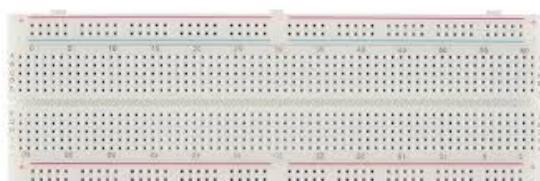


## Build instructions for the 3x3x3 LED cube

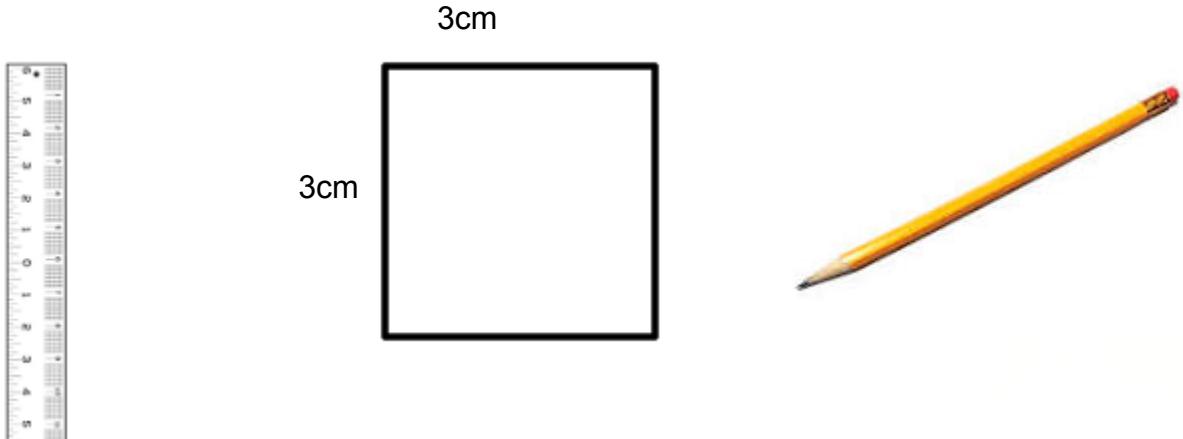
### Step 1: Gather materials and tools.

Materials needed:

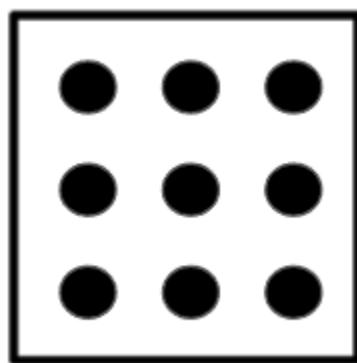
- 27 LEDs
- 18 red wires
- 6 black wires
- 3  $1\text{k}\Omega$  resistors
- Soldering station
- 1 pack of soldering metal
- 10cm x 10cm cardboard
- Wire cutters
- Pliers
- Breadboard
- Ruler
- Scissors
- Pencil
- Arduino Uno



**Step 2: Mark a 3cm x 3cm square on your cardboard using a ruler and a pencil.**



**Step 3: Mark 9 equally separated dots on your square using a ruler.**



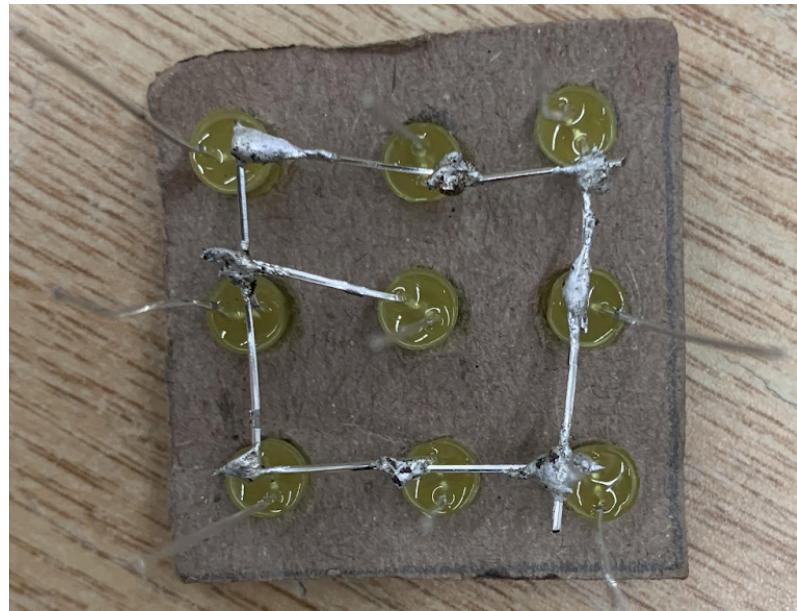
**Step 4: Cut out holes from the dots by pressing on them using a pencil. This will be your stencil for your LED layers.**



**Step 5: Place 9 of your LEDs in the holes facing down, and bend the negative ends of the wires so that they are all touching. Shorten the negative ends if they stick out beyond your cardboard.**



**Step 6: Solder all of the negative ends of the LEDs together using a soldering machine and soldering metal, make sure the soldering metal does not touch the positive terminals of your LEDs. This will be the top layer of your cube.**



**Step 7: Repeat step 5 and 6 two times for your second and third layers.**

