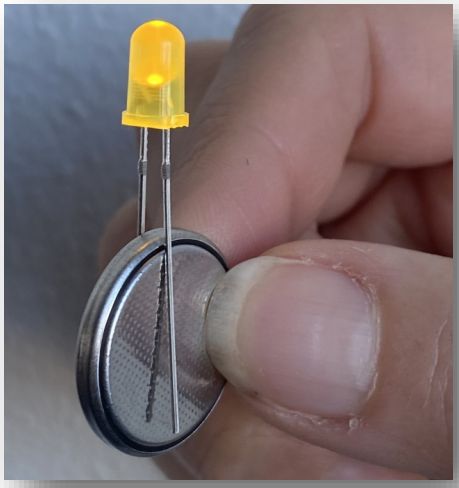
ELECTRIC CIRCUITS

LED (Light-Emitting Diode): A diode is a component that allows electric current to flow in one direction only. An LED is a diode that produces light when current flows through it. The diode must be connected in the proper way to the other parts of the circuit to function. All diodes have one leg that is shorter than the other to indicate it is the (-) side.

LIGHT-UP AN LED:

Place a 3V coin battery between the legs of an LED with the long leg touching the positive (+) side of the battery and the short leg touching the negative (-) side.

This is a simple example of an **electrical circuit**. The coin battery is working as the **power source**, the bulb of the LED is functioning as the **electric resistor** and the metal legs of the LED are serving as the **conducting path** for the electrons to travel.

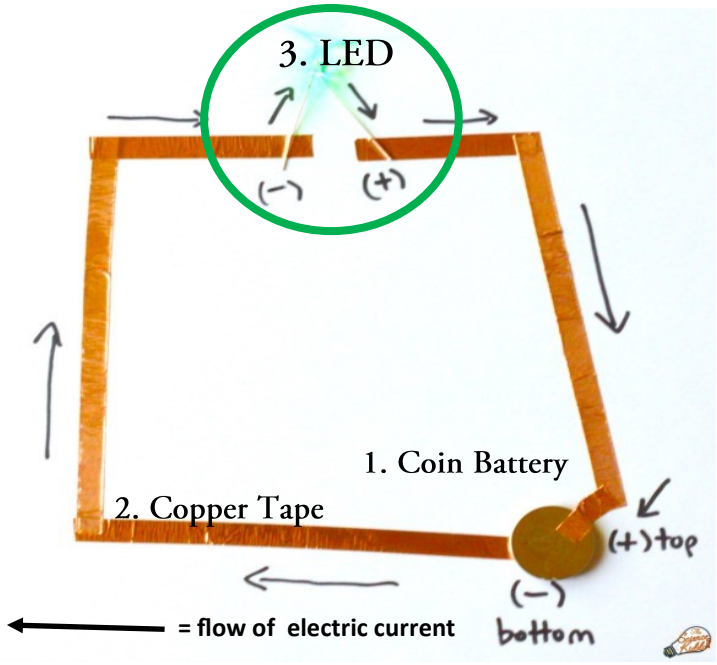


WHAT IS NEEDED TO MAKE AN ELECTRIC CIRCUIT?

ELECTRIC CIRCUIT: **a looping path through which electric current flows. It has three main parts.**

1. Power Source (Voltage): a source of electrical potential. For the activities in this bag, you will use a 3V coin battery.
2. Conducting Path: any material that creates a path for electrons to travel, which creates an electric current. For the activities in this bag, you will use copper foil tape.
3. Electrical Resistor: a device that uses electricity to work. For the activities in this bag, you will use light-emitting diodes (LED).

ELECTRIC CIRCUIT DIAGRAM



For any electrical circuit to function, all three components (power source, conducting path, and electrical resistor) must be connected in a continuous loop.