

Build a Lemon Light Instructions

MATERIALS

- Two or more lemons for each participant (the more lemons you have, the more energy you can create)
- Zinc electrodes: Either a 3-by-0.5-cm piece of zinc metal, obtainable at local hardware stores, or a galvanized zinc-coated screw, nail or penny made after 1982 (one per lemon)
- Copper electrodes: Either a similarly sized piece of copper metal, or you can use a penny that was made before 1982 (one per lemon)
- LED lightbulb
- Copper wire: A piece long enough to create a circuit from the zinc electrode to the lightbulb to the copper electrode (one per lemon)

INSTRUCTIONS

1. **Stick** the zinc electrode into the side of your lemon. This is now the negative electrode.
2. Stick the copper electrode on the opposite side so that it doesn't touch the zinc electrode. This is now the positive electrode.
3. Repeat steps 1 and 2 for each lemon.
4. Then using the copper wire **connect lemons together**, positive to negative (zinc to copper).
5. Next using the copper wire **connect the LED lightbulb** to the two lemons (electrodes) on the end. The wire that sticks out of the **flat side of the lightbulb** should be connected to the **negative** side (zinc) of the chain of lemons, and the wire that sticks out of the **round side** should be connected to the **positive side** (copper) of the chain of lemons.