

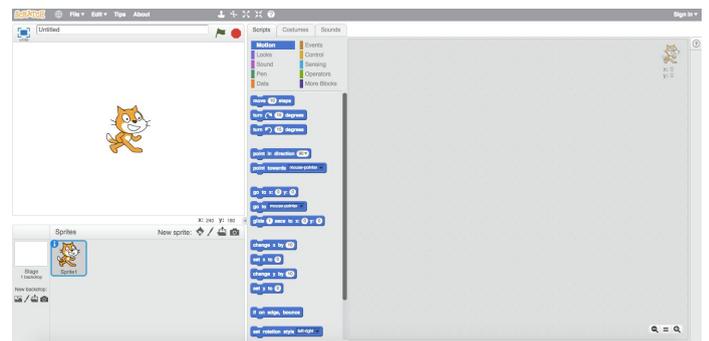
Makey Makey Fruit Drum Kit

In this activity, you are going to make a drum kit that you can play using fruit connected to a Makey Makey.

First of all, we will create the code for this activity in Scratch. Then we will connect up the Makey Makey and the fruit and get playing!

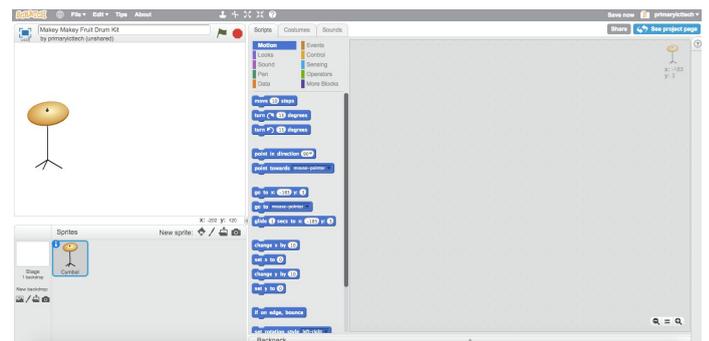
Part 1: Creating a cymbal

1. Open Google Chrome and go to the Scratch website at <https://scratch.mit.edu>, then click on "Try It Out"



2. In this project, we will not need the cat sprite, so right-click on it and delete it.

Click on "Choose sprite from library" and select the Cymbal sprite. Move this to the left of your stage.



3. Now drag and drop some code blocks into the script area, so that when the left arrow is pressed, a cymbal noise is played and the cymbal grows then shrinks back to its normal size.

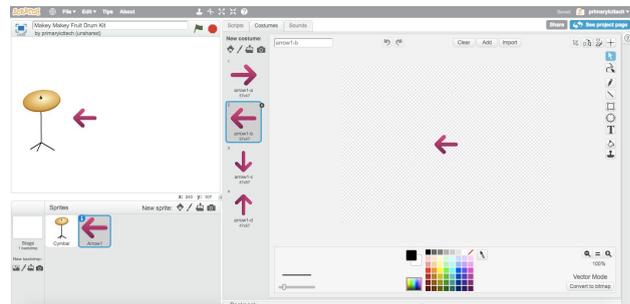


Test your project - Can you hear a cymbal sound when you press the left arrow key?

Part 2: Adding an arrow key

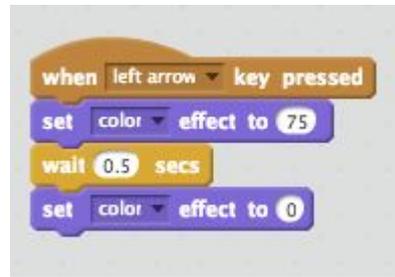
1. Let's add in an arrow to help the user work out how to play the drum kit.

Choose a sprite from the library again and select arrow 1. Then click on the Costumes tab and select the Costume "arrow-1b" which points left.



2. Add some code blocks so that when the left arrow key is pressed, the arrow will change colour.

You'll also need to add a wait block so that the arrow pauses before changing back to the other colour.

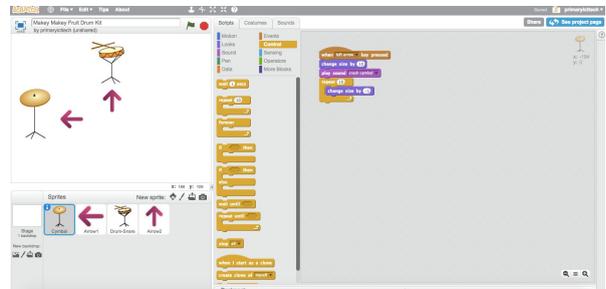


Test your project: Does the arrow light up when you press the left arrow key?

Part 3: Adding a drum

1. Use the skills you have learned to add a snare drum sprite and an up arrow sprite and place them towards the top of the screen.

Hint: choose the correct costume for the arrow



2. Which instructions in the code need to change to make the snare drum play when you press the up arrow?

Hint 1: Which arrow key press will start the instructions off for both your new sprites?
Hint 2: Which sound will the drum sprite play?



Test your project: Does the cymbal play when you press the left arrow? Does the drum play when you press the up arrow? Do the arrows change colour?

Challenge 1: Adding more instruments

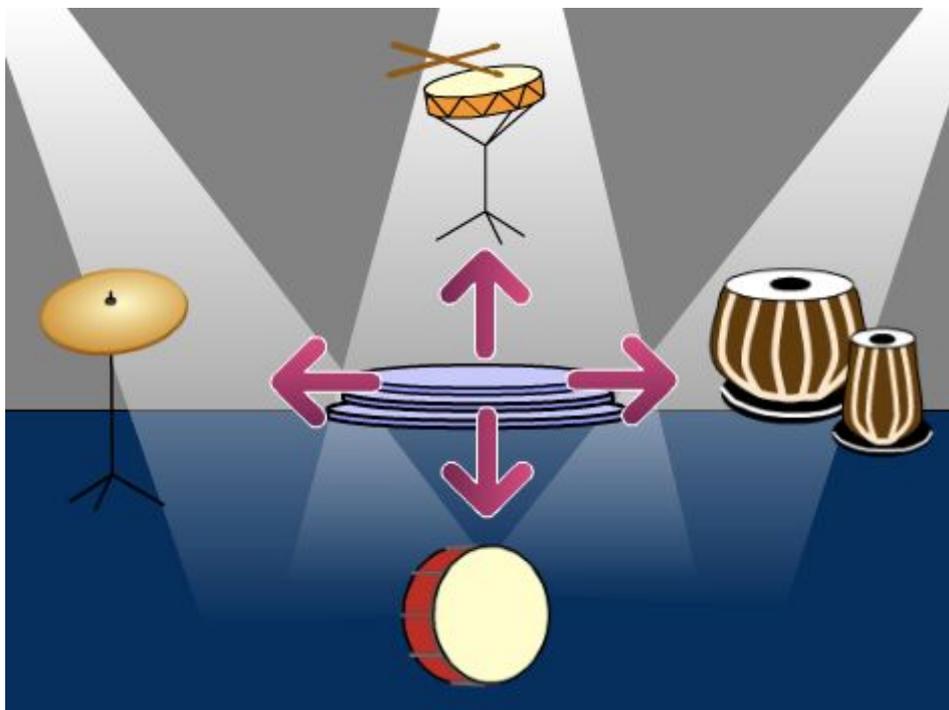
Choose two more instruments, one which will play when you press the right arrow and another which will play when you press the down arrow. Add code so they both play an appropriate sound.

Challenge 2: Adding more arrows

Add in two more arrows and change their costumes so that they point right and down. Add code so that they change colour when you press the correct arrow.

Challenge 3: Adding more touches

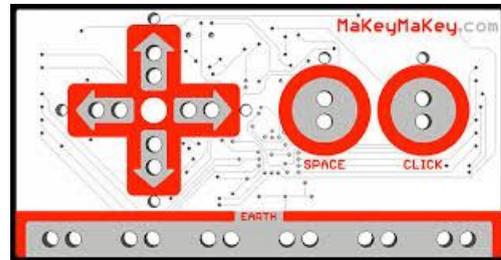
If you have time, you can add a backdrop and experiment with getting your instruments to change costume when you click on them. Be sure to change them back to their original costume too!



Part 4: Connecting up your Makey Makey

1. You will need:

- A Makey Makey
- A cable to connect the Makey Makey to the computer
- Five crocodile clips
- Four pieces of fruit



2. Connect your Makey Makey to the computer USB port using the red USB cable.

3. Connect crocodile clips from each of the arrow connector pin holes to each one of your pieces of fruit.

4. Connect one end of the last crocodile clip to the earth pin holes.

5. Hold the other end of that crocodile clip in one hand and then tap the fruit with your other hand to play the drums!

Test your project: Can you play your fruit drum kit?

Why not swap with another family and try out their drum kit too?