

# Makey-Makey and Scratch

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**Makey-Makey** - allows you to take everyday objects and combine them with the internet. Using the alligator clips attached to any conductive material you can control the keyboard of your computer, such as the space bar, arrow keys and left click of the mouse.

Need:

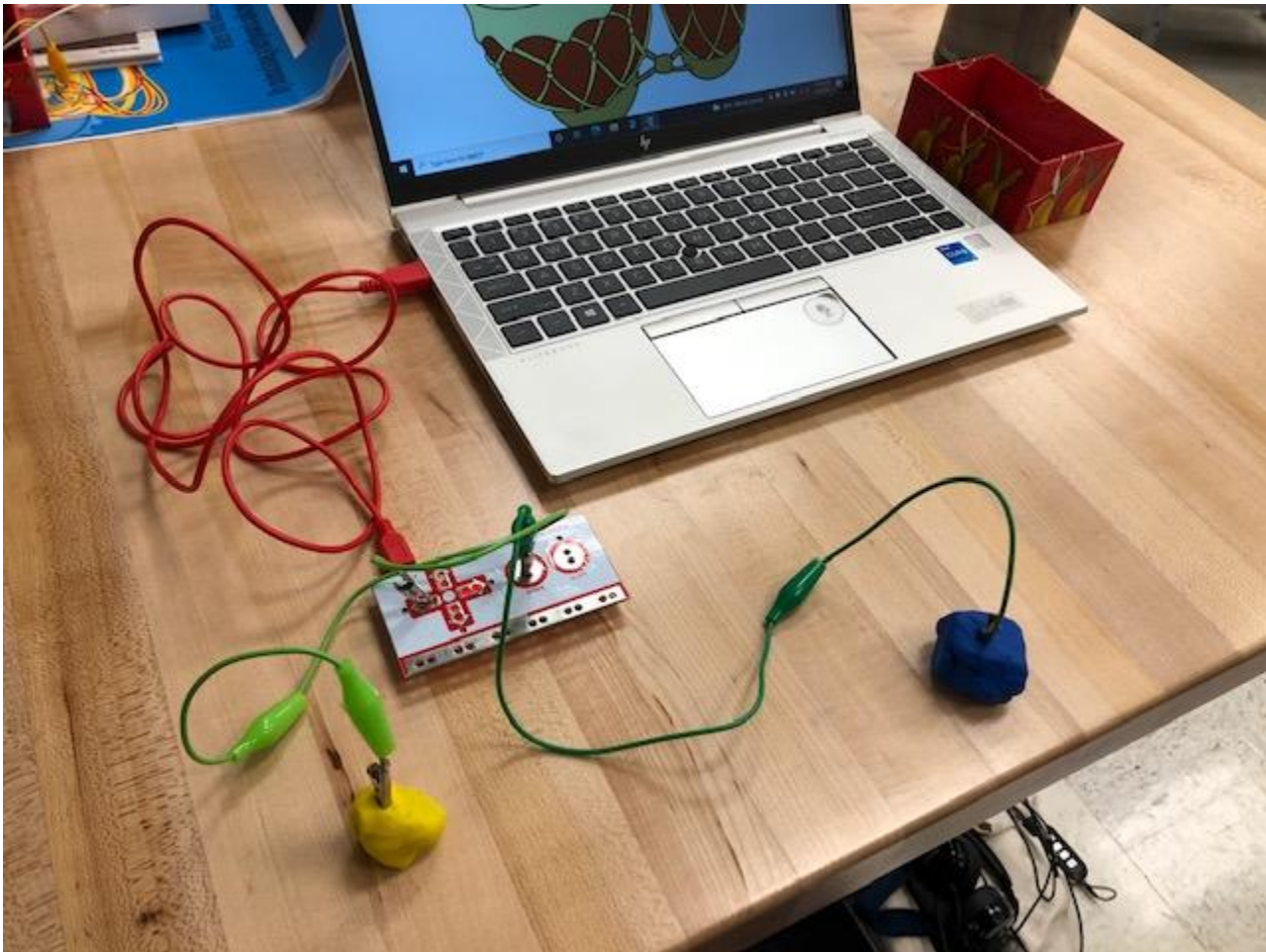
Makey-makey

Usb cord to connect to computer

2 alligator clips

2 conductive items (bananas, clay, etc.)

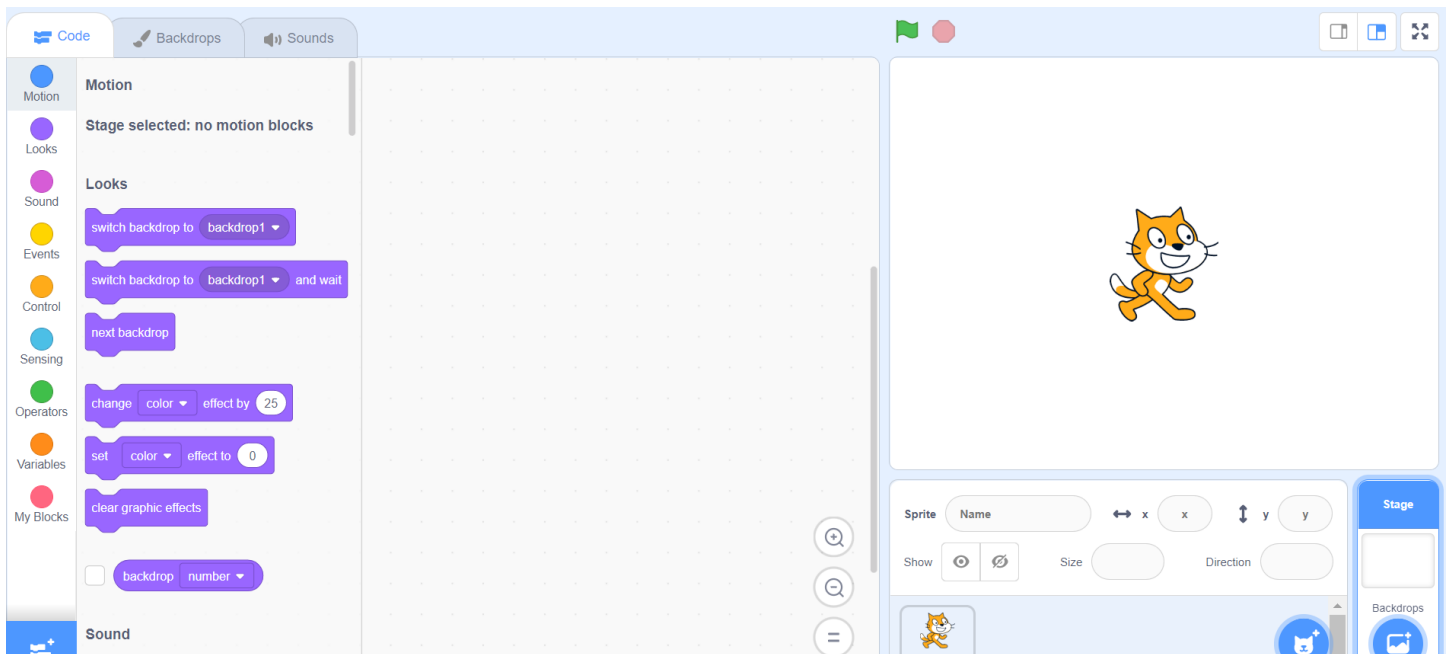
Connect the items and go the website: <https://apps.makeymakey.com/bongos/>



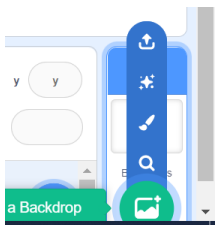
# Scratch

<https://scratch.mit.edu/projects/editor/?tutorial=getStarted>

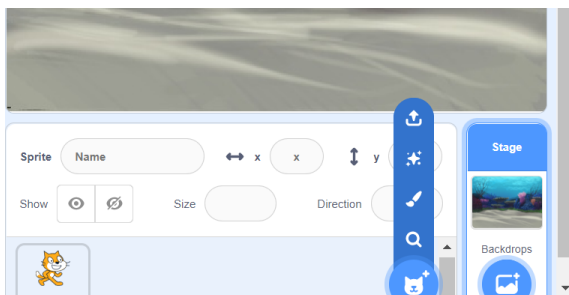
## 1. Using the Link Above, open Scratch and choose your own backdrop and sprite



**Backdrop** - (lower right) use the search icon to select a backdrop



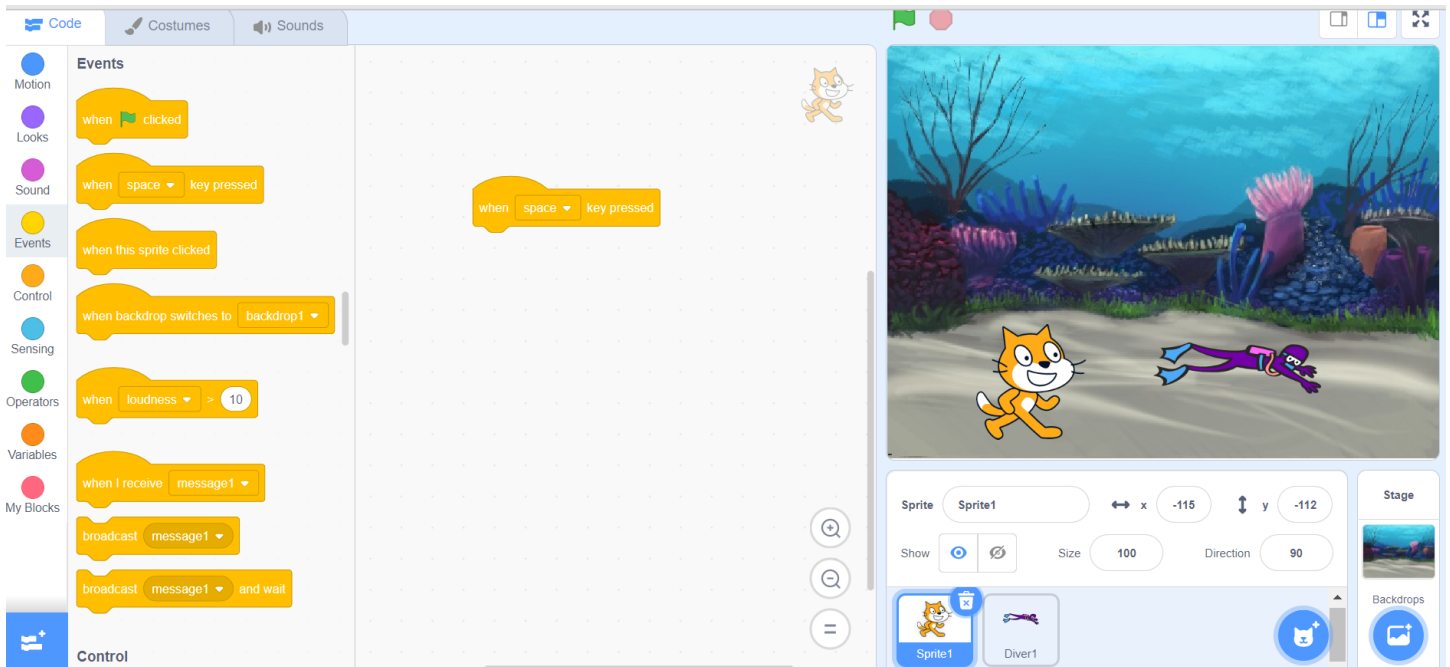
**Sprite** - (to the left of the backdrop) use the search icon to select a Sprite



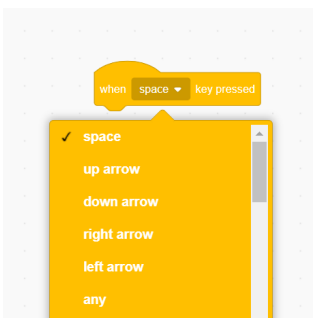
## 2. Add your first events code- when \_\_\_\_\_ key pressed

You can use your mouse to click and place the Sprites where you want them in the backdrop. In the area below the backdrop, click on the first Sprite. In this example, the Cat is clicked. We will begin with programming the actions of this Sprite.

Click on the **Events code** and select the second one on the list. Drag it to the middle section, which is the workspace.

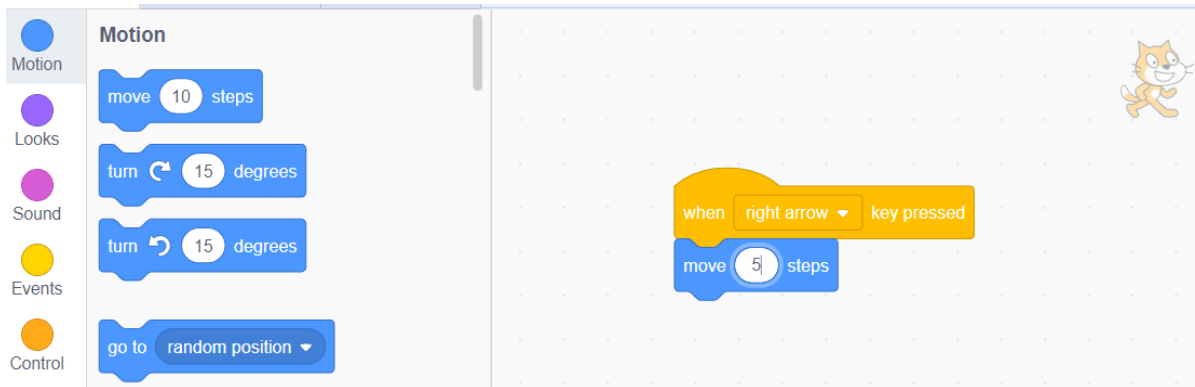


Whenever you see a downward pointing triangle, you have options to select from:



## 3. Add a Motion Code and Make your sprite move 5-10 steps

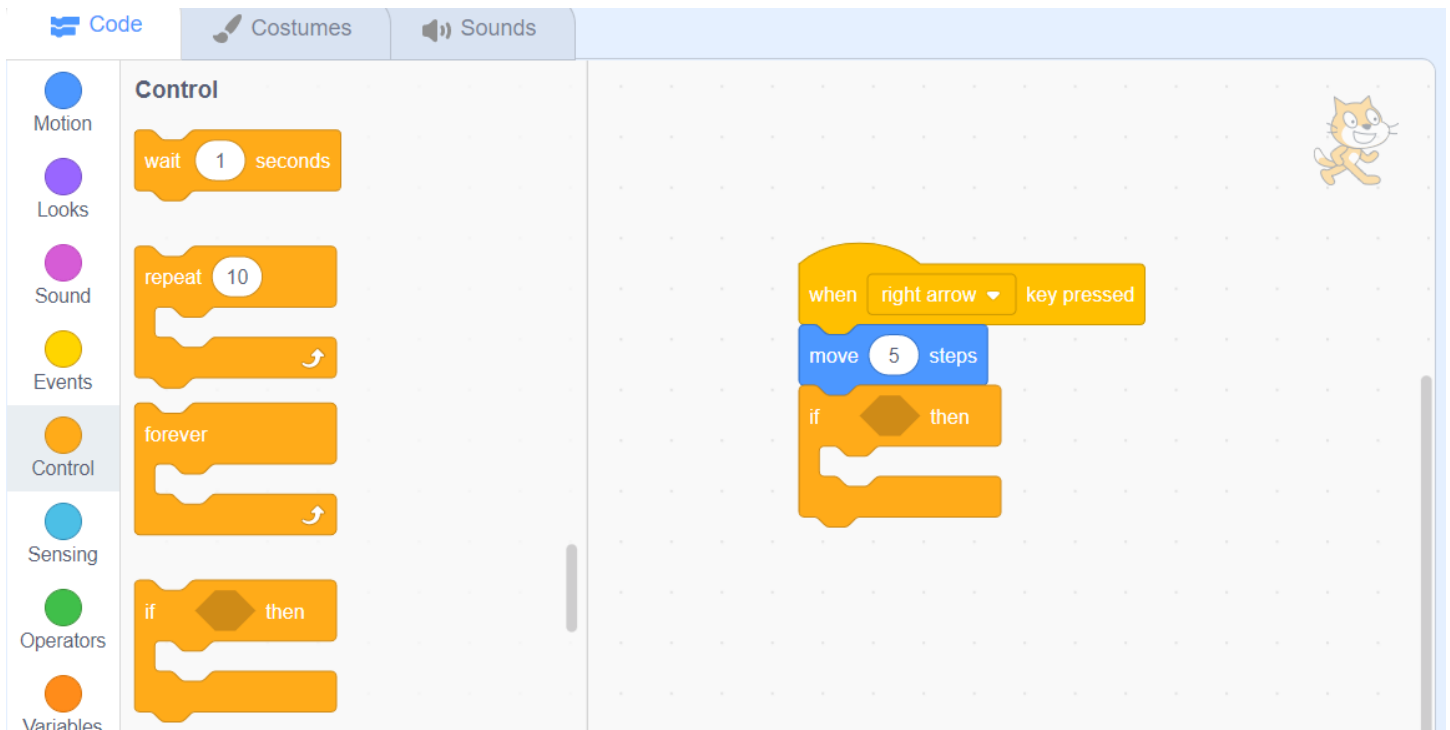
Next, **Motion code** and choose Move 10 steps. Since the 10 is in a white bubble, you have the ability to change the number of steps. I am setting mine to 5.



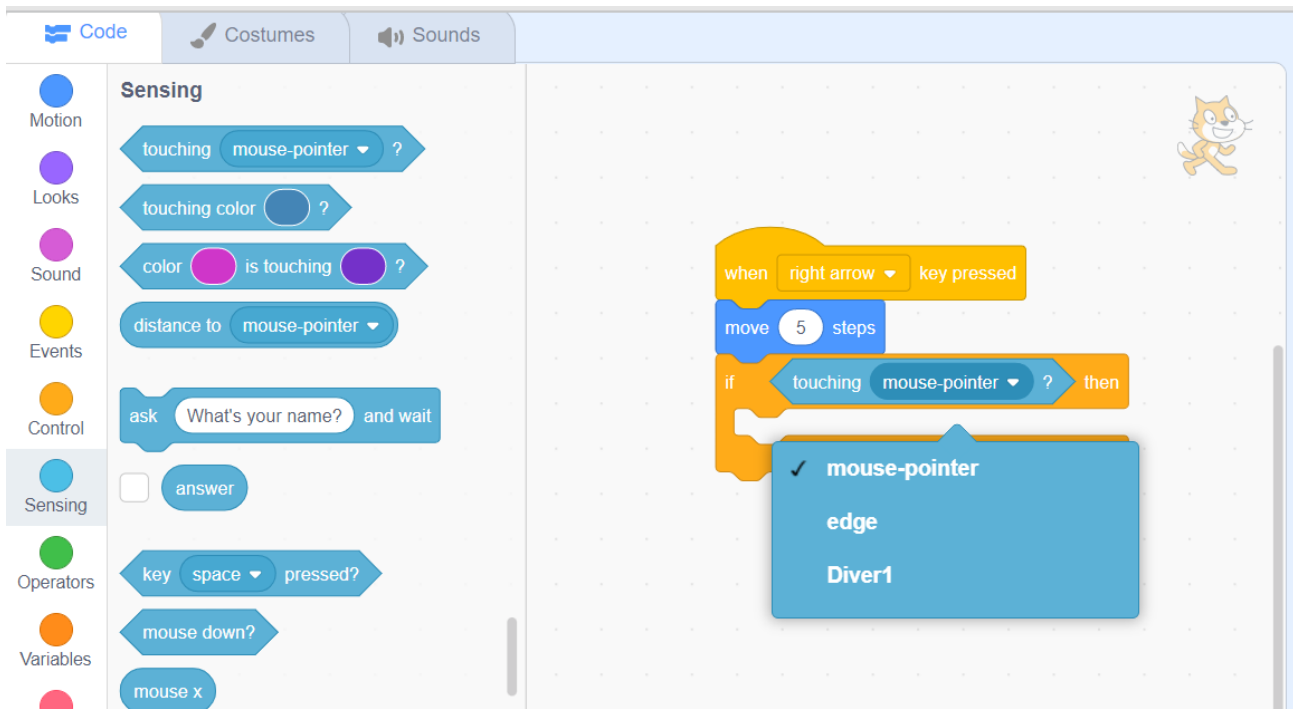
Using your Makey-Makey, activate the right arrow and watch your Sprite move. Once it has moved, you will want to use your mouse to reset the scene.

#### 4. Add a If/Then Block

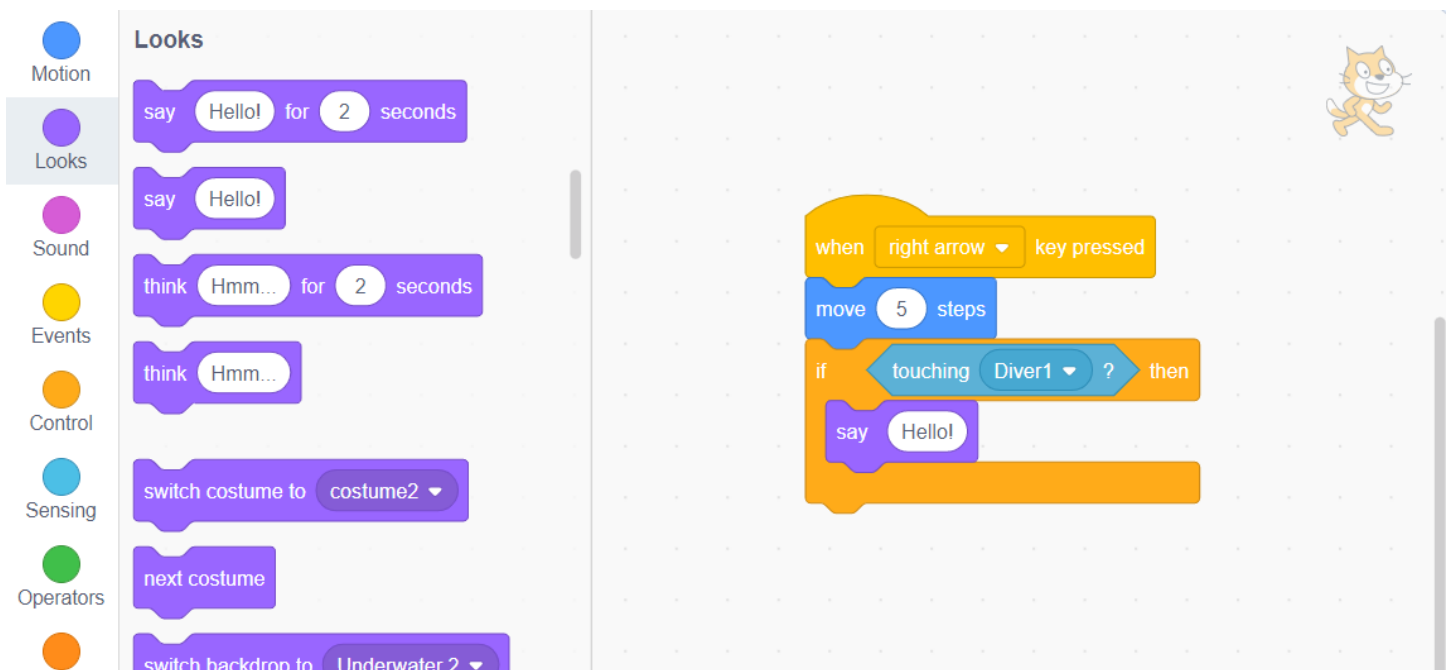
Finally, we will go to the **Control coding** section and choose the If/Then block.



This requires two more pieces of information to complete the code. For the "if" part, go to **Sensing** and choose the first option "touching". You will "hover" over the space between if and then to drop the code. Again, notice the downward facing triangle. (In my example, I will choose Diver1.)



So, if the Cat sprite is touching the Diver sprite, I need to choose an action. I selected say Hello from the **Looks** code. Can I change what is said? (Yes!)



Can I add another piece of code? (Yes!)

## 5. Add more pieces of code using If/Then, AND, OR, statements

The screenshot shows the Scratch code editor with the following script for the cat sprite:

```
when right arrow key pressed
  move 5 steps
  if touching Diver1? then
    say Howdy neighbor!
    play sound Meow until done
```

The background is an underwater scene with a purple diver and a cat sprite. The interface includes a left sidebar with categories like Sound, Events, and My Blocks, and a right sidebar with sprite and stage controls.

Using your Makey-Makey, activate the right arrow and watch your Sprite move.

**Your challenge is to click on the other Sprite, and code the next motion.** Can you make 3 other If, Then, Else statements work?

Write your Statements Here:

1.

2.

3.