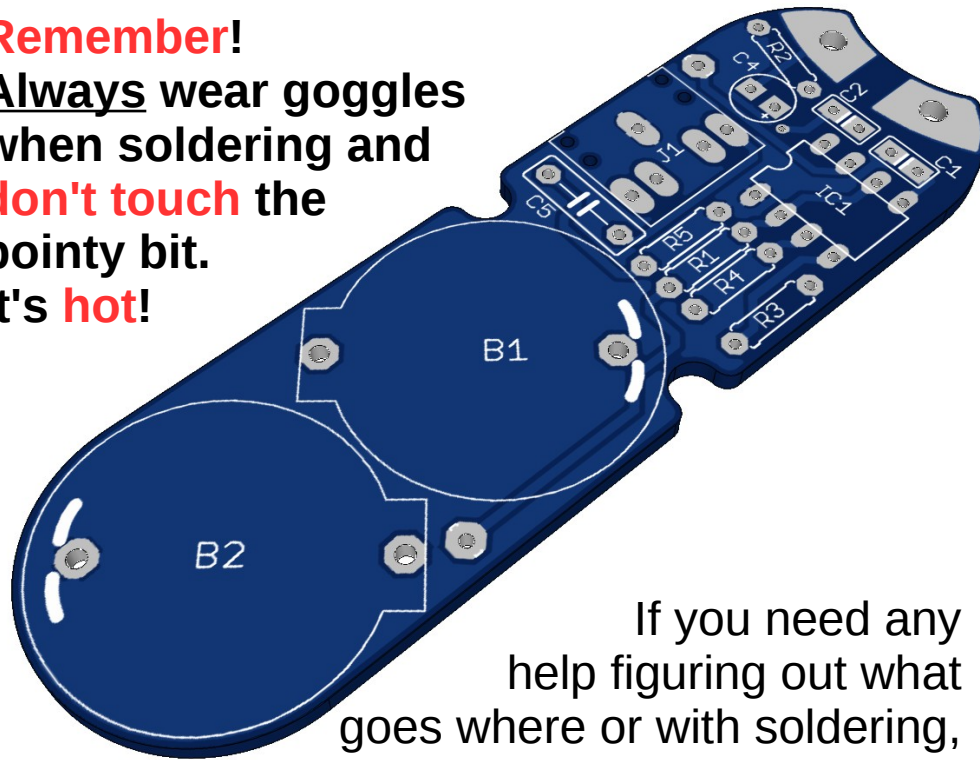


We are going to be building our own musical pencils! All of the components you need are in the box you were given at the start of the workshop. Use the information on this sheet to assemble your Drawdio by matching the correct components to where they go on the circuit board.

Remember!

Always wear goggles when soldering and **don't touch** the pointy bit. It's **hot**!



If you need any help figuring out what goes where or with soldering, please ask one of the helpers. We don't bite!

Finished already? **Play with it!** We want to know **what** kinds of **sounds** you can make by drawing **different shapes**. What noise does writing your name make? **Does it change** as you write? **Why** do you think this is?

Understanding the Circuit Board:

The circuit board has holes for each components "legs" where they will be soldered on, along with a letter and number. So you know which component goes where. For example, "R4" means resistor number four. So you know to find which resistor "R4" is, and what resistance value it has. Similarly, "C5" is capacitor five, and so on. For the larger components like "B1" and "IC1", see if you can work out which components fit there by looking at their legs.

When you have finished attaching all of the components, ask one of the helpers to explain how we attach the pencil using the Copper strip.

Component	Value	Colours
R1	300K	Orange Black Yellow
R2	20M	Brown Black Blue Gold
R3	10K	Brown Black Black Red Brown
R4	2.2K	Red Red Red Gold
R5	1K	Brown Black Red Gold
C1	10nF	Small Orange One (103)
C2	680pF	Small Orange One (681)
C4	10uF	The Black Round One
C5	0.15uF	The Blue Square One