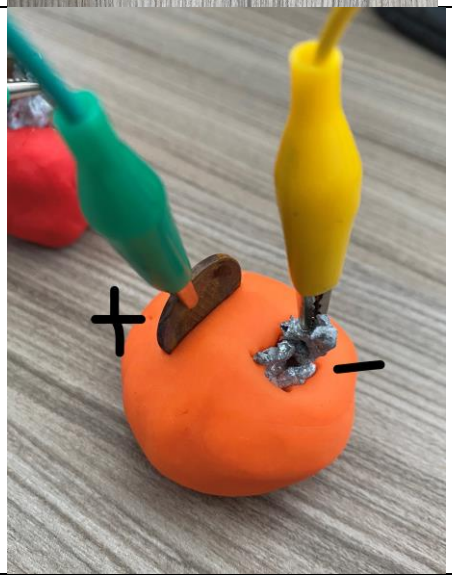
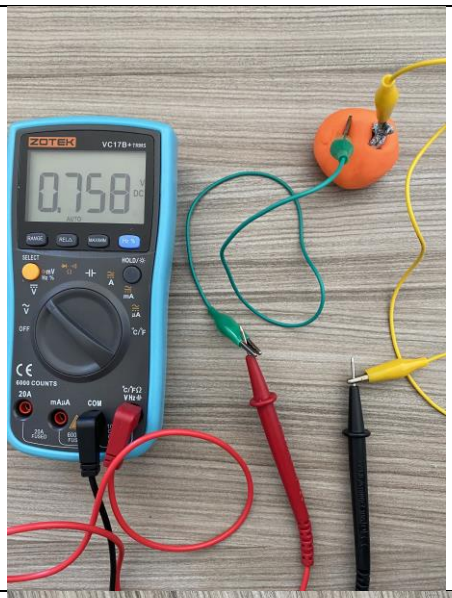
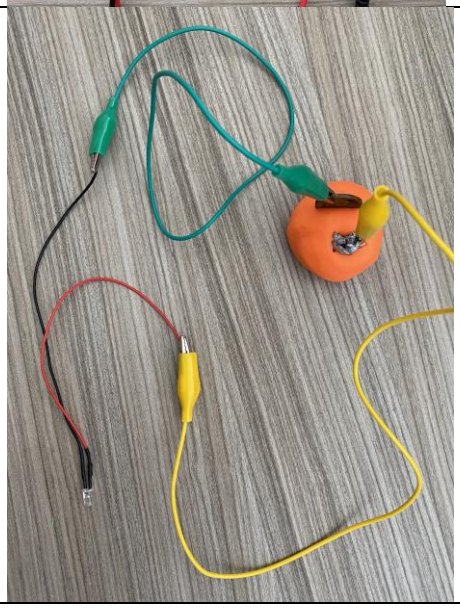
How to make your own battery

Materials required:

- Copper coins
- Galvanised nail
- LED
- Crocodile clips and wires
- Volt meter
- Playdough (can also use lemons/potatoes/salt water)
- 3V battery

Step by step instructions:

1. Get two sections of playdough. Connect one on the battery terminals and one of the LED connections to one of the sections of playdough. Do the same for the other two connections. The LED should light up but if it doesn't switch the wires connecting to the battery around.	
2. Make one ball out of playdough and on one side insert the copper coin and on the other insert a galvanised nail which are coated in zinc. Alternatively use another object made out of zinc. Connect one crocodile clip to each.	

3. To test how much electricity is flowing through your playdough battery connect the crocodile clips to a voltmeter. For this example it was 0.758 V.	
4. To connect it to the LED it is similar as for the battery. One LED needs around 2V to turn on so it didn't turn on with just one of the playdough battery cells. Try making a few more battery cells and then measuring the voltage to see how it changes.	

5. To make one big circuit with multiple battery cells make sure that one the LED connections is connected to the first coin and the other is connected to the last piece of zinc. Connect the battery cells in between from the zinc to the copper.	

To explore this concept further:

- What happens if you use more than one LED?
- How does the size of the playdough affect the voltage measured?
- Try to make a battery in the same with other materials such as lemons and see how it differs.