

Scratch Blocks

MOTION

move 10 steps

turn 15 degrees

turn 15 degrees

go to random position ▼

go to x: 0 y: 0

glide 1 secs to random position ▼

glide 1 secs to x: 0 y: 0

point in direction 90

point towards mouse-pointer ▼

change x by 10

set x to 0

change y by 10

set y to 0

if on edge, bounce

set rotation style left-right ▼

x position

y position

direction

LOOKS

say Hello! for 2 seconds

say Hello!

think Hmm... for 2 seconds

think Hmm...

switch costume to costume2 ▼

next costume

switch backdrop to backdrop1 ▼

next backdrop

change size by 10

set size to 100 %

change color ▼ effect by 25

set color ▼ effect to 0

clear graphic effects

show hide

go to front ▼ layer

go forward ▼ 1 layers

costume number ▼

backdrop number ▼

size

SOUND

play sound Meow ▼ until done

start sound Meow ▼

stop all sounds

change pitch ▼ effect by 10

set pitch ▼ effect to 100

clear sound effects

change volume by -10

set volume to 100 % volume

EVENTS

when clicked

when space ▼ key pressed

when this sprite clicked

when backdrop switches to backdrop1 ▼

when loudness ▼ > 10

when I receive message1 ▼

broadcast message1 ▼

broadcast message1 ▼ and wait

wait 1 seconds

repeat 10

forever

if then

if then else

wait until

repeat until

stop all ▼

when I start as a clone

create clone of myself ▼

delete this clone

CONTROL

wait 1 seconds

repeat 10

forever

if then

if then else

wait until

repeat until

stop all ▼

when I start as a clone

create clone of myself ▼

delete this clone

SENSING

touching mouse-pointer ▼ ?

touching color ?

color is touching ?

distance to mouse-pointer ▼

ask What's your name? and wait

answer

key space ▼ pressed?

mouse down?

mouse x

mouse y

set drag mode draggable ▼

loudness

timer

reset timer

backdrop # ▼ of Stage ▼

current year ▼

days since 2000

username

OPERATORS

+ - * /

pick random 1 to 10

> 50

< 50

= 50

and

or

not

join apple banana

letter 1 of apple

length of apple

apple contains a ?

mod

round

abs ▼ of

VARIABLES

my variable

set my variable ▼ to 0

change my variable ▼ by 1

show variable my variable ▼

hide variable my variable ▼

list

add thing to list ▼

delete 1 of list ▼

delete all of list ▼

insert thing at 1 of list ▼

replace item 1 of list ▼ with thing

item 1 of list ▼

item # of thing in list ▼

length of list ▼

list ▼ contains thing ?

show list list ▼

hide list list ▼

MY BLOCKS

define my block my block

define my block boolean


my block boolean

define my block number or text

my block number or text



Extension Blocks



Music
Play instruments and drums.

play drum (1) Snare Drum for 0.25 beats

rest for 0.25 beats


play note 60 for 0.25 beats

set instrument to (1) Piano

set tempo to 60

change tempo by 20

tempo



Pen
Draw with your sprites.

erase all

stamp

pen down

pen up


set pen color to

change pen color by 10

set pen color to 50

change pen size by 1

set pen size to 1




Video Sensing
Sense motion with the camera.

when video motion > 10

video motion on sprite

turn video on

set video transparency to 50



Text to Speech
Make your projects talk.

Requires Collaboration with Amazon Web Services

speak hello

set voice to alto

set language to English




Translate
Translate text into many languages.

Requires Collaboration with Google

translate hello to Indonesian

language



Face Sensing
Sense faces with the camera.

go to nose

point in direction of face tilt

set size to face size

when face tilts left

when this sprite touches a nose

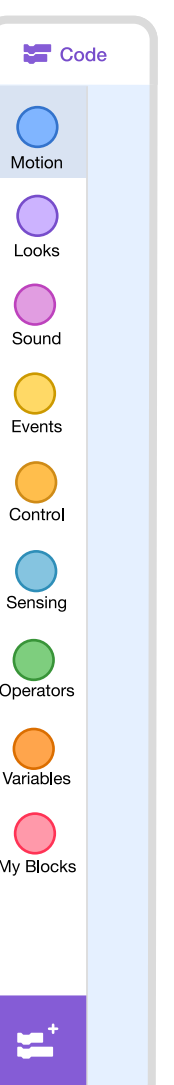
when a face is detected

a face is detected?

face tilt

face size

Extension Menu





Project Editor

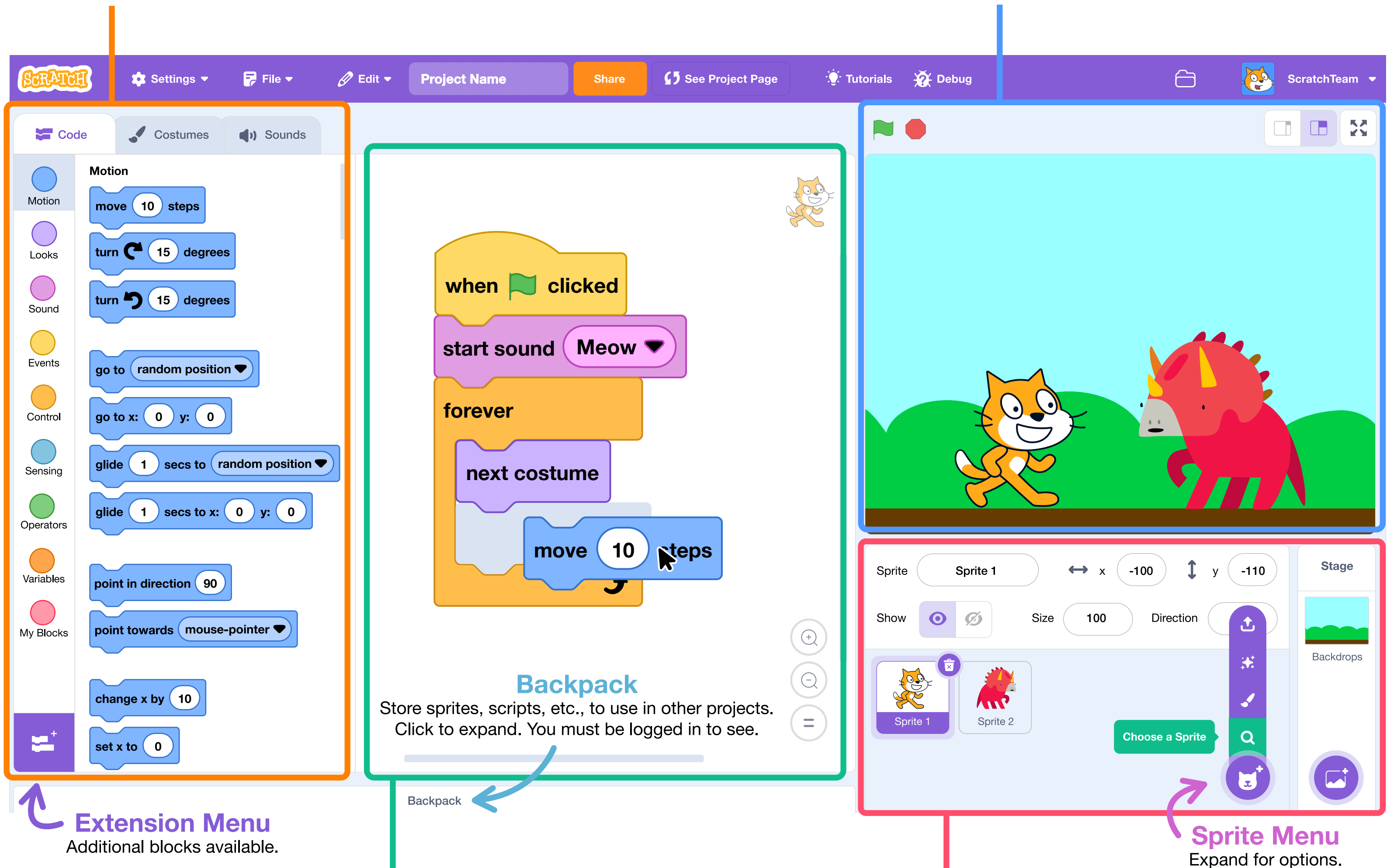
See Inside

Block Palette

Blocks for coding your projects.

The Stage

Where your creations come to life.

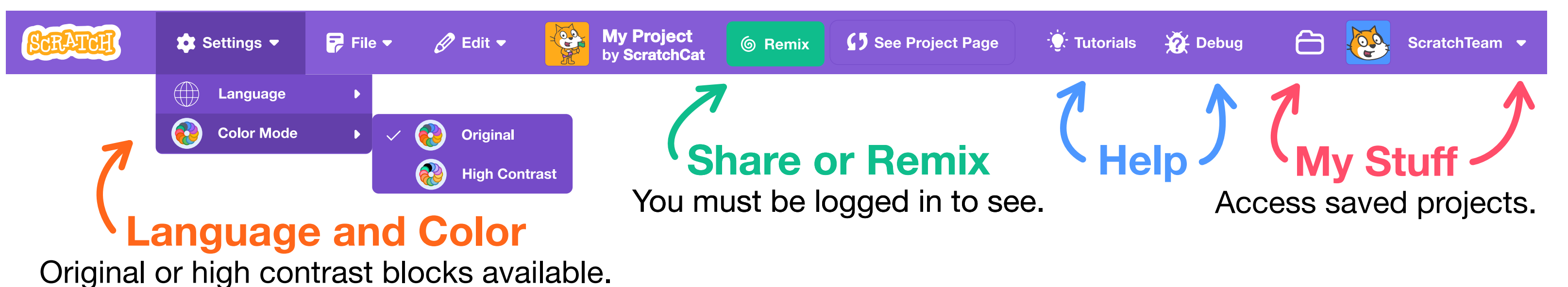


Coding Area/Script Area

Drag in blocks and snap them together.

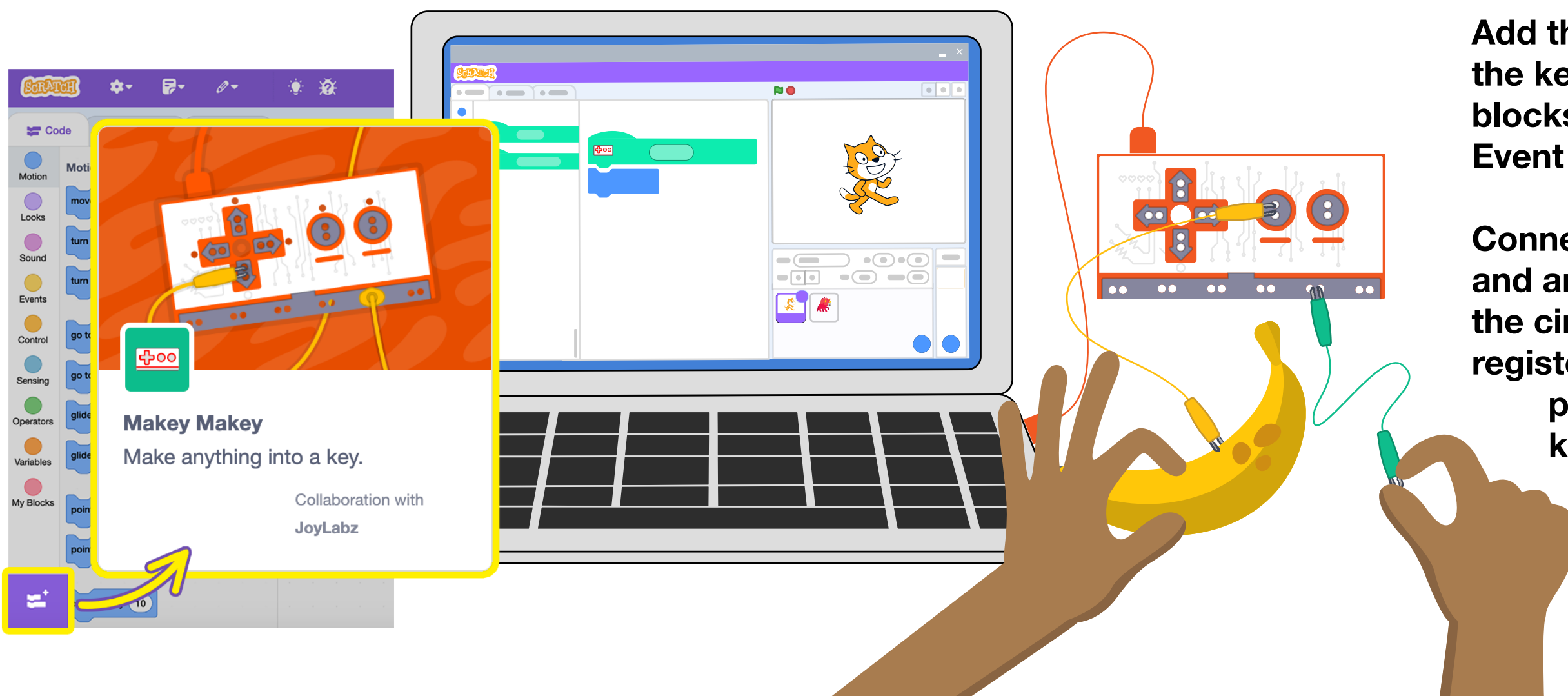
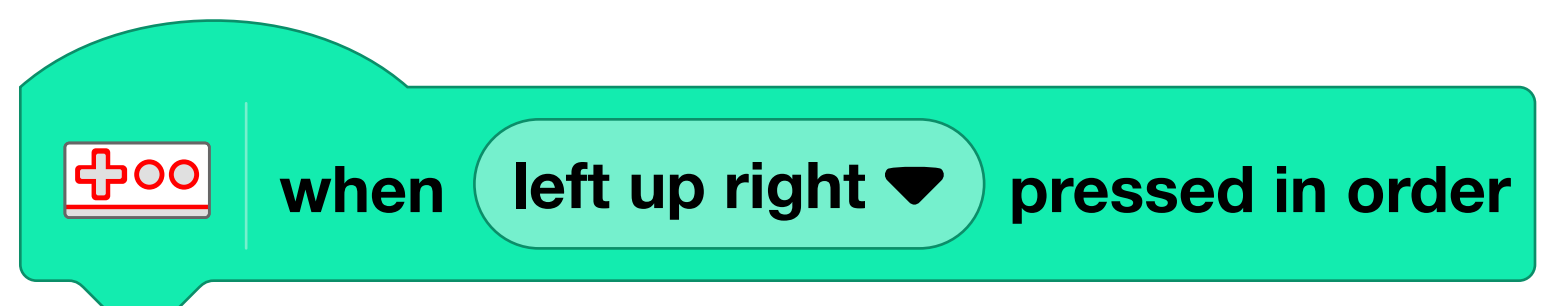
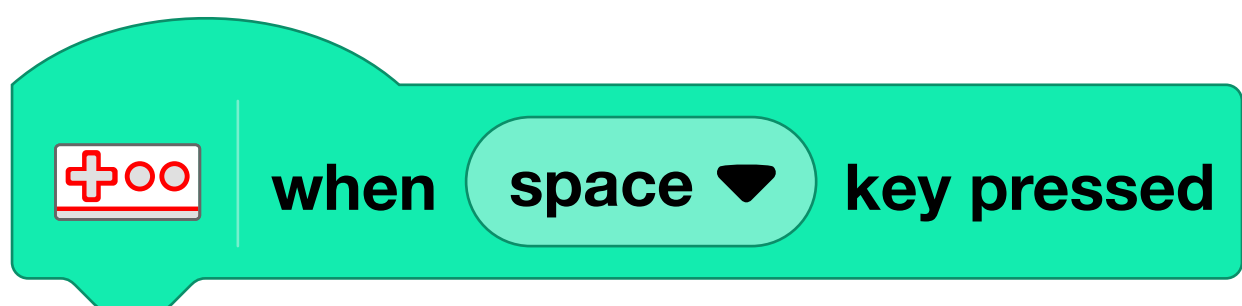
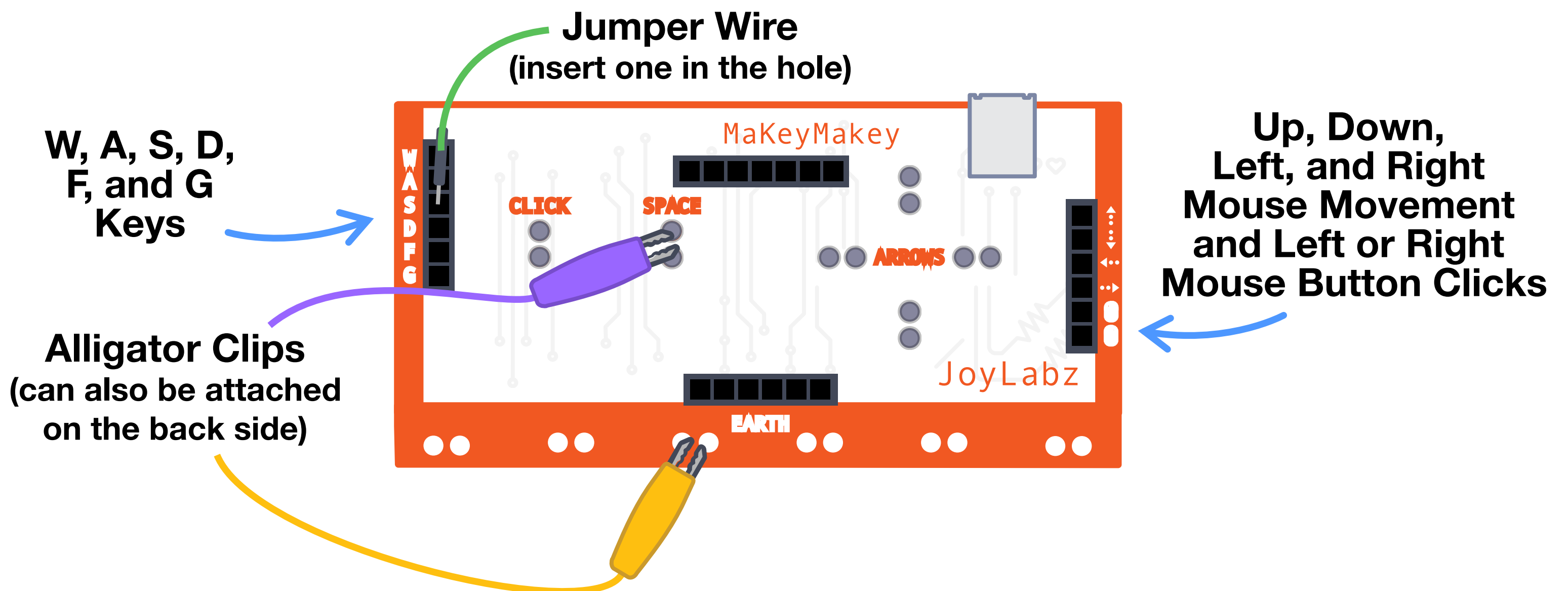
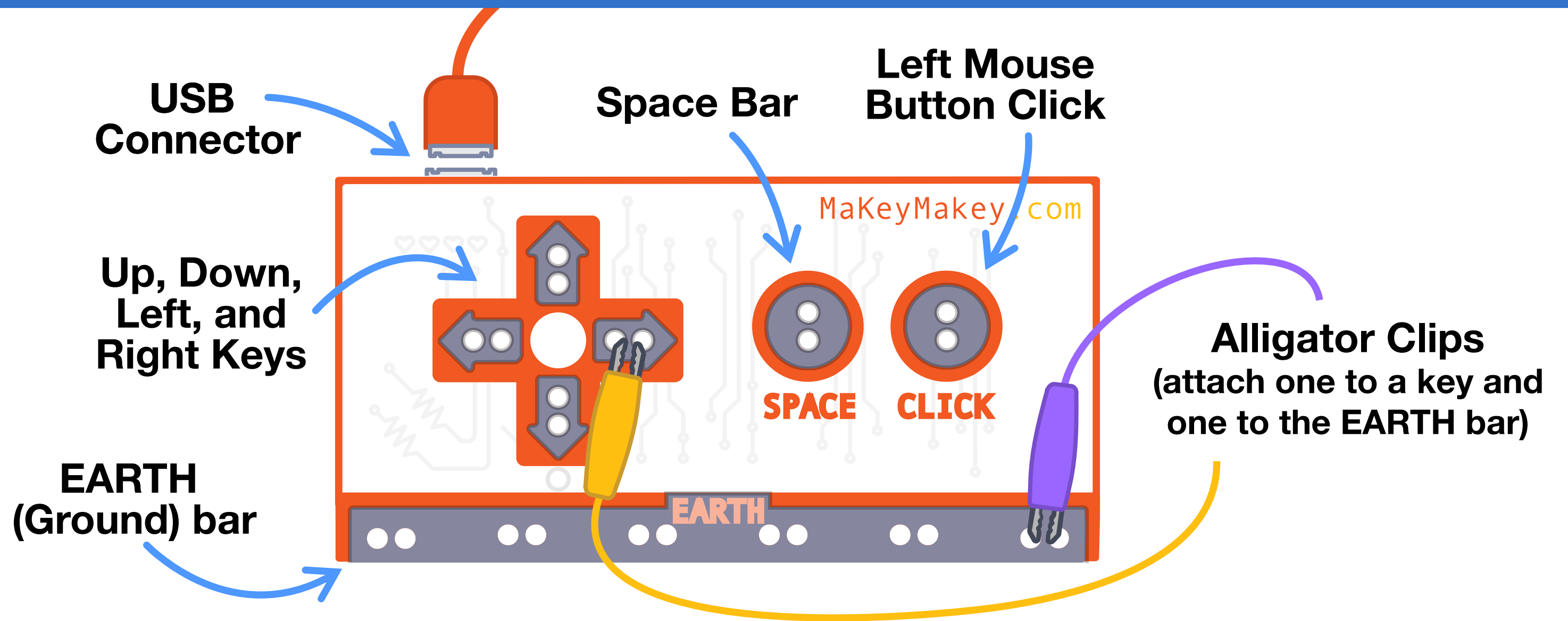
Sprite Area

Click the thumbnail of a sprite to select it.





and Makey Makey

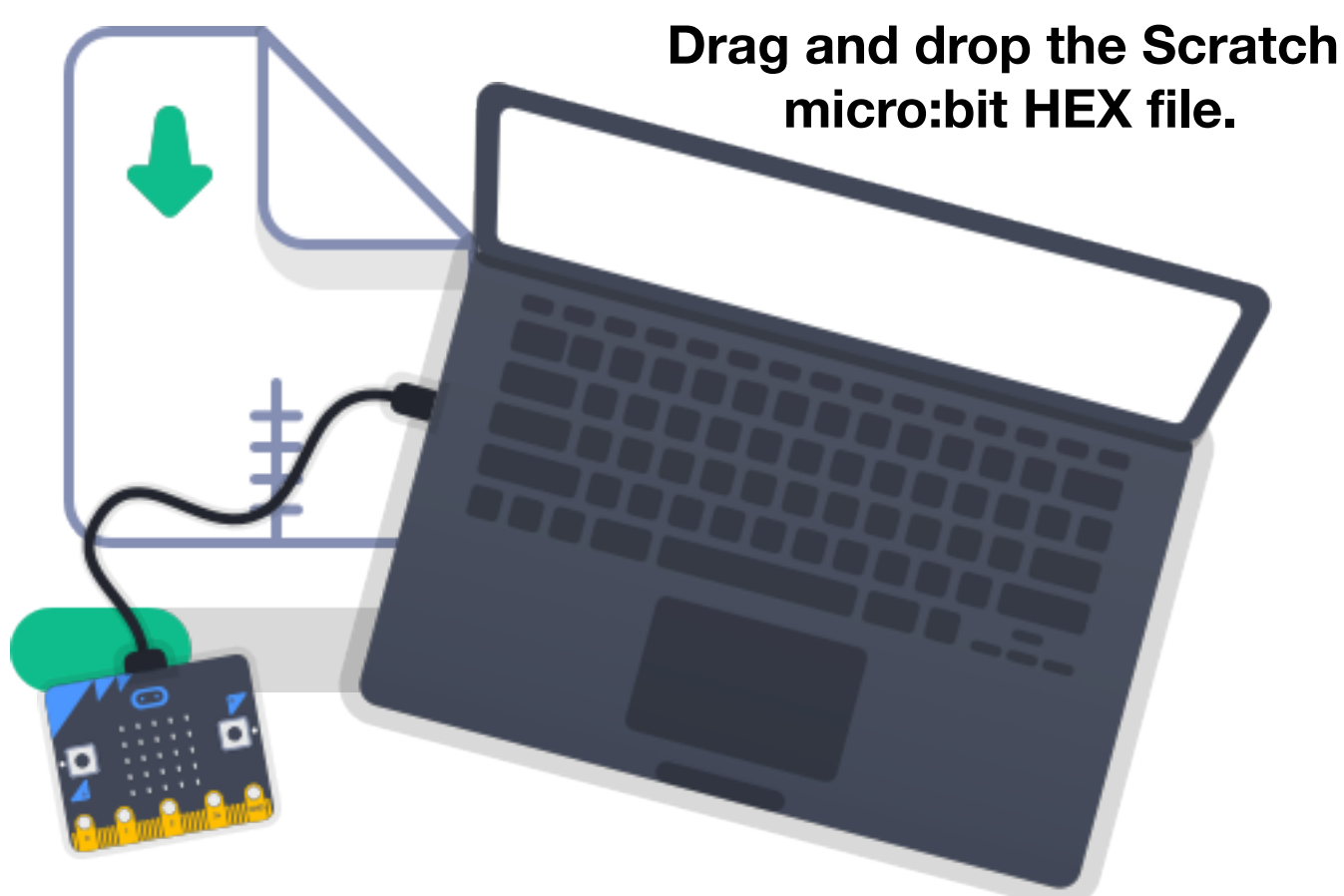
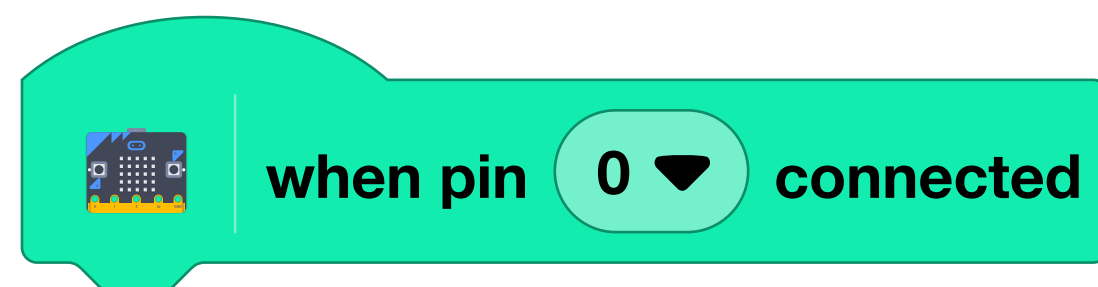
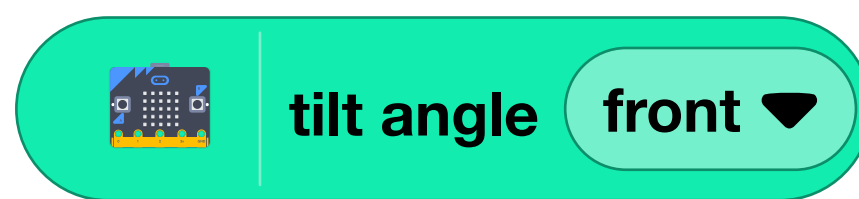
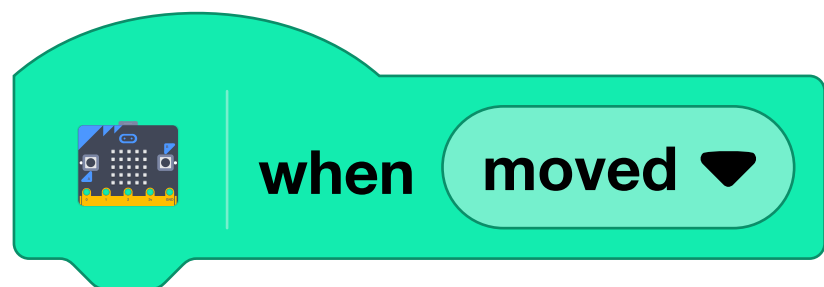
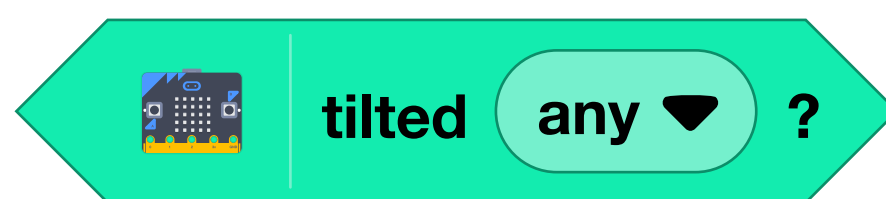
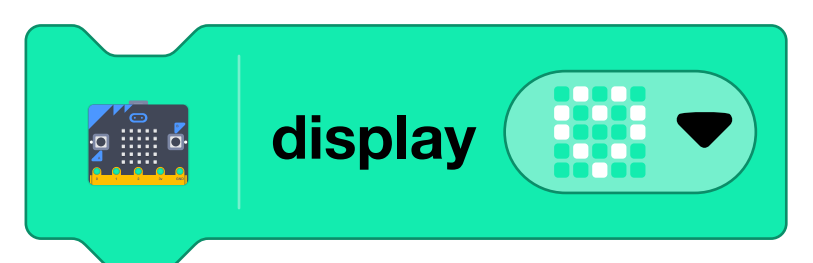
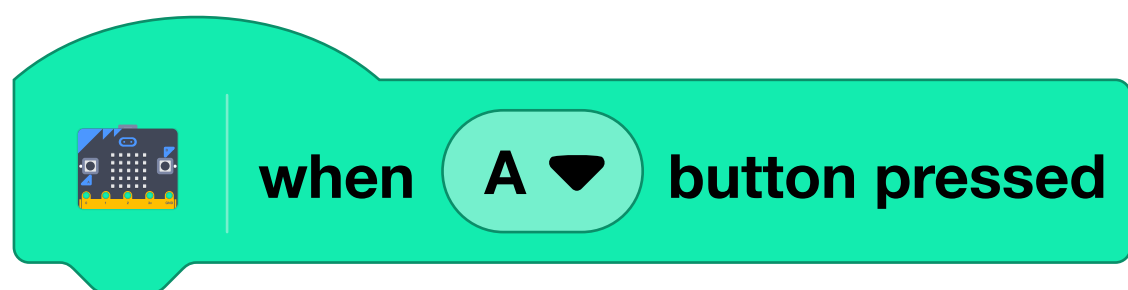
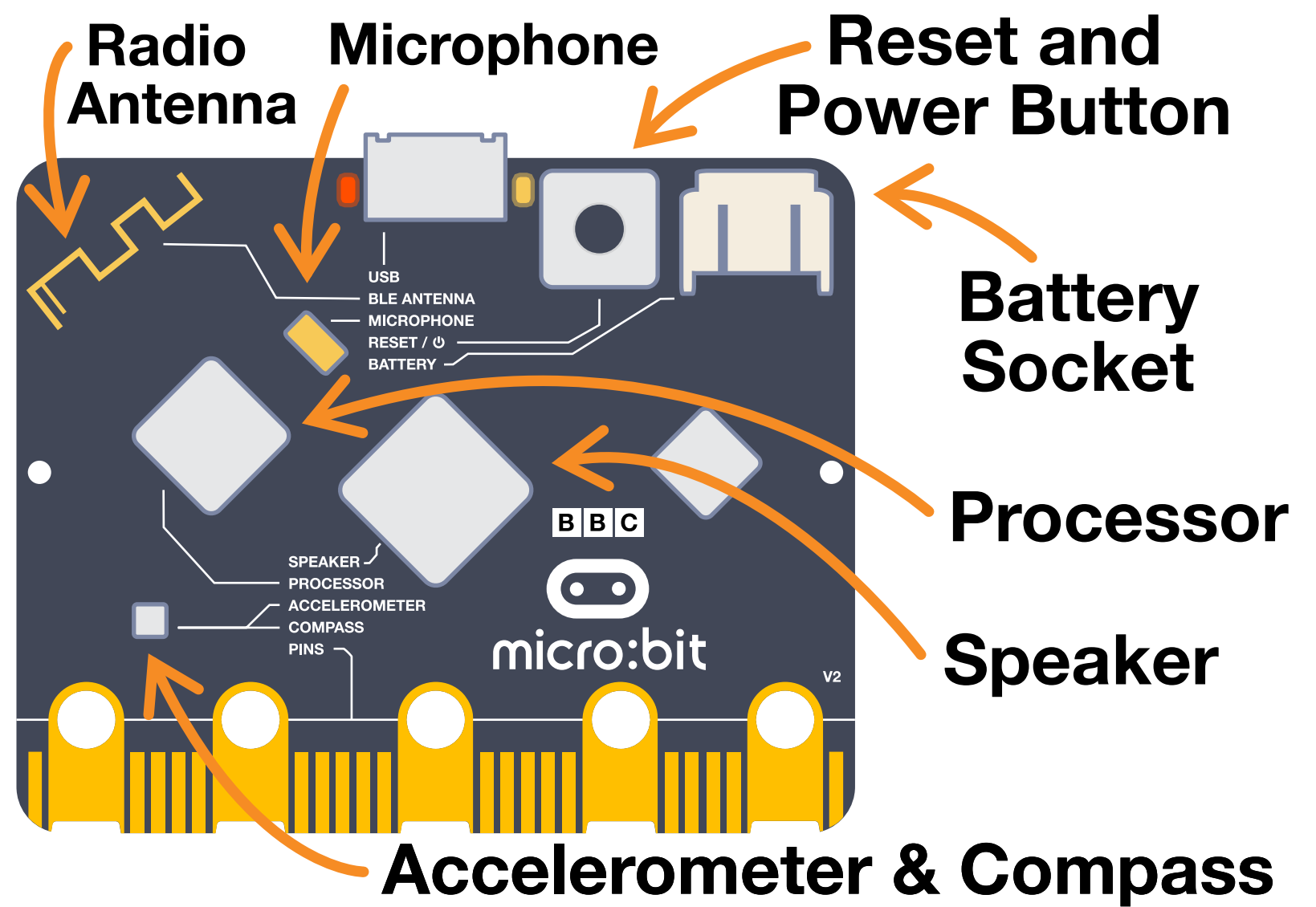
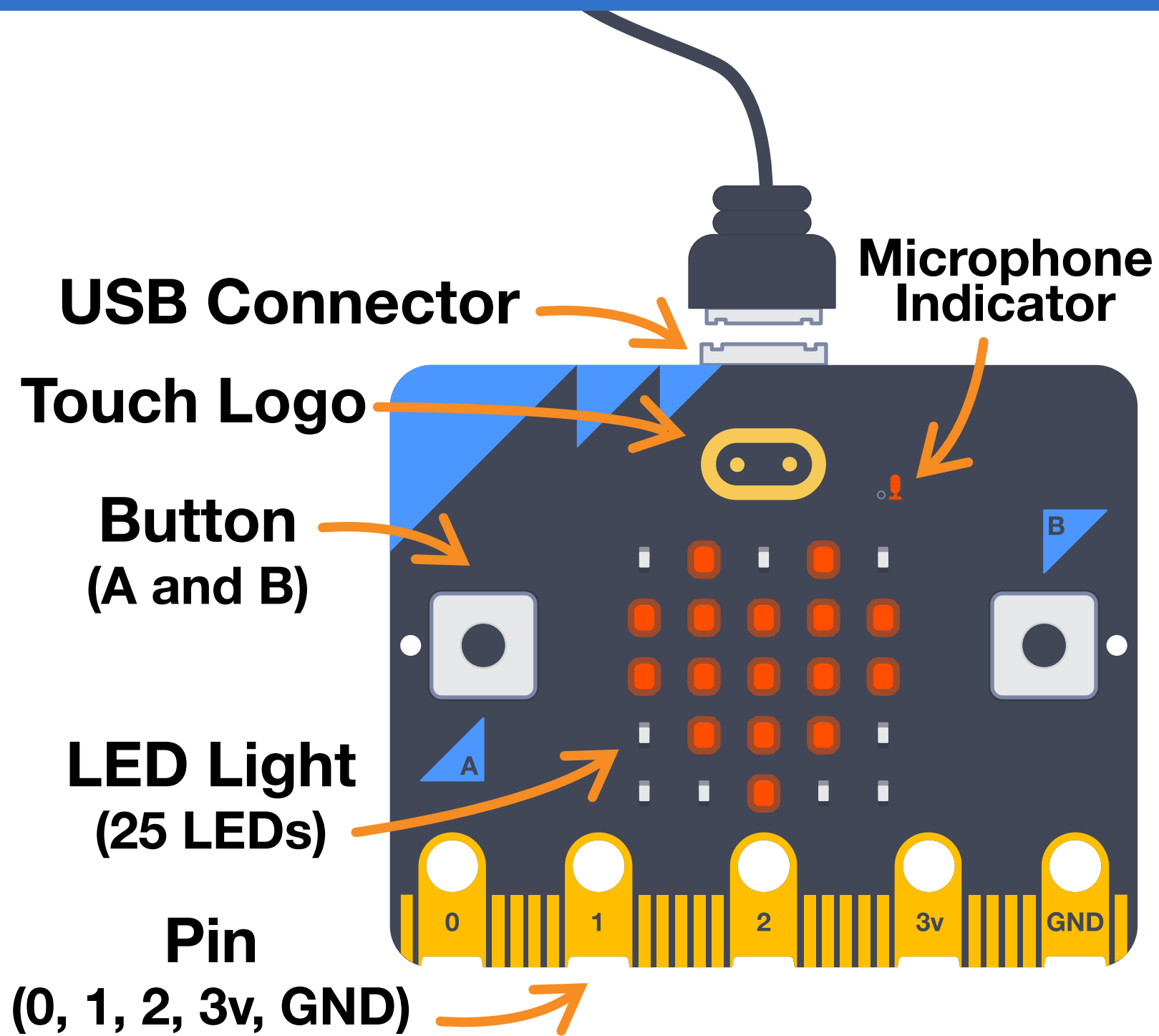


Add the extension. Or you can use the keyboard key and mouse click blocks, like the “when _ key pressed” Event block, as an alternative.

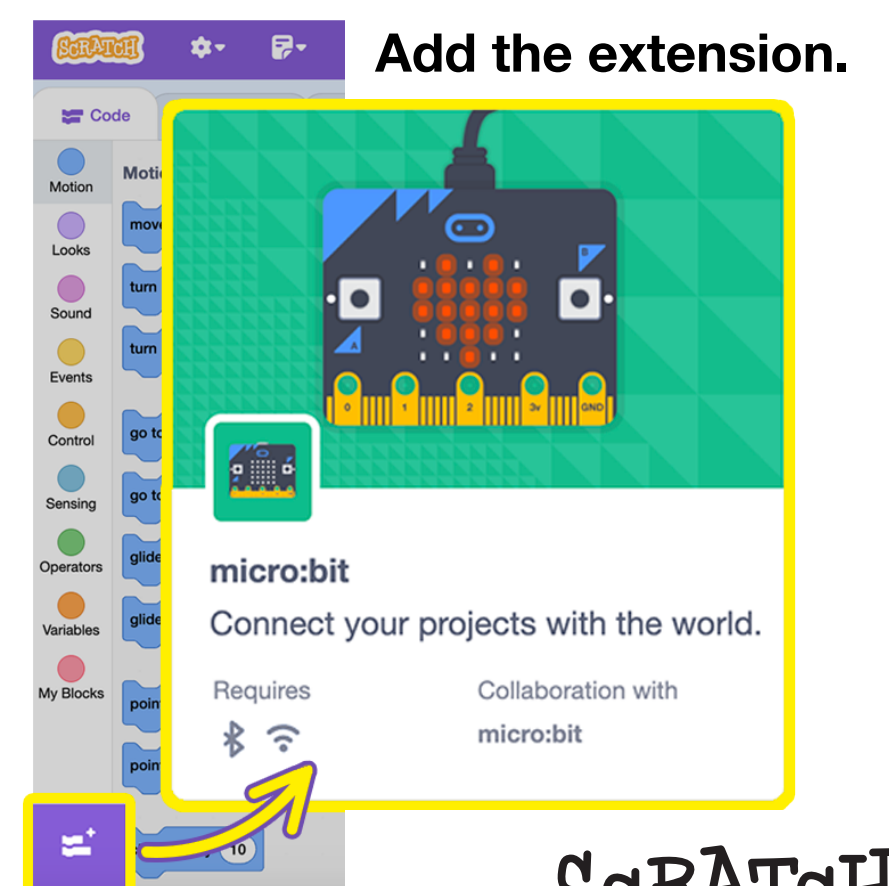
Connect one alligator clip to “EARTH” and another to a keyboard key. Close the circuit (to make the program register that keyboard key was pressed) by touching both the key and EARTH clips.



and micro:bit



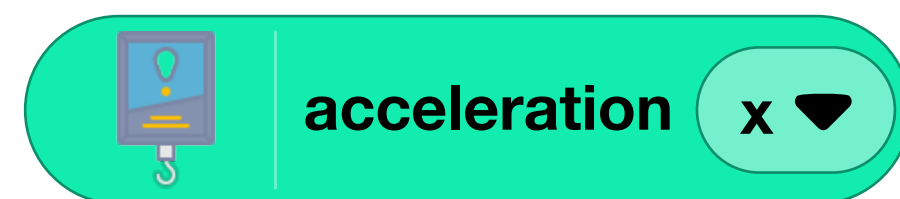
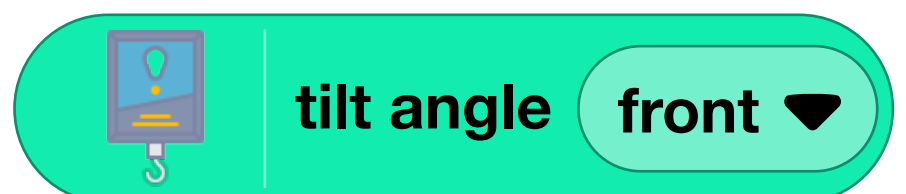
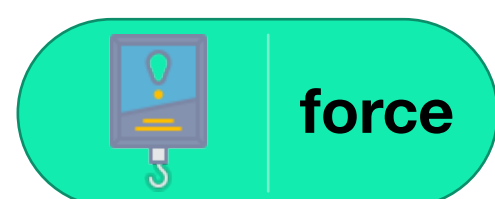
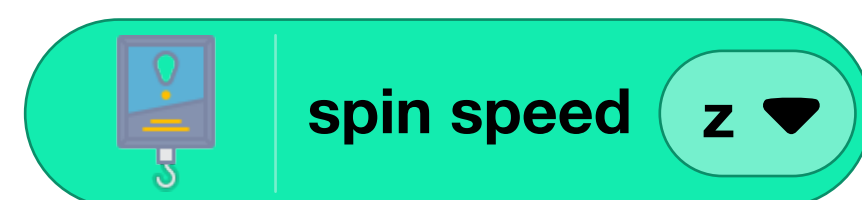
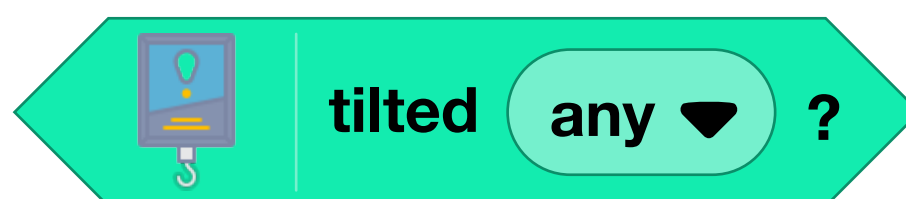
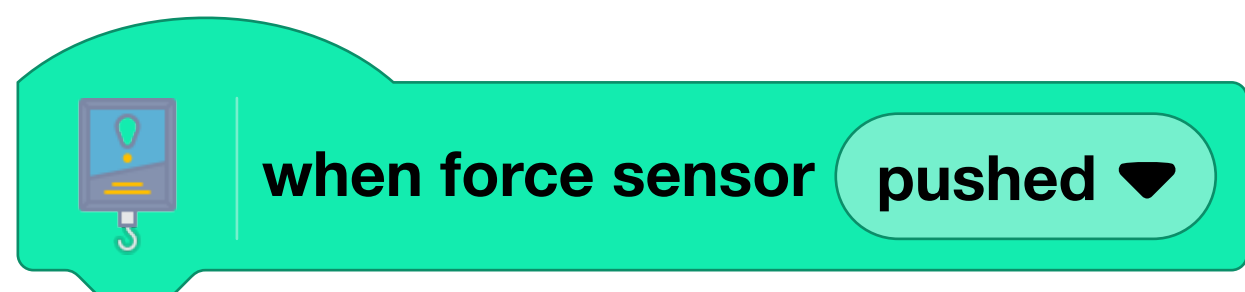
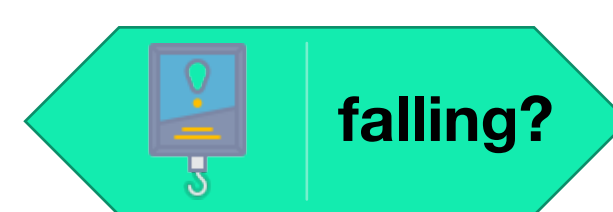
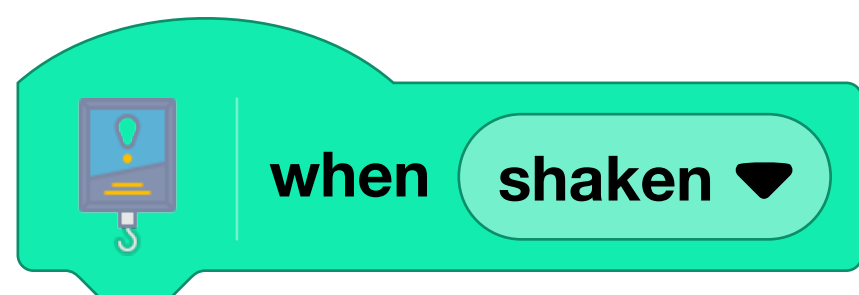
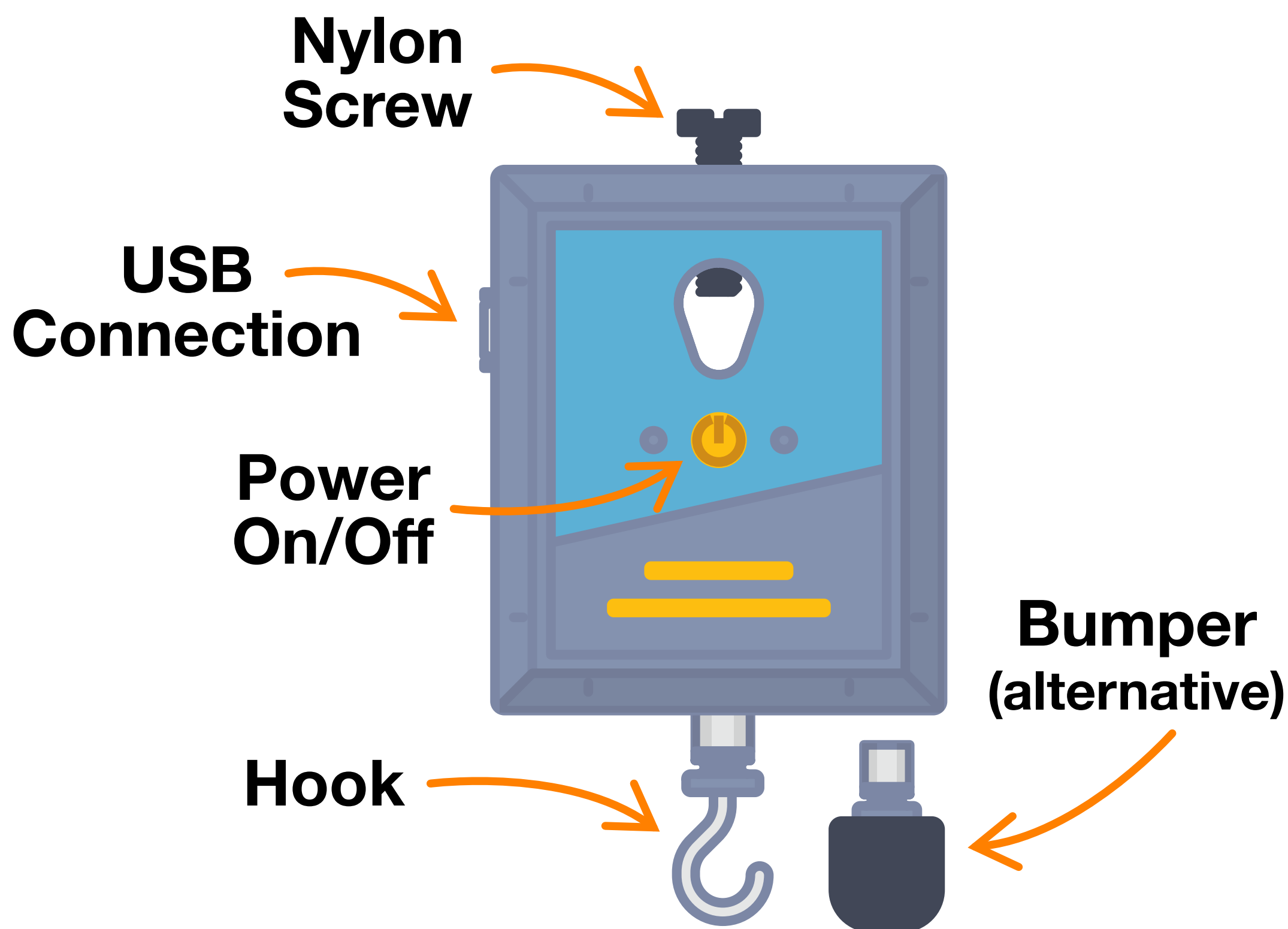
Start Scratch Link and enable Bluetooth.



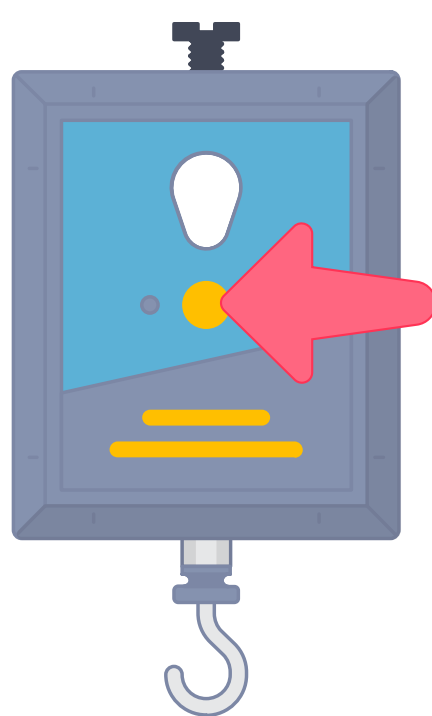
Scratch works with v1 and v2 (shown) micro:bit versions.



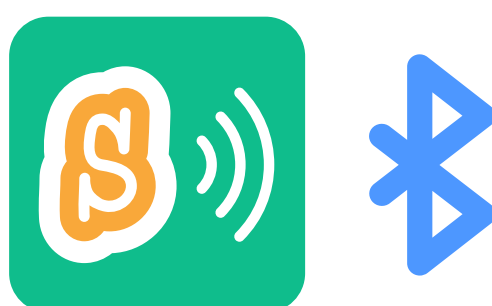
and Vernier Go Force



Power on the Vernier sensor.



Start Scratch Link and enable Bluetooth.



Add the extension.

