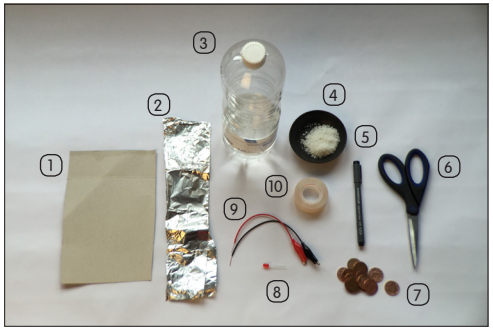
COIN BATTERY

Let's make magic with copper coins and power up a LED

Tools and materials

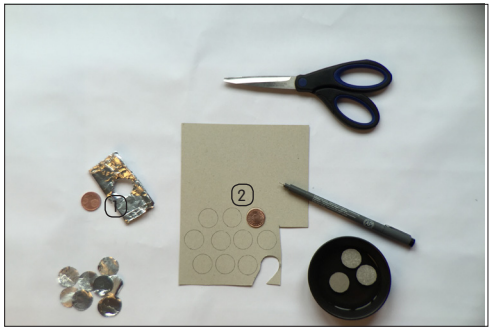


1. Cardboard
2. Aluminum Foil
3. Vinegar
4. Bowl and some salt
5. Pencil
6. Scissors
7. Copper coins (+/- 15)
8. LED
9. Wires with crocodile clips at one end
10. Insulating tape

Step 1 – Clean coins

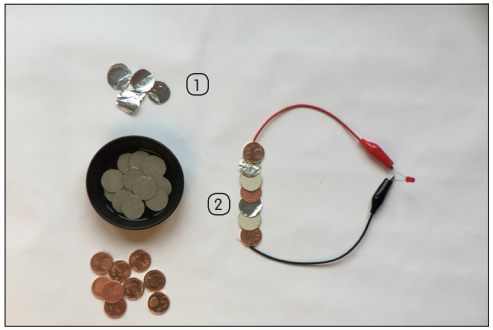
1. Pour in the bowl some vinegar and add salt to it
2. Put the coins in the bowl
3. Rub the coins around with your fingers for a couple of minutes
4. Dry the coins on a paper towel

Step 2 – Cut



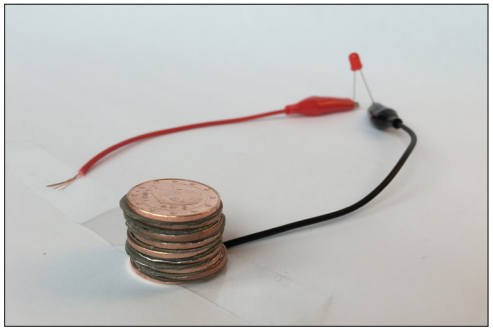
1. Cut 14 cardboard circles the size of the coins
2. Soak the cardboard circles in the bowl with vinegar and salt
3. Cut 14 aluminum circles the size of the coins

Step 3 – Assemble



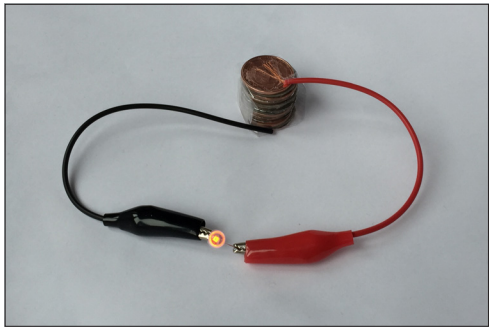
1. Assemble a stack:
   - take a coin,
   - put a carboard circle on top,
   - put an aluminum circle on top
   - repeat this until the 15 coins are stacked
2. End the stack with a coin
3. Be careful to not bend the layers of foil to other layers

Step 4 – Wire up



1. Attache the LED to the wires with the crocodile clips
2. The other end of the wires are stripped for 1cm
3. Take a piece of tape and paste these ends of the wire to the tape as shown in the picture
4. Place the stack on top of the wire and tape
5. Wrap the tape around the stack so one wire is pasted on the bottom and the other wire pasted on the top

Step 5 – Turn on the light



1. Now you should see the LED on
2. If not try to switch sides of the LED at the crocodile clips
3. Enjoy the maker-magic!

Notes