

CODING CARDS

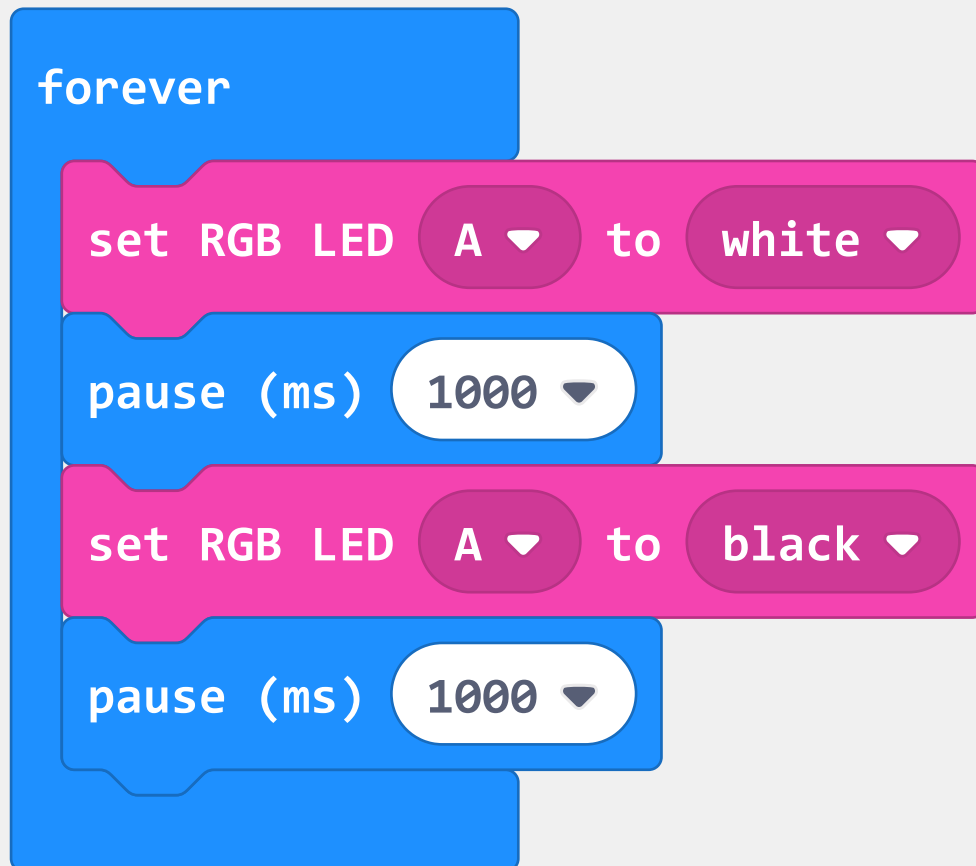


LEARNING
PLATFORM

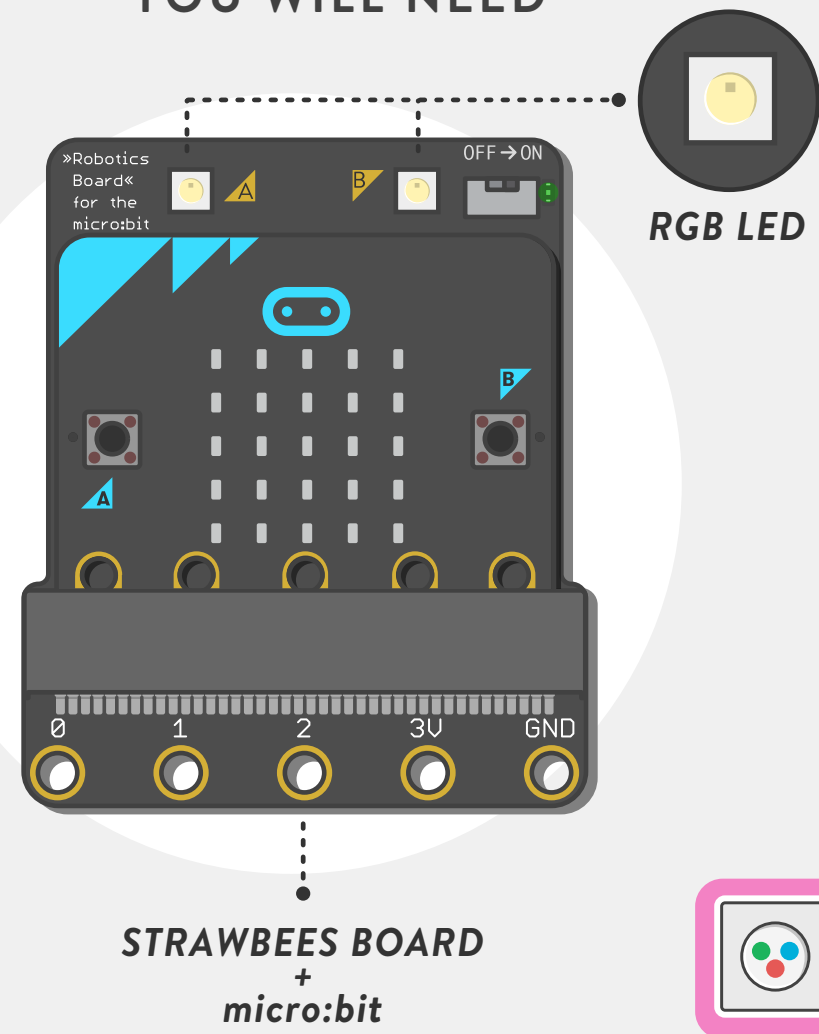
For activities, lesson plans and
support material please go to:

learning.strawbees.com

BLINK



YOU WILL NEED

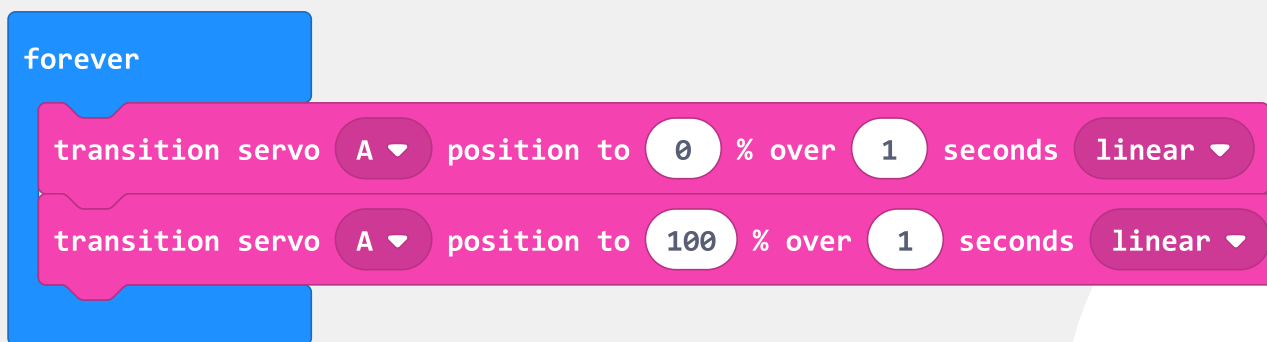


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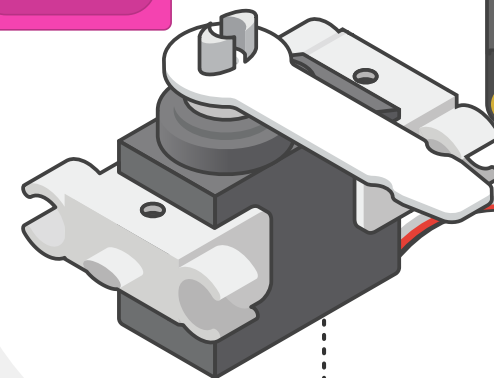
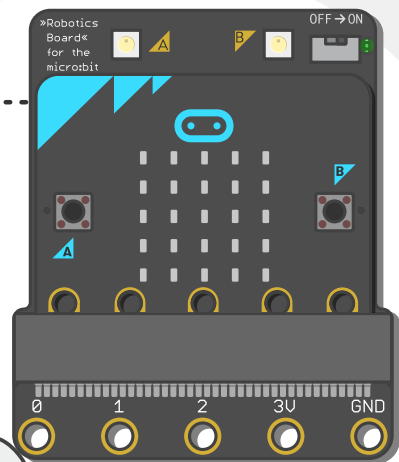


BACK AND FORTH

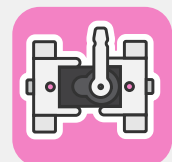
YOU WILL NEED



STRAWBEES BOARD
+
micro:bit



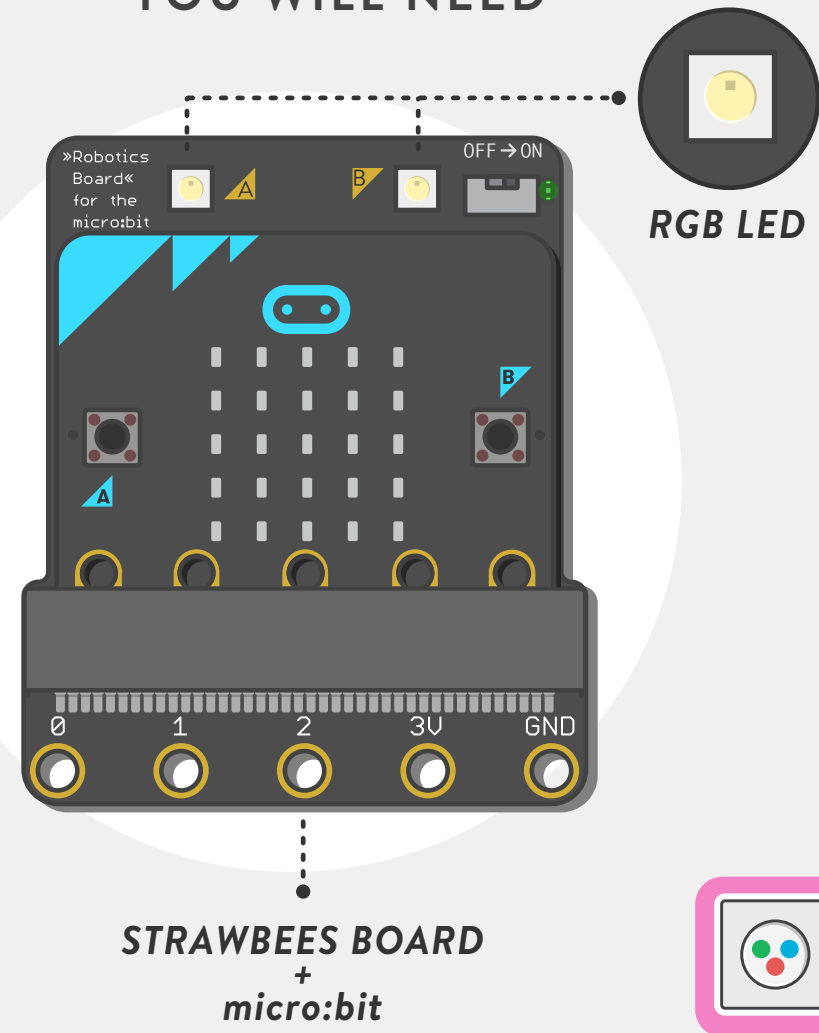
SERVO MOTOR
+
ARM & MOUNTS



CHANGE COLOR 10 TIMES

```
on start
repeat 10 times
do
  set RGB LED A to red 100 % green 0 % blue 0 %
  pause (ms) 500
  set RGB LED A to red 0 % green 0 % blue 100 %
  pause (ms) 500
  set RGB LED A to red 0 % green 0 % blue 0 %
```

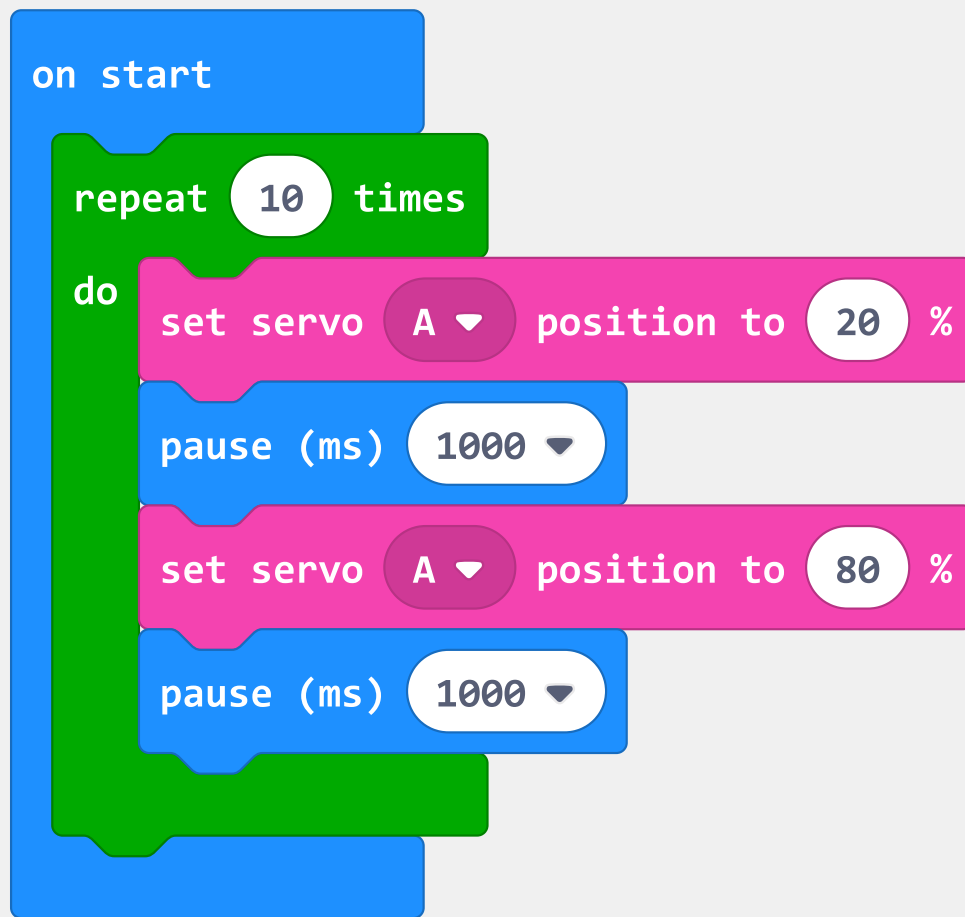
YOU WILL NEED



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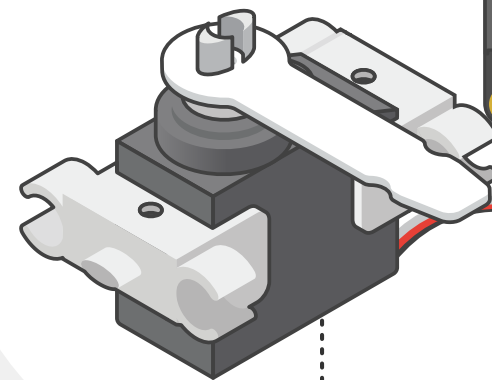
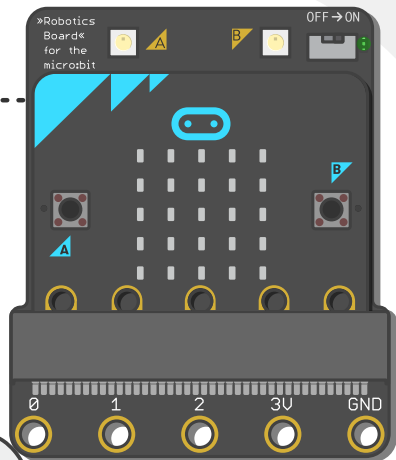


WAVE 10 TIMES

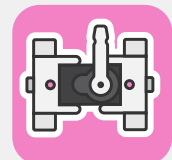


YOU WILL NEED

STRAWBEES BOARD
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micro:bit



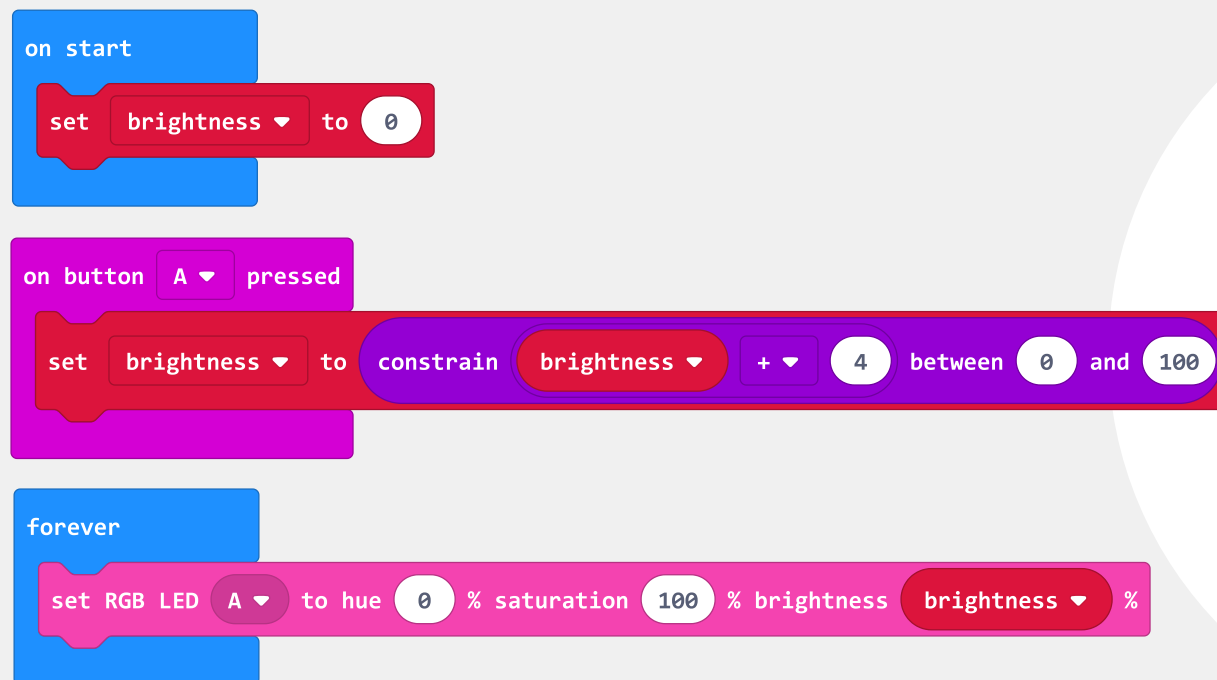
SERVO MOTOR
+
ARM & MOUNTS



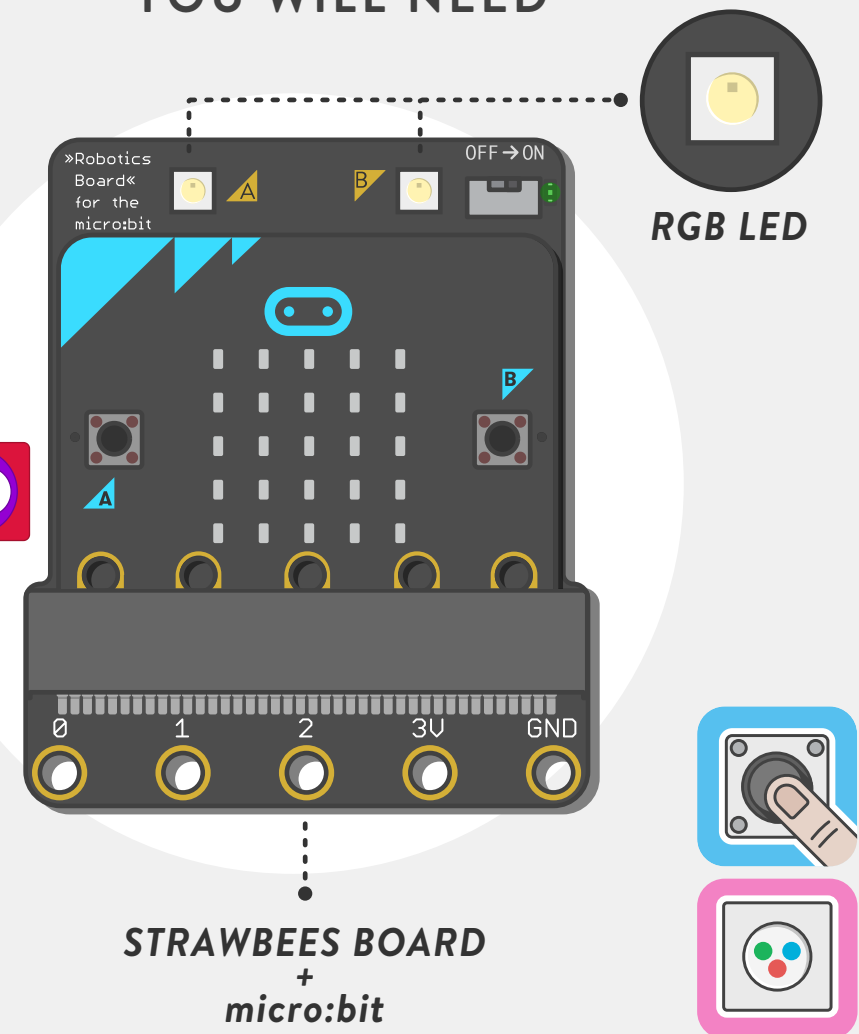
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GRADUALLY CHANGE BRIGHTNESS



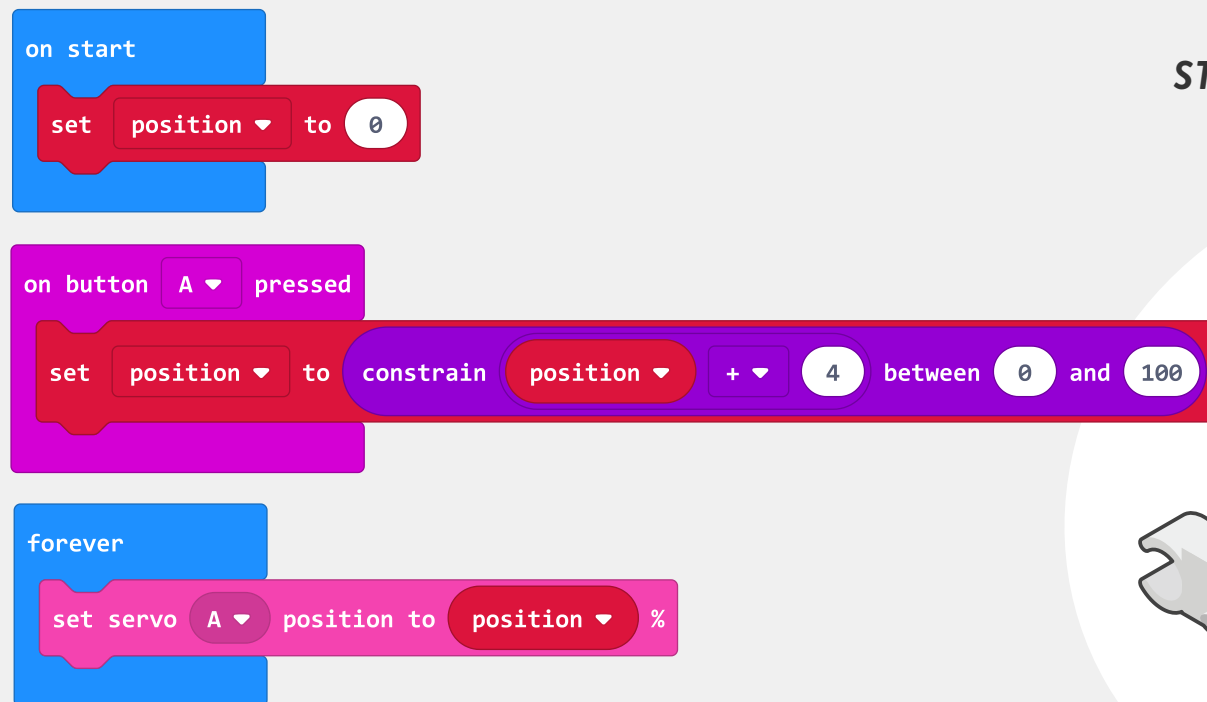
YOU WILL NEED



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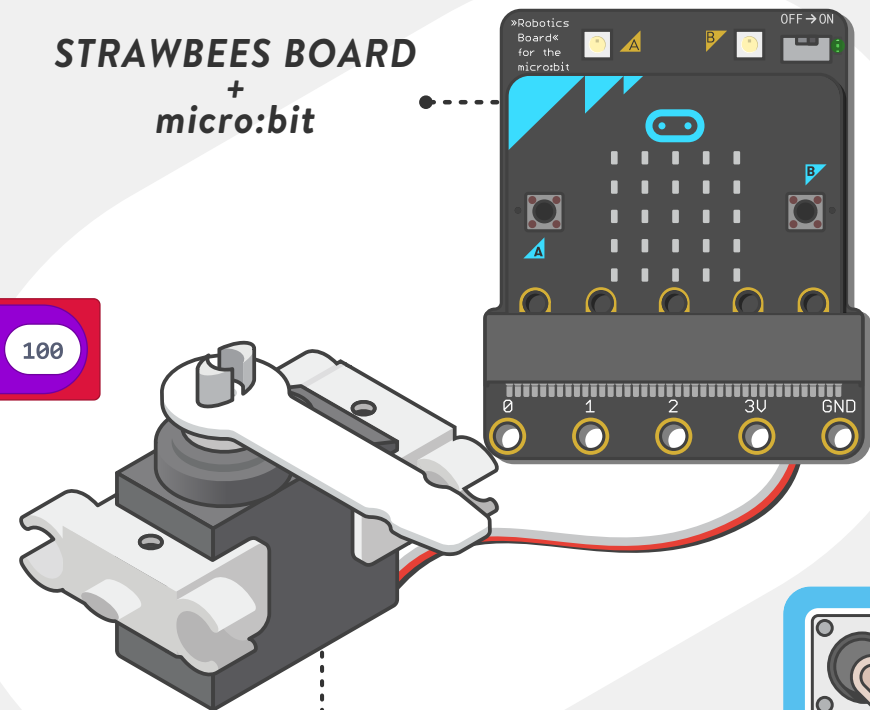


GRADUALLY CHANGE POSITION

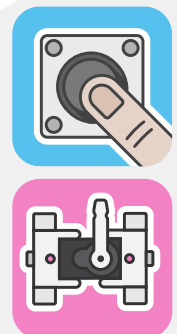


YOU WILL NEED

STRAWBEES BOARD
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micro:bit



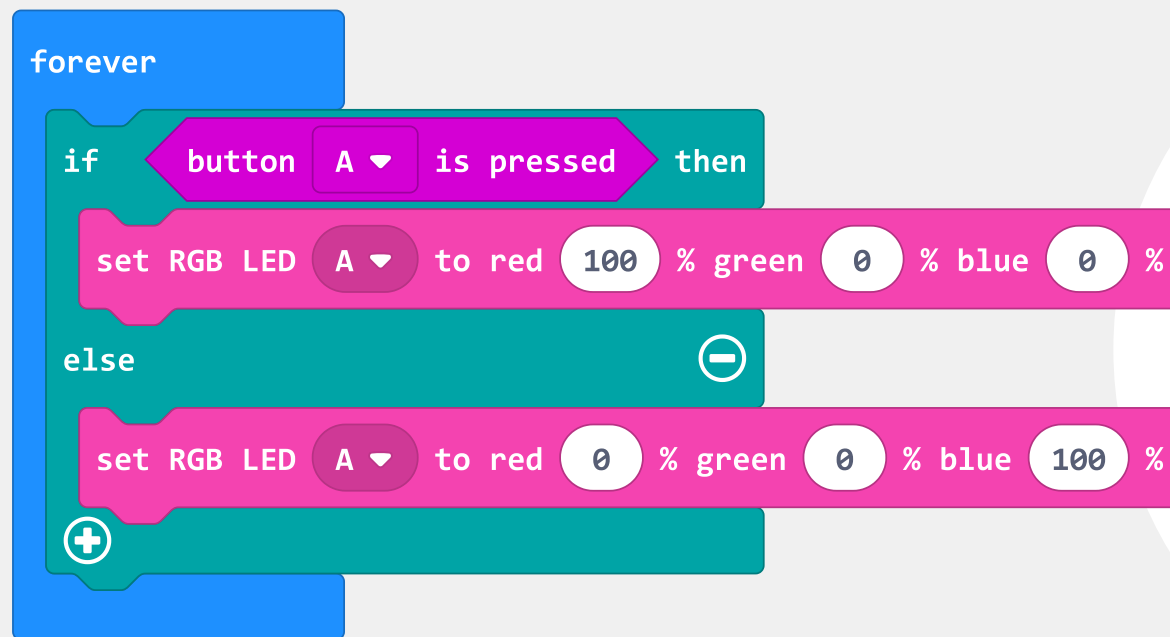
SERVO MOTOR
+
ARM & MOUNTS



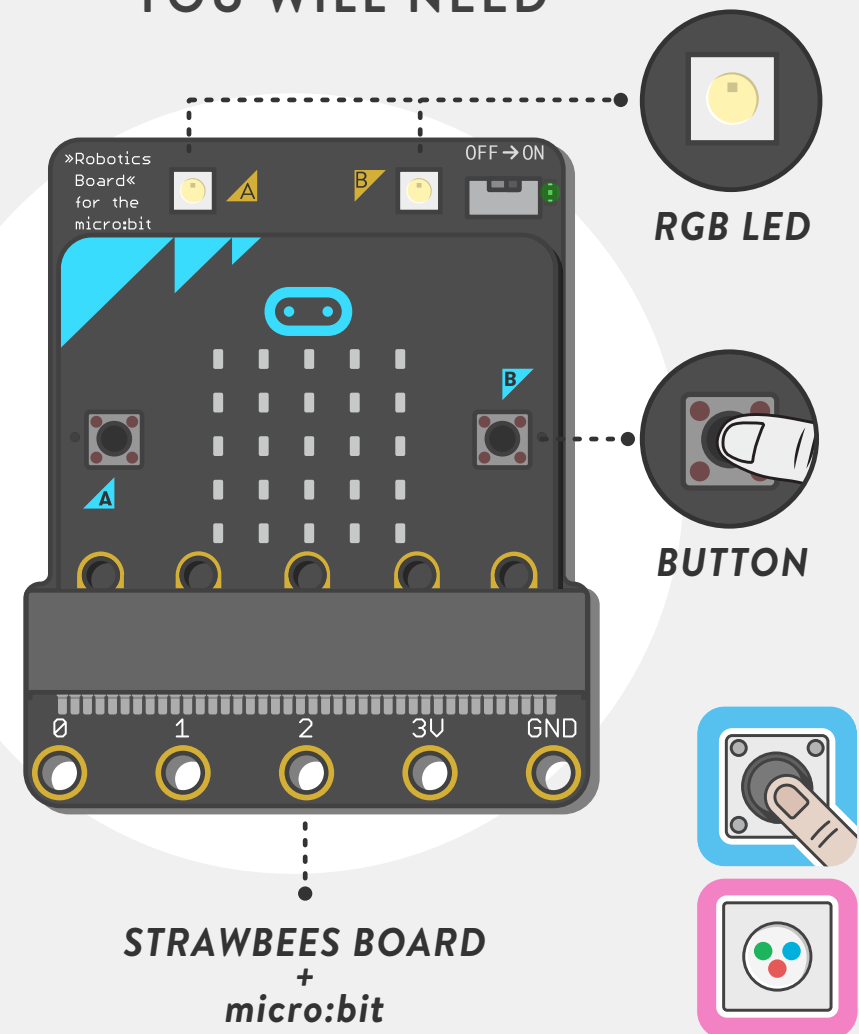
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CHANGE COLOR WHILE PRESSING BUTTON



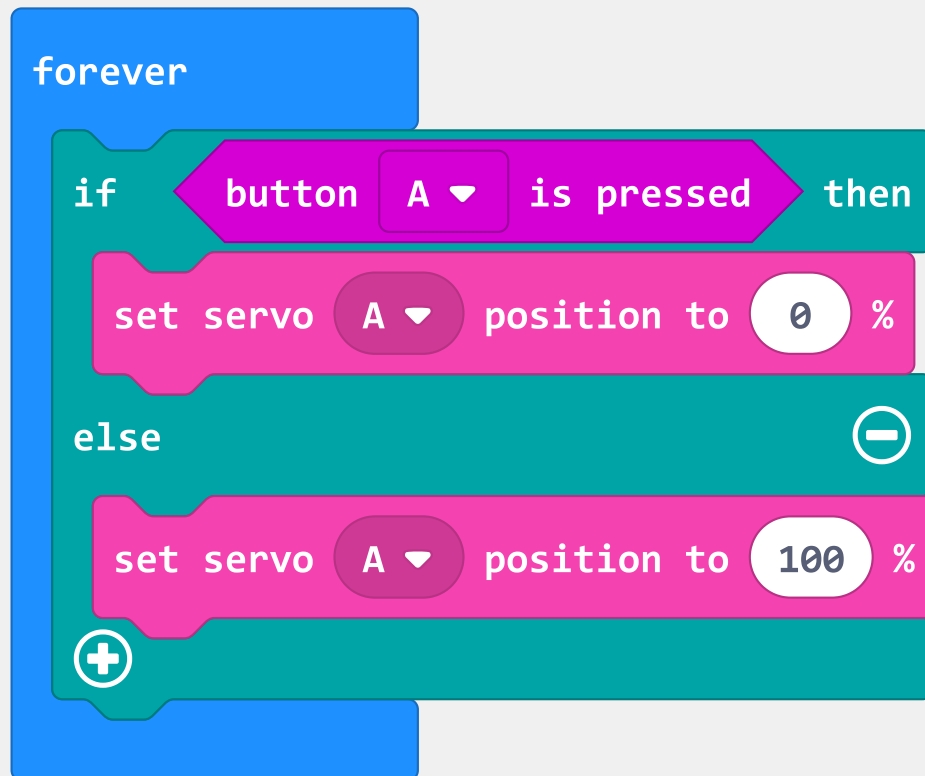
YOU WILL NEED



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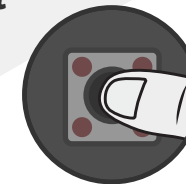


CHANGE POSITION WHILE PRESSING BUTTON

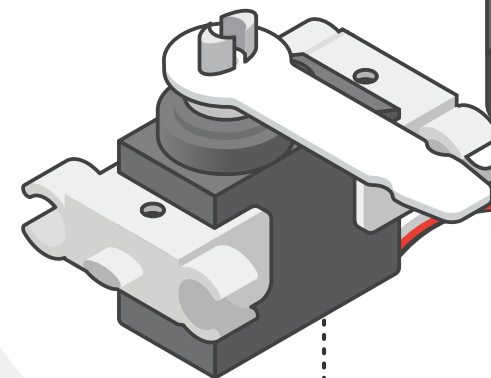


YOU WILL NEED

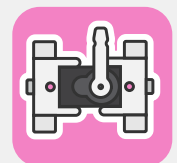
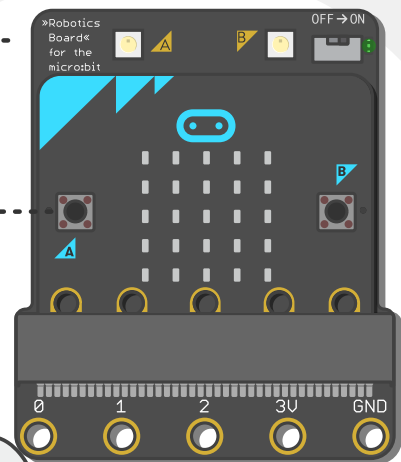
STRAWBEES BOARD
+
micro:bit



BUTTON

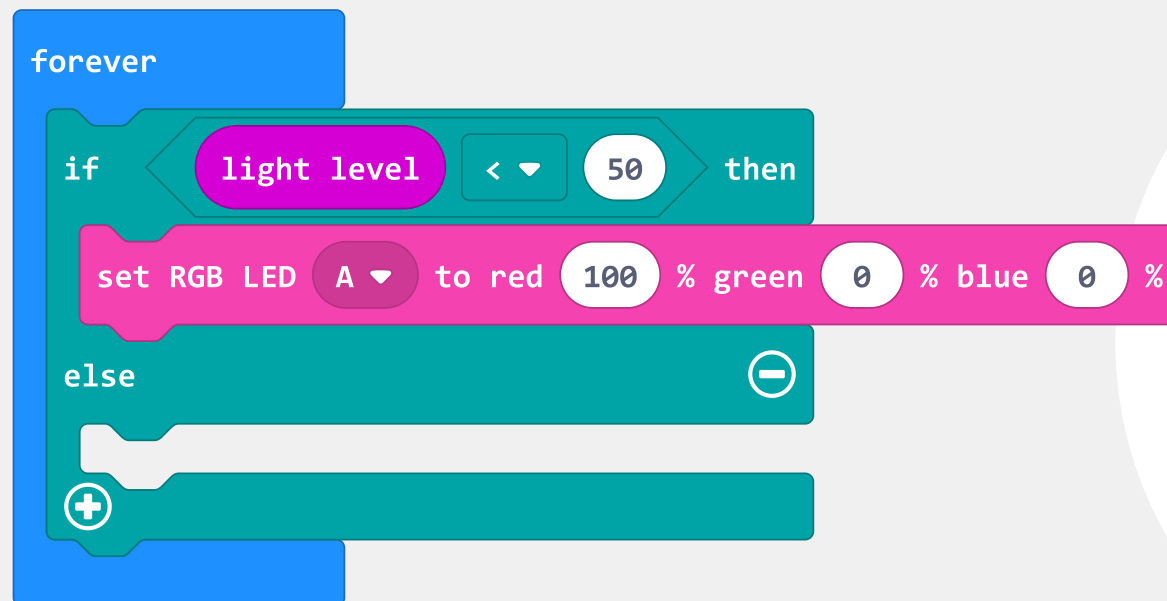


SERVO MOTOR
+
ARM & MOUNTS





SHINE IN THE DARK



YOU WILL NEED



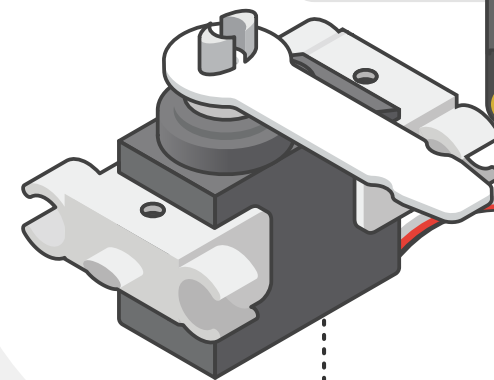
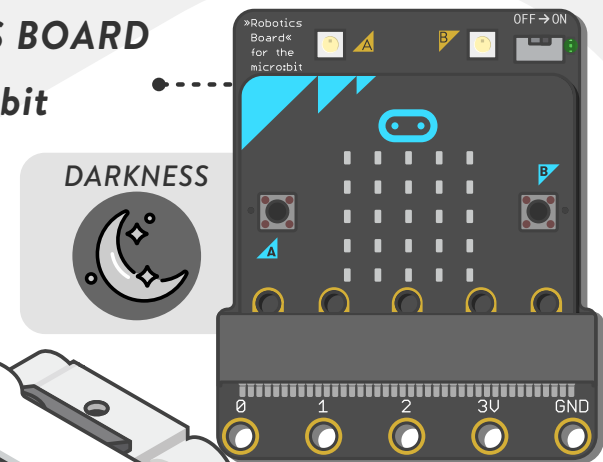


MOVE IN THE DARK

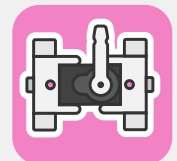
YOU WILL NEED



STRAWBEES BOARD
+
micro:bit

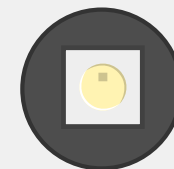


SERVO MOTOR
+
ARM & MOUNTS

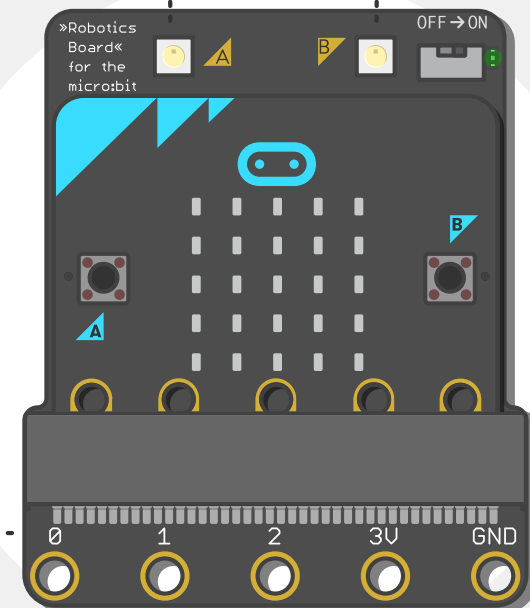


COLOR PARTY

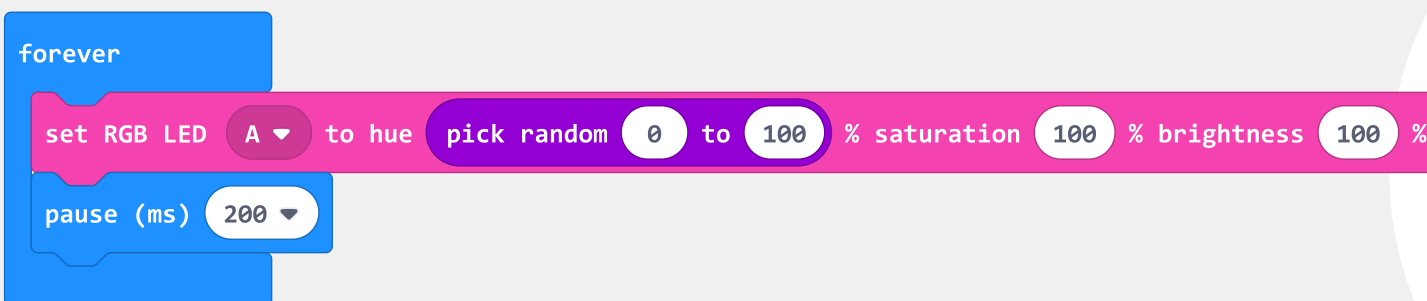
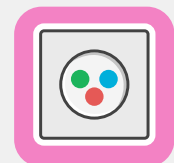
YOU WILL NEED



RGB LED

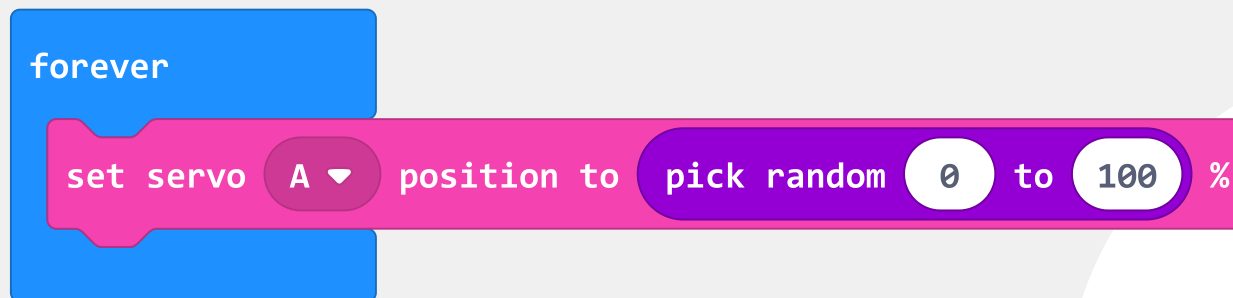


STRAWBEES BOARD
+
micro:bit

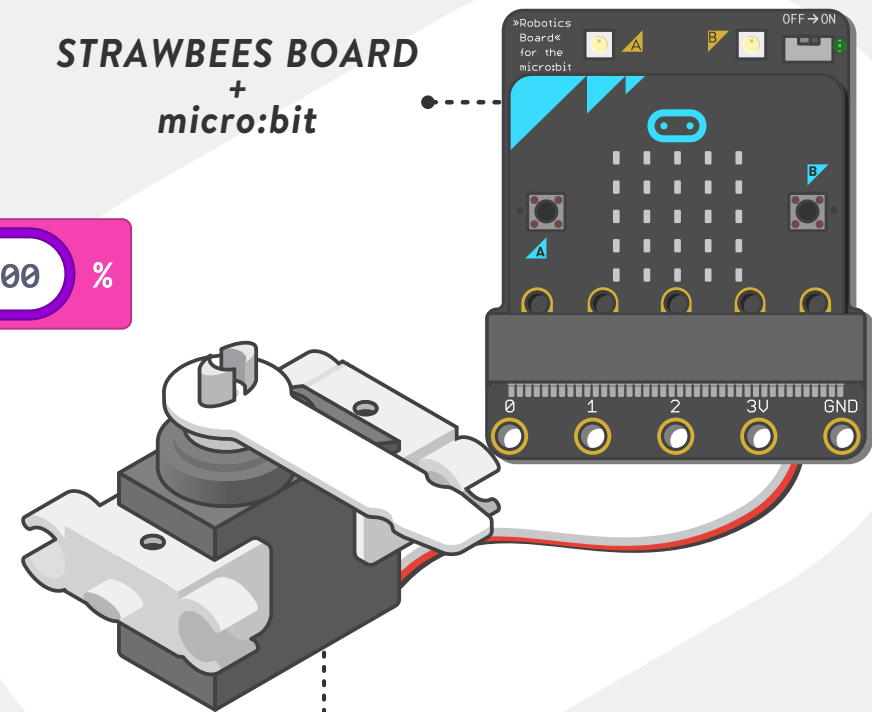


SHAKE

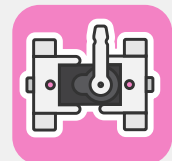
YOU WILL NEED



STRAWBEES BOARD
+
micro:bit

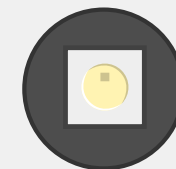


SERVO MOTOR
+
ARM & MOUNTS

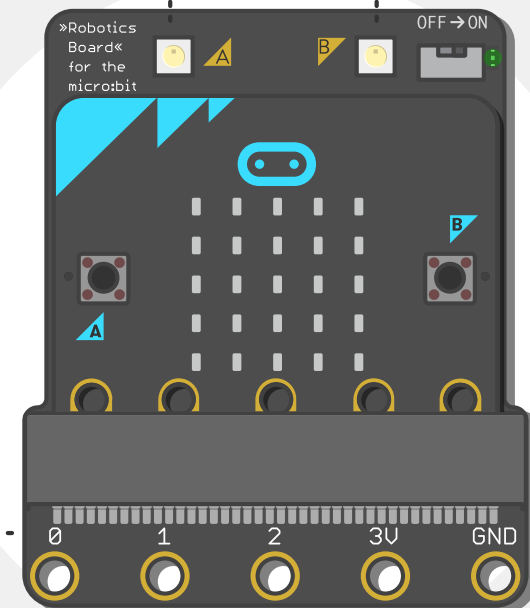


RAINBOW

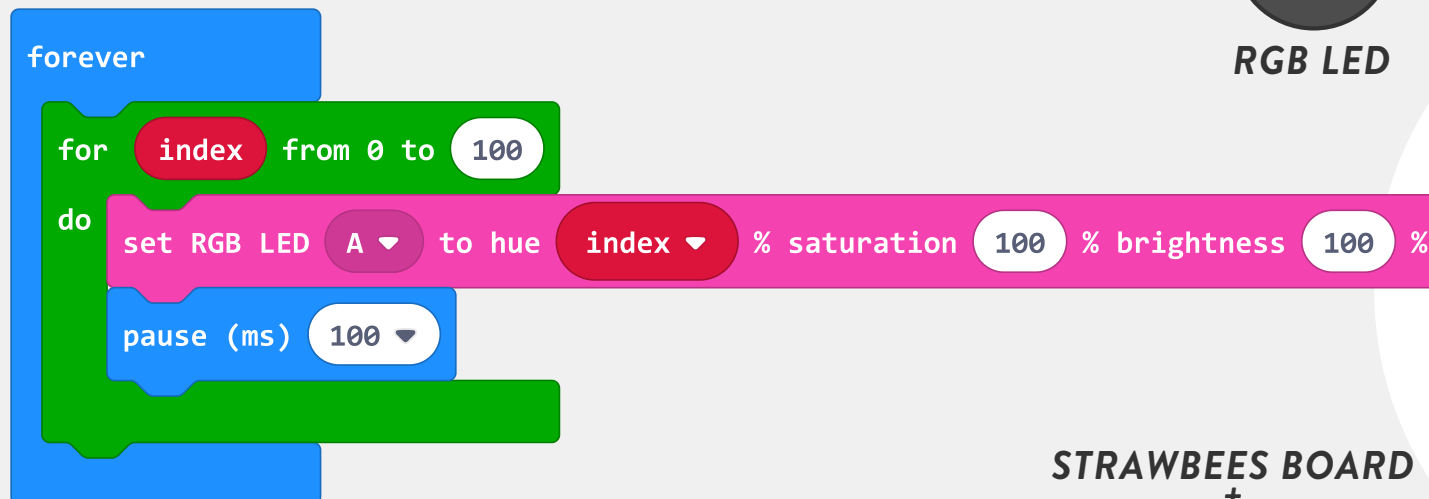
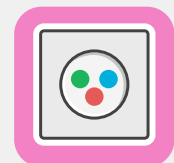
YOU WILL NEED



RGB LED



STRAWBEES BOARD
+
micro:bit

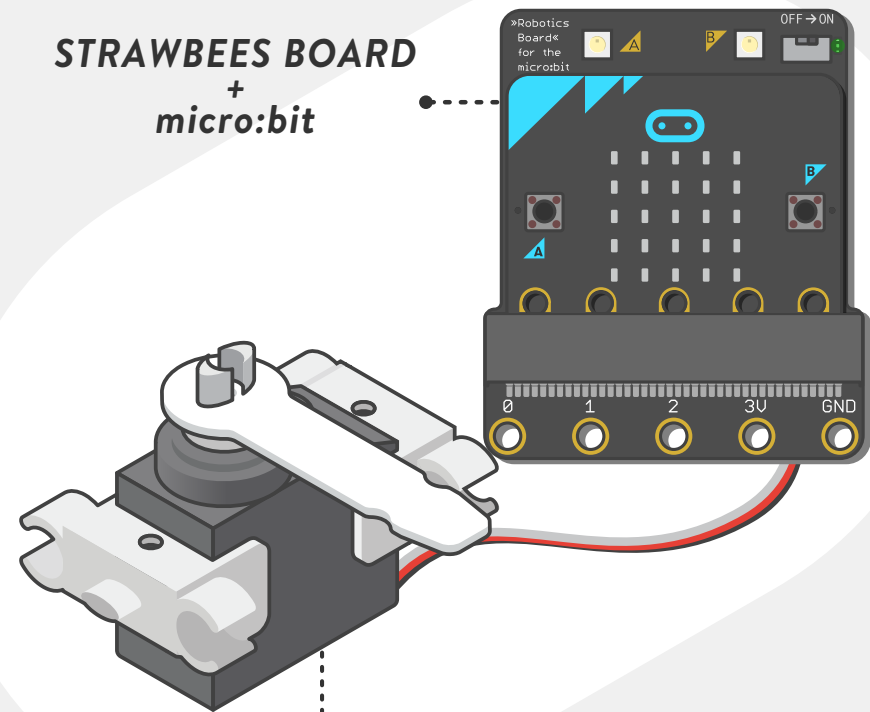


SWEEP MOTOR

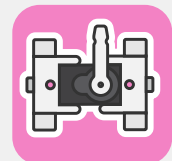
```
forever
  for index from 0 to 100
  do
    set servo A position to index %
    pause (ms) 100
```

YOU WILL NEED

STRAWBEES BOARD
+
micro:bit

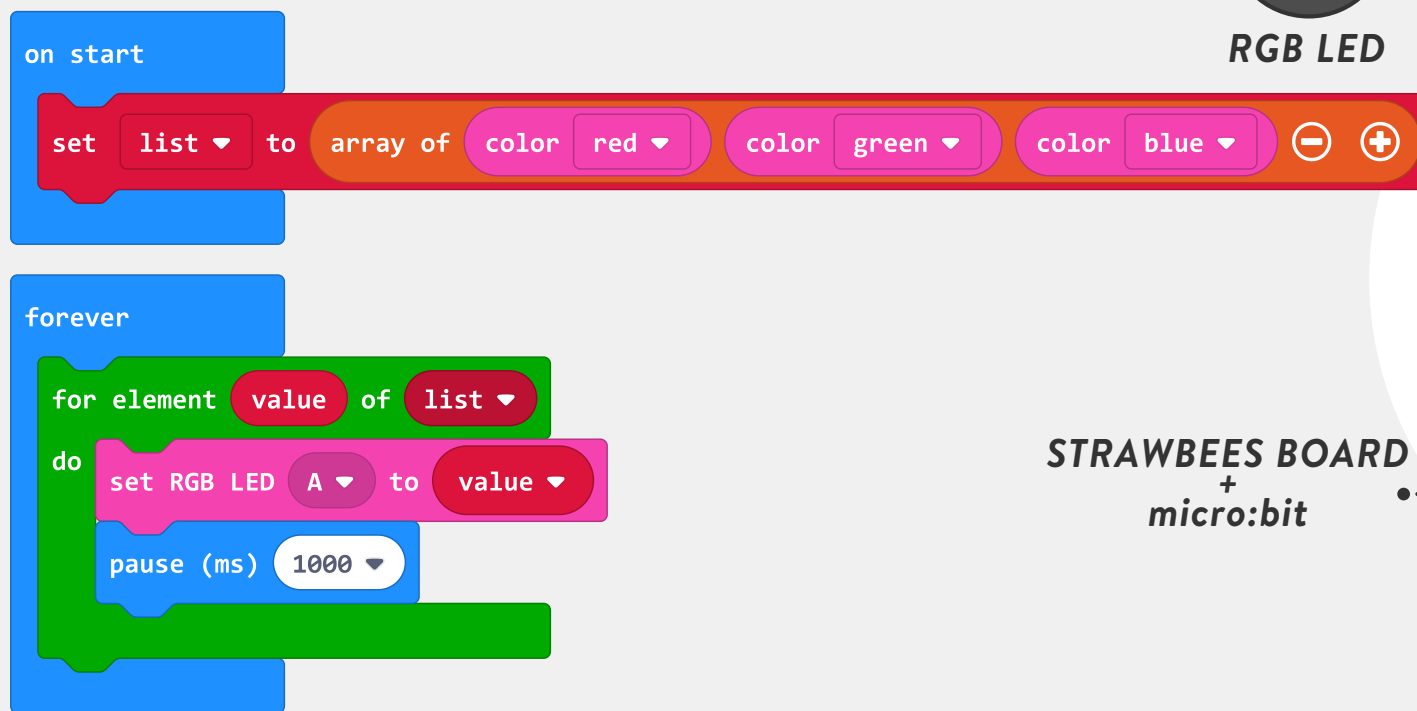


SERVO MOTOR
+
ARM & MOUNTS

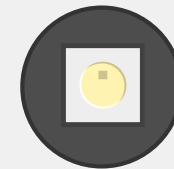




LOOP OVER A LIST OF COLORS

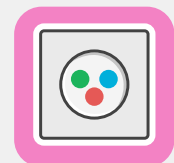
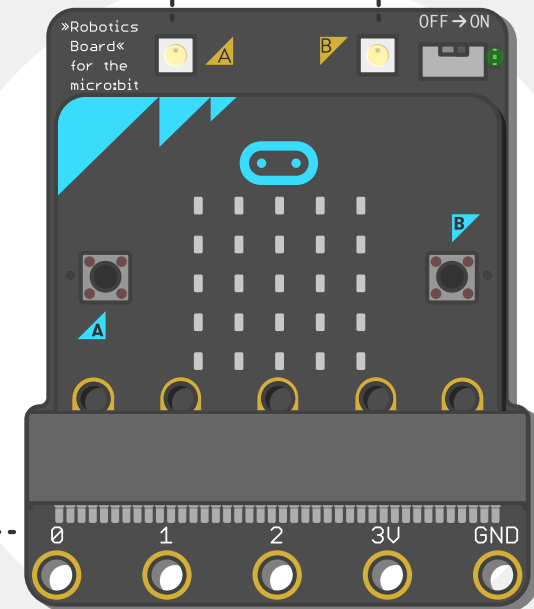


YOU WILL NEED



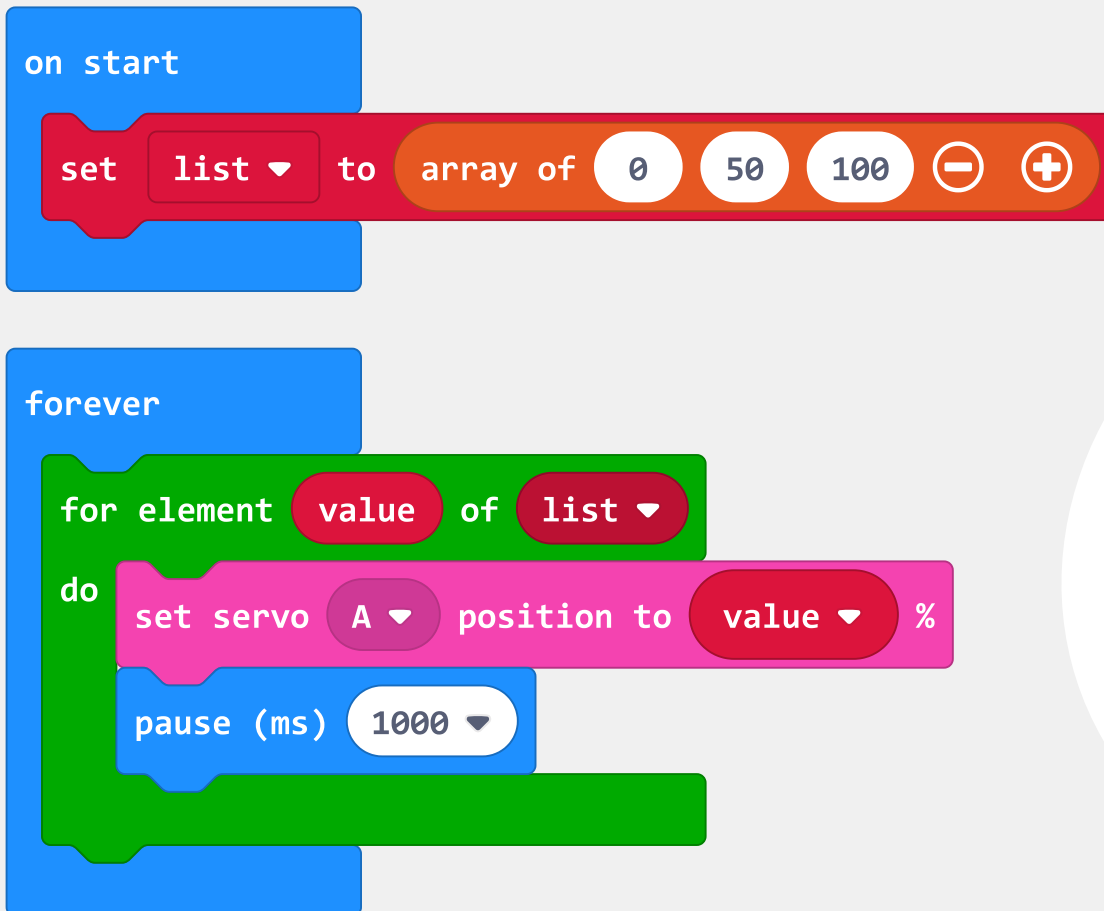
RGB LED

STRAWBEES BOARD
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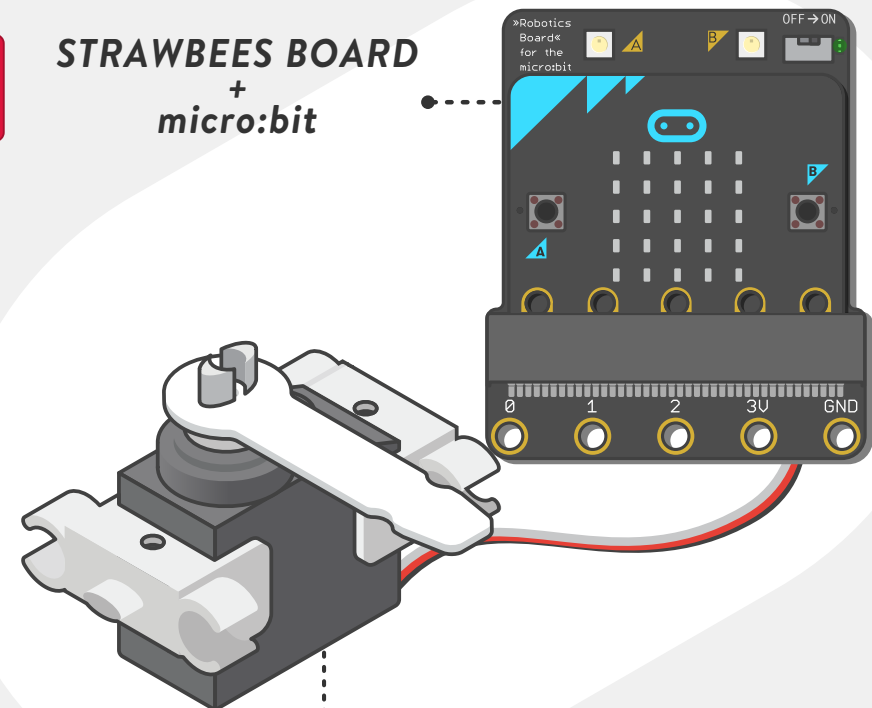


LOOP OVER A LIST OF POSITIONS

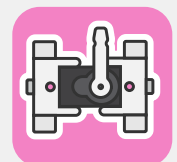


YOU WILL NEED

STRAWBEES BOARD
+
micro:bit



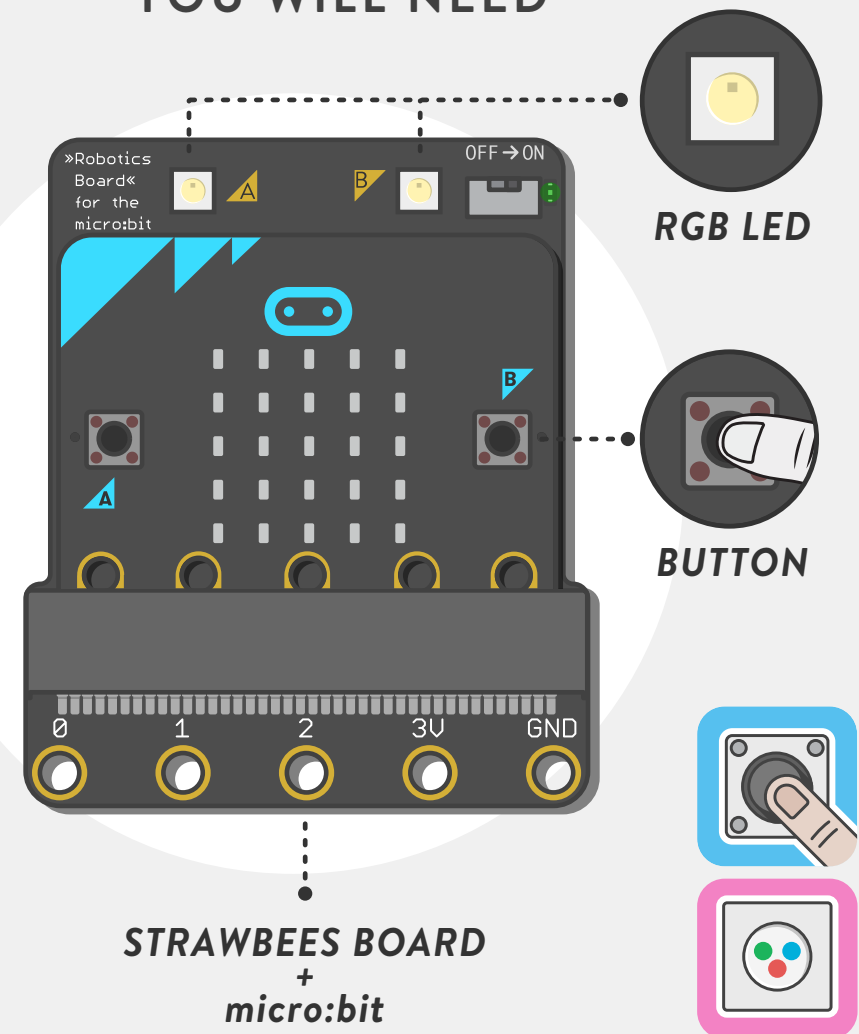
SERVO MOTOR
+
ARM & MOUNTS



LIGHT SWITCH

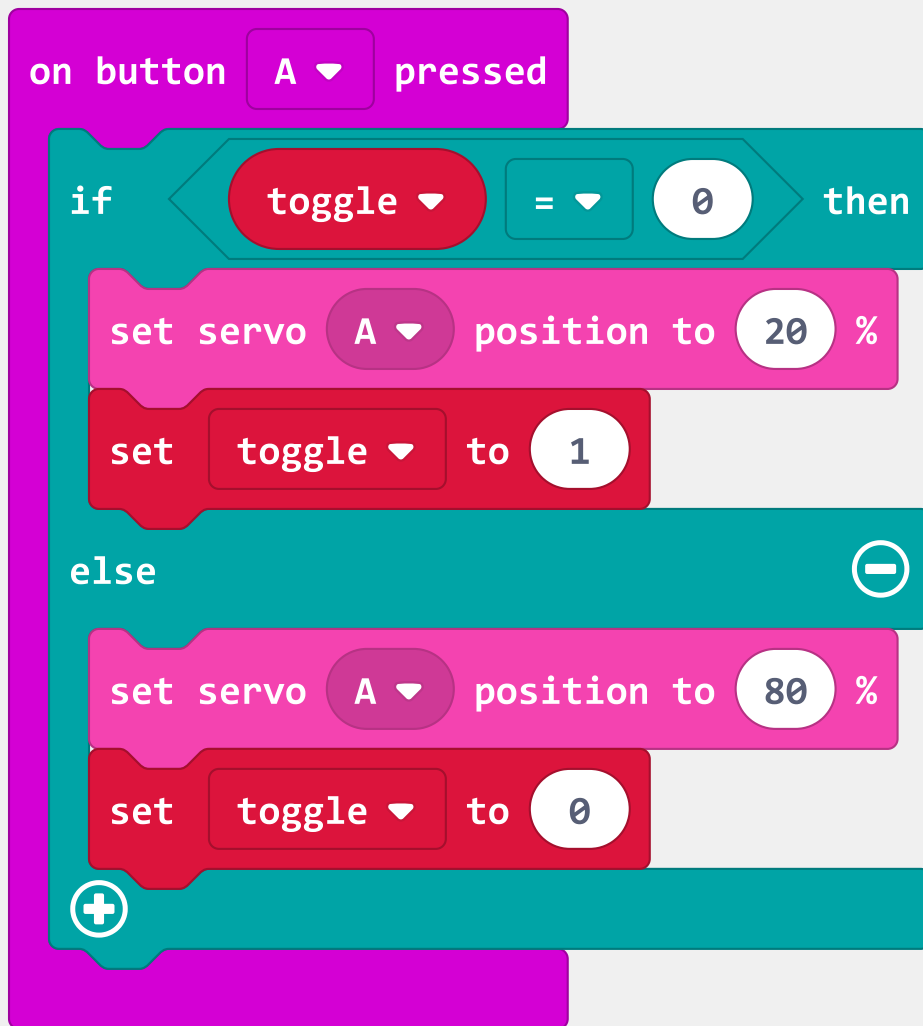
```
on button A pressed
  if toggle = 0 then
    set RGB LED A to red 100 % green 0 % blue 0 %
    set toggle to 1
  else
    set RGB LED A to red 0 % green 0 % blue 0 %
    set toggle to 0
```

YOU WILL NEED



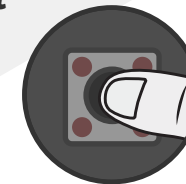


PRESS BUTTON TO TOGGLE POSITION

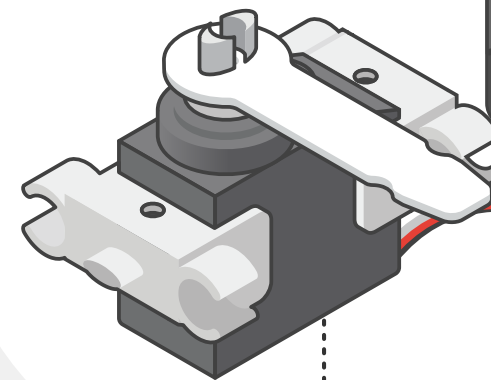


YOU WILL NEED

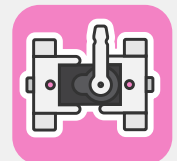
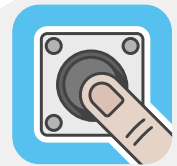
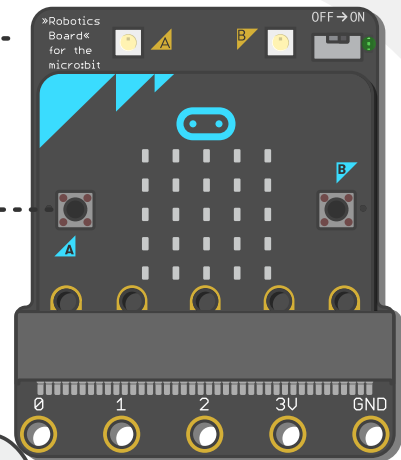
STRAWBEES BOARD
+
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BUTTON



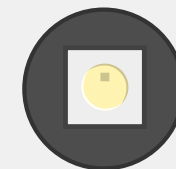
SERVO MOTOR
+
ARM & MOUNTS



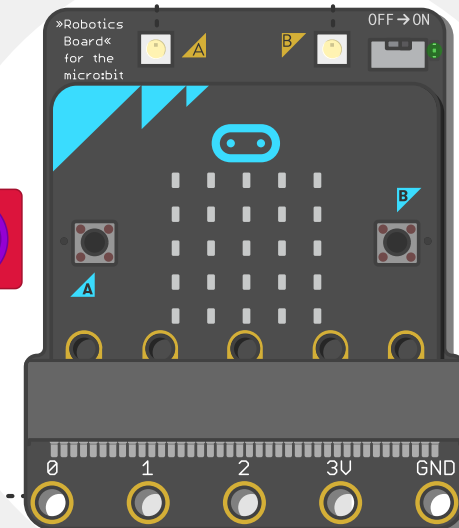
TILT TO CHANGE COLOR

```
forever
  set movement ▾ to acceleration (mg) x ▾
  set hue ▾ to map movement ▾ from low -1023 high 1023 to low 0 high 100
  set RGB LED A ▾ to hue hue ▾ % saturation 100 % brightness 100 %
```

YOU WILL NEED

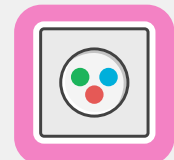
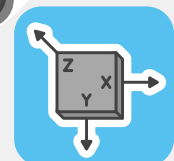
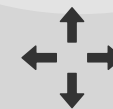


RGB LED



STRAWBEES BOARD
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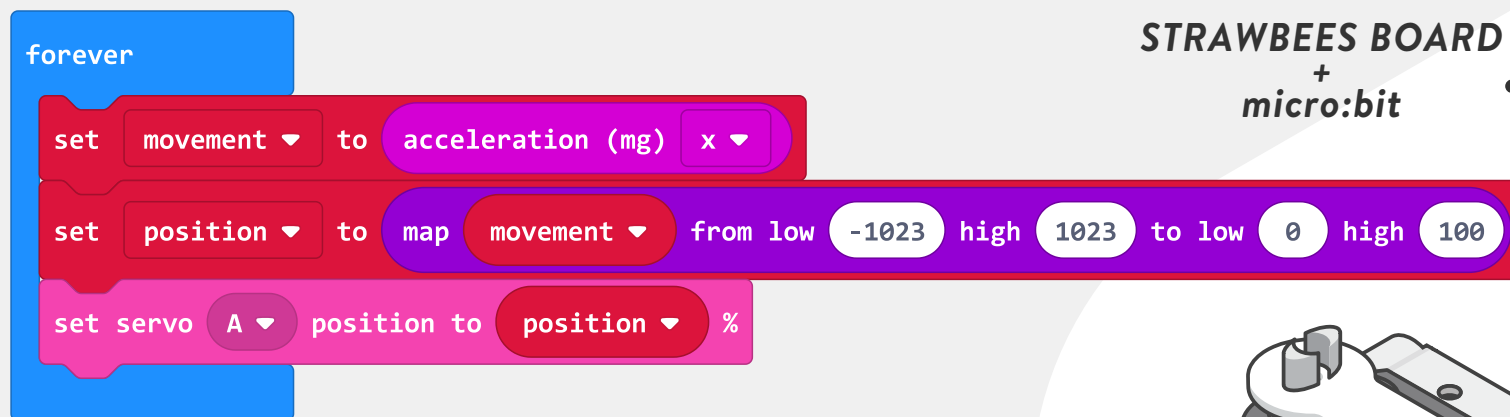
MOVEMENT



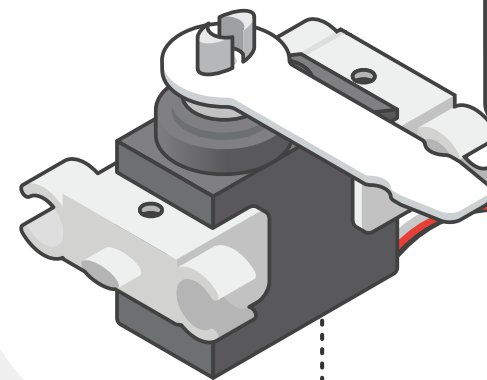
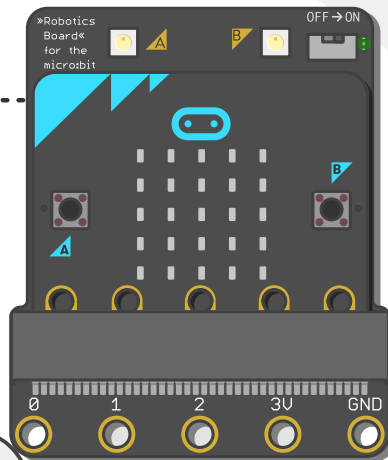
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TILT TO MOVE

YOU WILL NEED

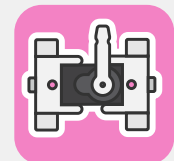
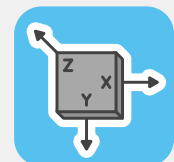


STRAWBEES BOARD
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micro:bit



SERVO MOTOR
+
ARM & MOUNTS

MOVEMENT



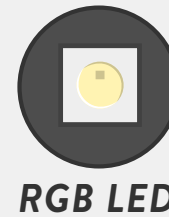
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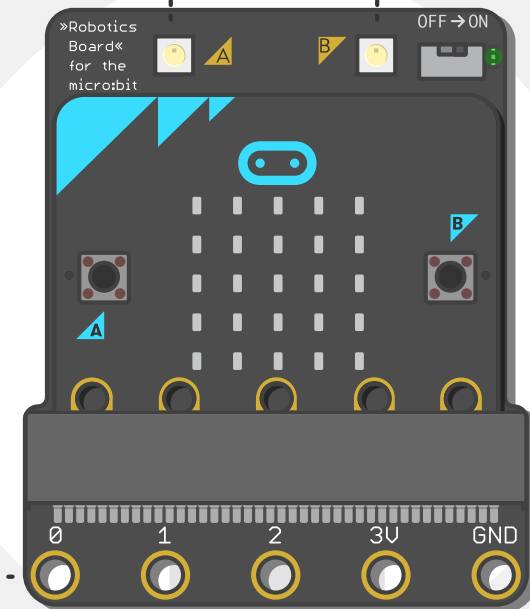
LIGHT ALARM

```
forever
  set RGB LED A to red 0 % green 0 % blue 0 %
  if acceleration (mg) strength > 1100 then
    set RGB LED A to red 100 % green 0 % blue 0 %
    pause (ms) 4000
```

YOU WILL NEED

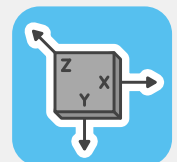
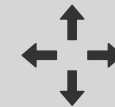


RGB LED



STRAWBEES BOARD
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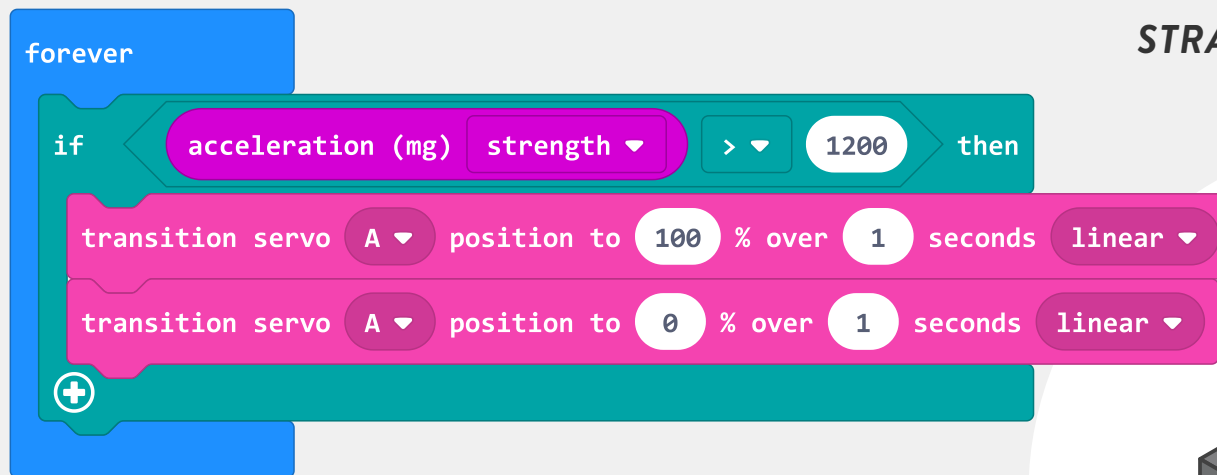
MOVEMENT



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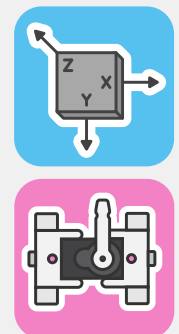
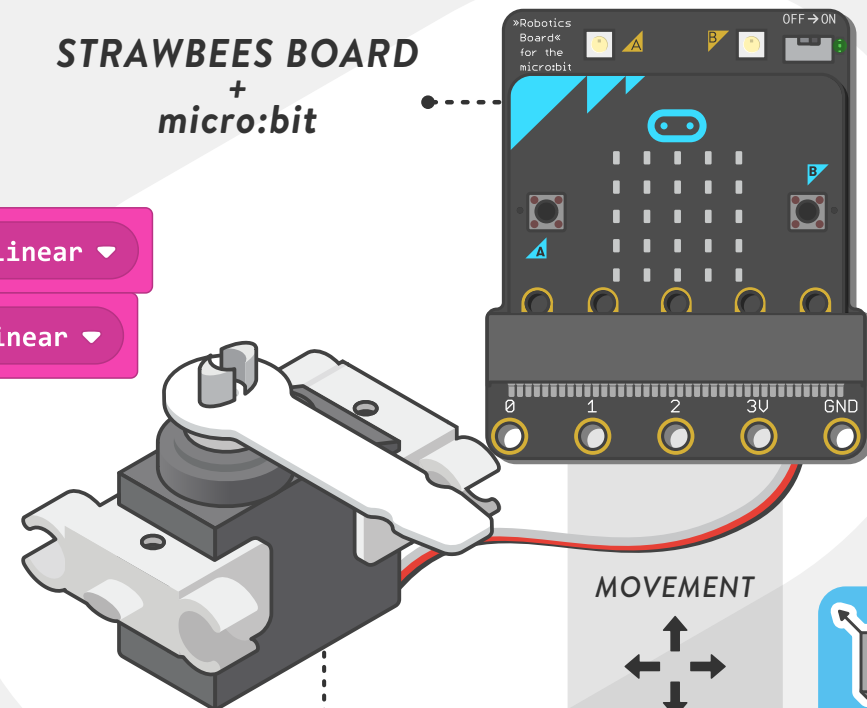


MOVE WHEN MOVED



YOU WILL NEED

STRAWBEES BOARD
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SEND/RECEIVE COLOR: SENDER

on start

radio set group 1

forever

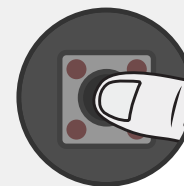
if button A is pressed then

radio send value "light" = 100

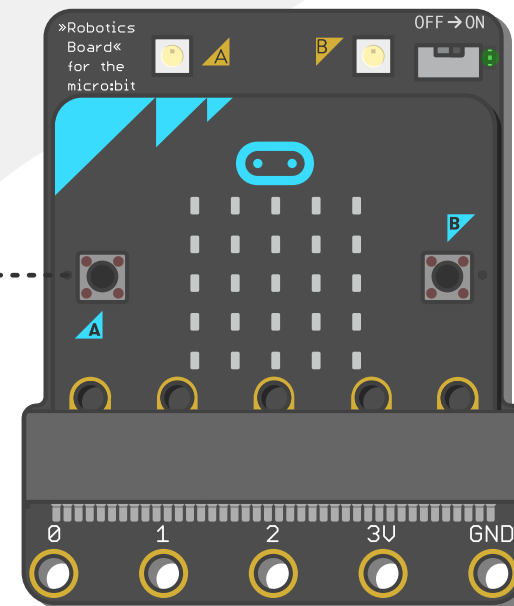
else

radio send value "light" = 0

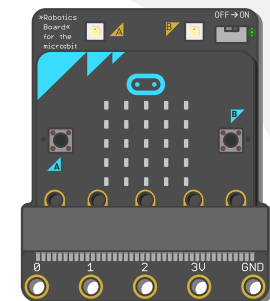
YOU WILL NEED



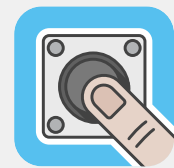
BUTTON



STRAWBEES BOARD
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micro:bit



ANOTHER
STRAWBEES
BOARD
+
micro:bit
(FOR RECEIVING)

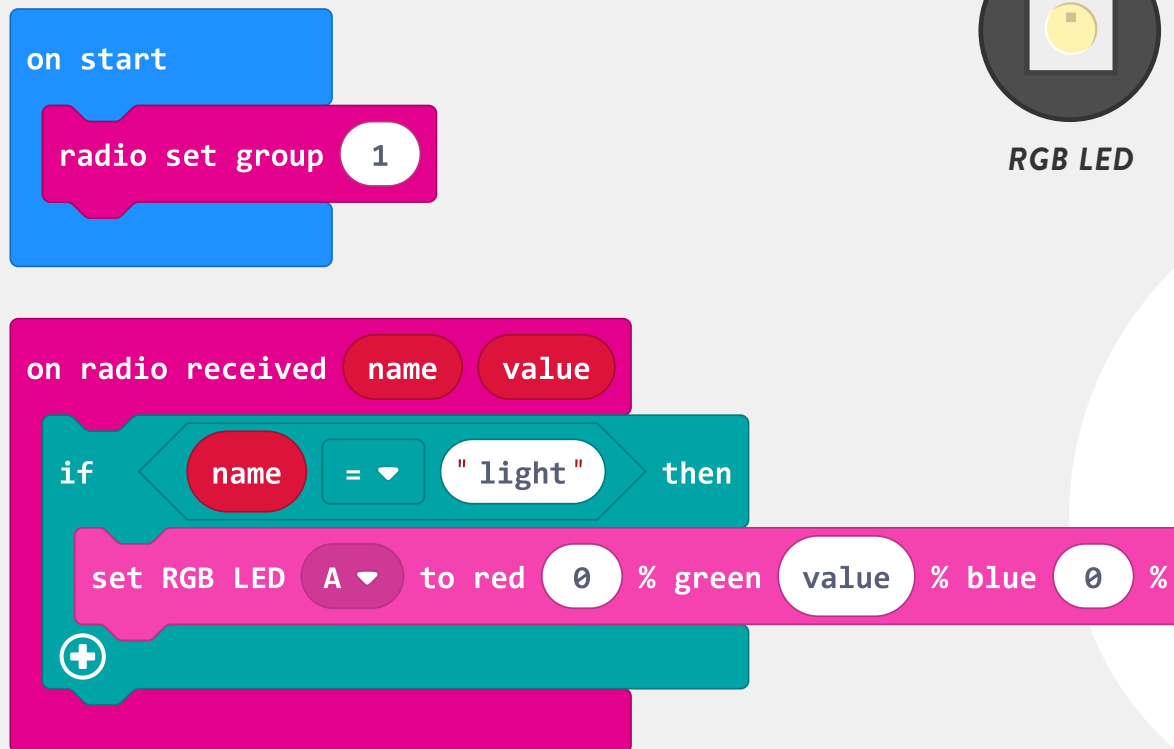


Check out the RECEIVER version of this card

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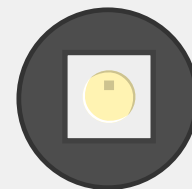
SEND/RECEIVE COLOR: RECEIVER



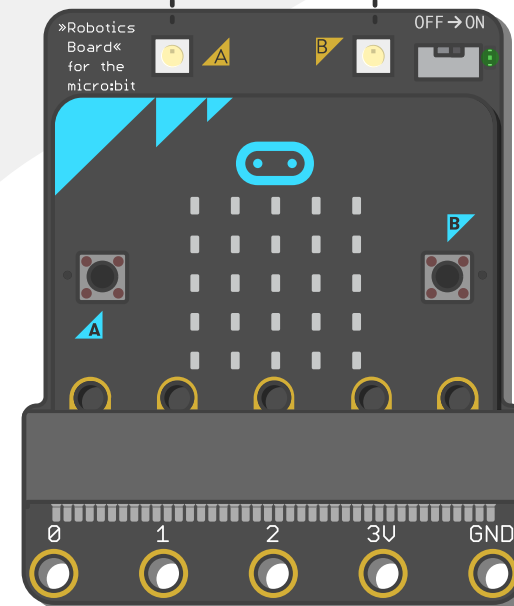
Check out the SENDER version of this card

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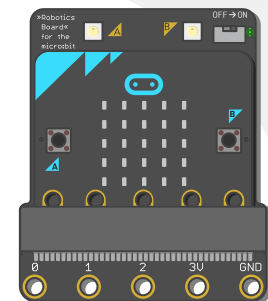
YOU WILL NEED



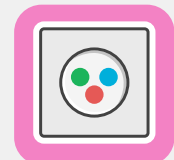
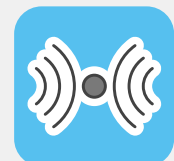
RGB LED



STRAWBEES BOARD
+
micro:bit



ANOTHER
STRAWBEES
BOARD
+
micro:bit
(FOR SENDING)



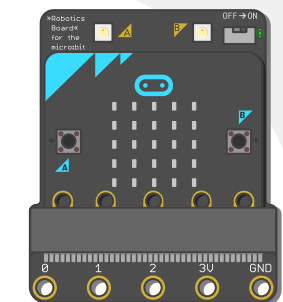
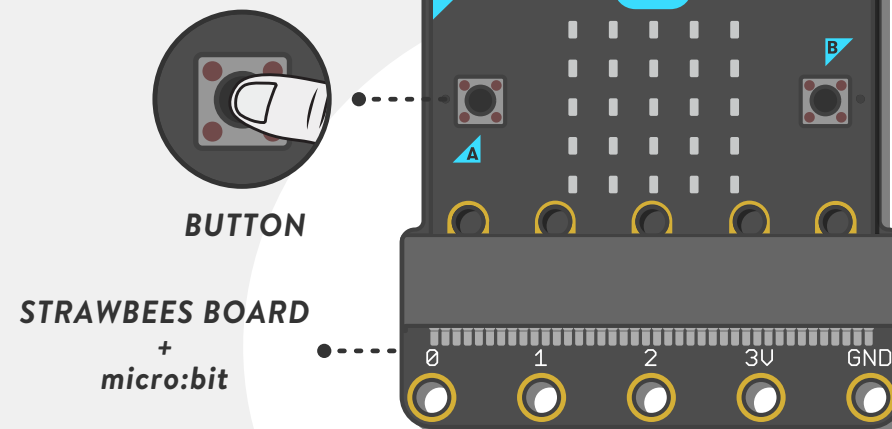


REMOTE CONTROL MOTOR: SENDER

YOU WILL NEED

```
on start
  radio set group 1
```

```
forever
  set movement to map acceleration (mg) x from low -1023 high 1023 to low 0 high 100
  radio send value "movement" = movement
```



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Check out the RECEIVER version of this card

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REMOTE CONTROL MOTOR: RECEIVER

on start

radio set group 1

on radio received name value

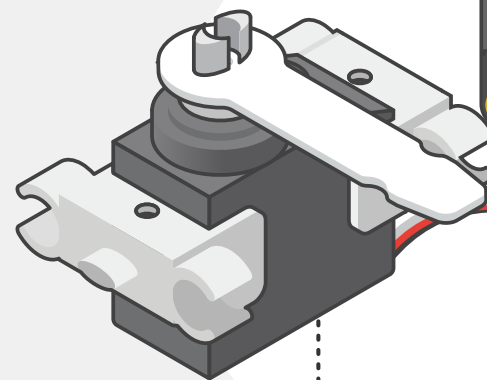
if name = "movement" then

set servo A position to value %

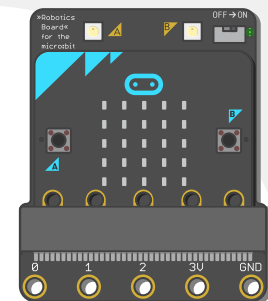


YOU WILL NEED

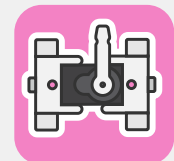
STRAWBEES BOARD
+
micro:bit



SERVO MOTOR
+
ARM & MOUNTS



ANOTHER
STRAWBEES
BOARD
+
micro:bit
(FOR SENDING)



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