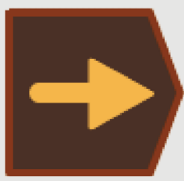


Meeting the TBlocks

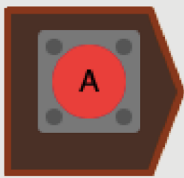
Start TBlocks are placed at the beginning of a program and tell the program to run.



Run - will run the program when the play button is pressed



Accelerometer - will run the program when the Trashbot senses a certain acceleration



Button - will run the program when "A", "B", or "A + B" is clicked



Temperature - will run when the Trashbot senses a certain temperature

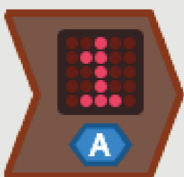
Action TBlocks perform tasks on the Trashbot



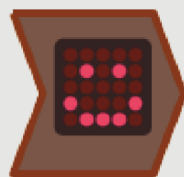
Set - will set variable A or B to a certain value



Add - will add or subtract a set value to variable A or B



Print - will print the value of a variable OR will print the value of a sensor



Smile - will show an image on the LED display



Sound - will play a sequence of up to 4 notes



Single Motor - will run a single motor for a set time and at a set speed



Double Motor - will run both motors for a set time and at a set speed

Control TBlocks manage the flow of the program through repetition and pauses



Wait - will pause the program for a certain amount of time



Loop - will loop through a sequence of TBlocks a set amount of times

Building Apps with TBlocks

Happy/Sad - The Trashbot will start out with a smiling face, but when there is too big of an acceleration, the Trashbot will frown. The "run" TBlock starts the first sequence right away, displaying a smile on the Trashbot. The "accelerometer" TBlock starts the second sequence (displaying a sad face) when there is a big acceleration.



Museum Counter - Clicking button "A" will register 1 group (variable A) of 4 people (variable B) entering the museum. Button "B" will register 1 group (variable A) of 1 person (variable B) entering. Both buttons together will print out the total number of groups that entered (variable A) and people that entered (variable B).



Thermometer - Upon initially starting, the motor is set to a speed of 0. When the temperature gets too hot, the Trashbot will beep 4 times and the motor (maybe with a fan connected) will start running back and forth 5 times in the loop.



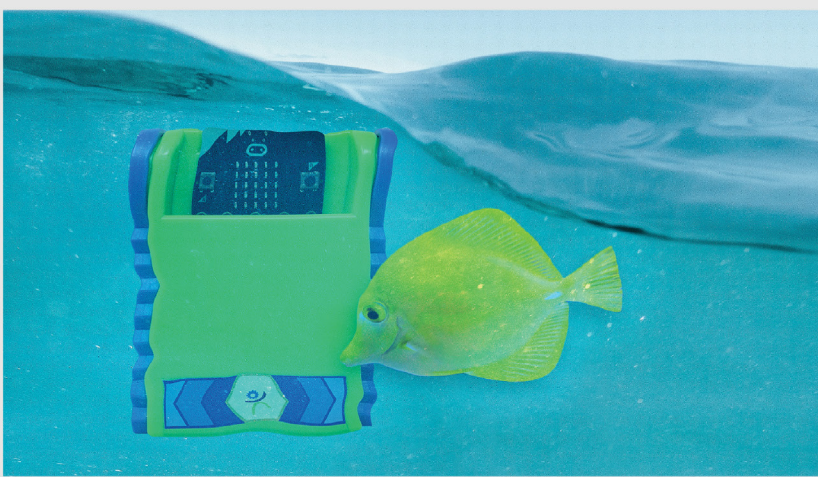
Project Examples

Easy



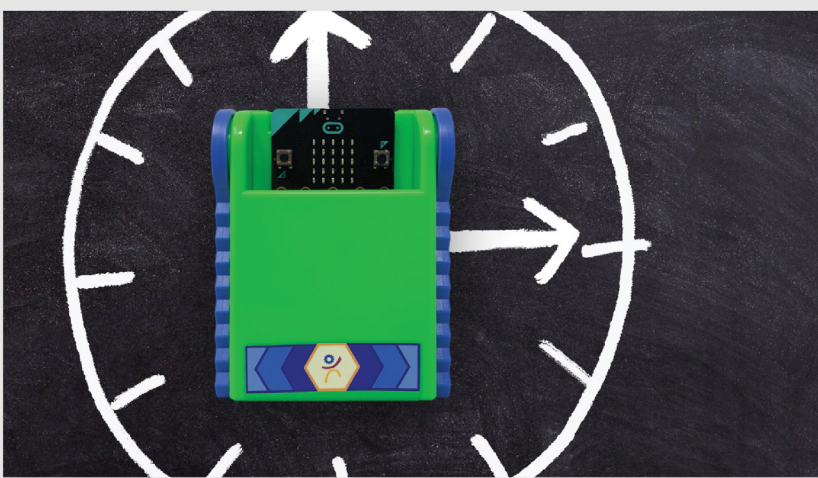
Introduce yourself using the Trashbot: create a program that will display your name!

Medium



Combine your Trashbot with materials to make an underwater animal. Make sure your animal will be able to swim, eat, and stay safe!

Medium



Time can be a difficult thing to keep track of; make a device using the Trashbot to keep track of time. Be creative!

Hard



Invent a device to help you out when the weather gets rough. Think about tough conditions and inventive solutions!