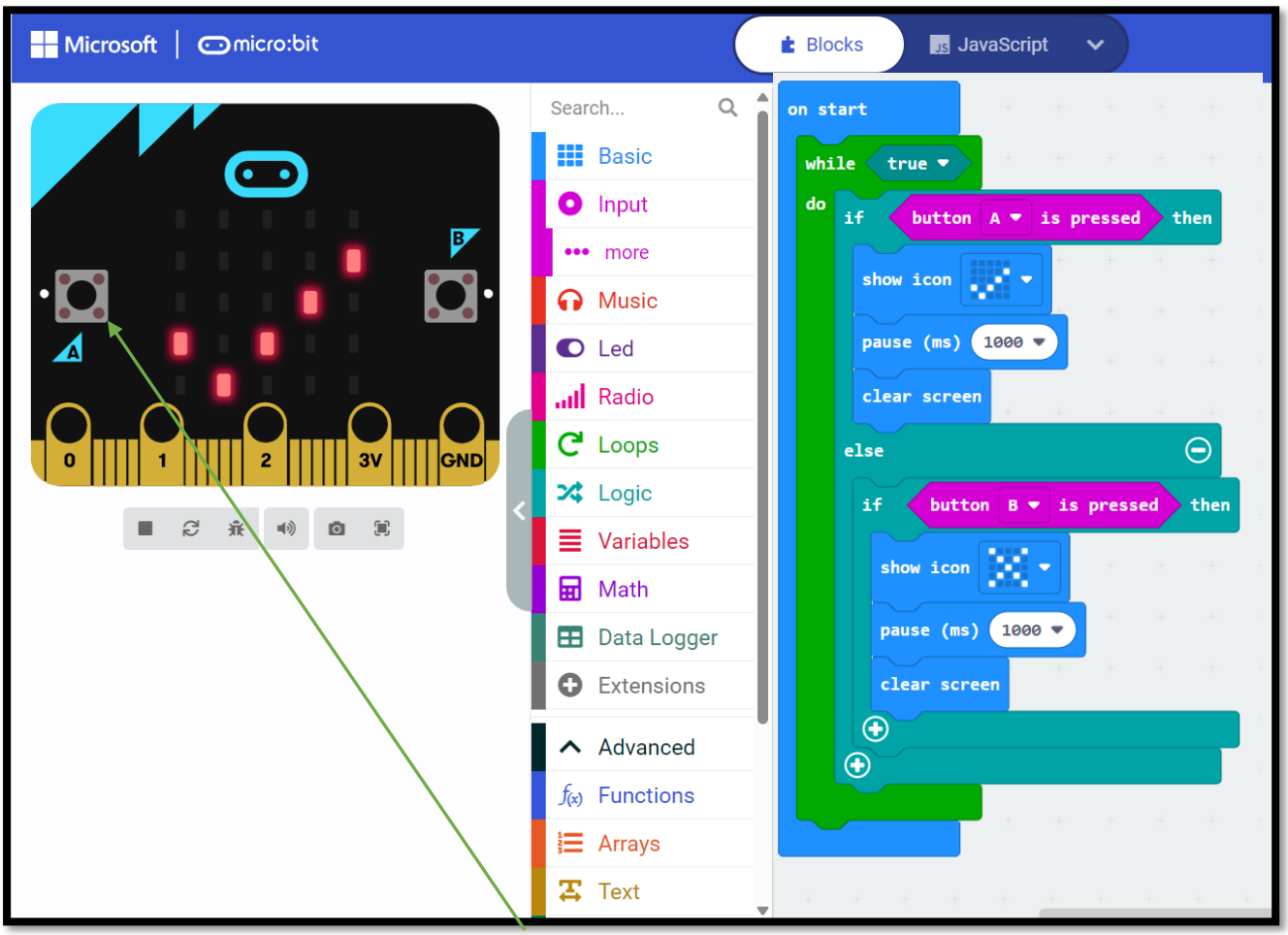


This is the text code for the micro:bit to function in this way

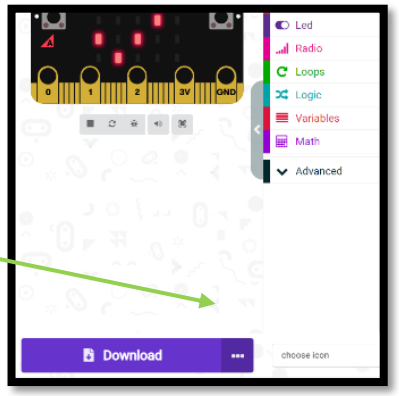


The MakeCode also allows block coding where the instructions must fit together, like a jig saw puzzle, for the program to work. This is the same code using block code.





- Test that the code works by pressing the buttons on the screen to show the tick and the cross.



If you have the hardware, attach your micro:bit, via USB

Click on the dots and select *Connect Device* then download your code to one of the micro:bits

Now make the following changes and show the Showdown Umpire:

- Remove the clear screen and pause options, what happens?
- Replace the show icon with “show string” and write you own message for button A
- Replace the show icon with “show leds” and create your own picture

STEM Showdown Umpire Comments	Completed (STEM Showdown Umpire to sign)

Adelaide University

Extension Task

Extension Task	STEM Showdown Umpire Comments	Completed (STEM Showdown Umpire to sign)
Make a picture of a smiley face		
Code it to play a tune		
Make a micro:bit into a dice		
Create the first letter of your name on the LEDs, and make it display using a new input (look in input to find something other than the button A or B option)		
Choose your own creative design and load it to the micro:bit		

Make sure you hand up your signed sheet to the umpire at the end of the session to have your points allocated to the leaderboard.