

Building Electric Circuits

- A circuit is a system that transfers energy using an energy source to fuel the system.
- All circuits require an energy source. This can include batteries or fuel.
- Circuits are used in many devices in your home, such as TVs, speakers, and toasters.

When a circuit is built correctly, these types of energy can be found:

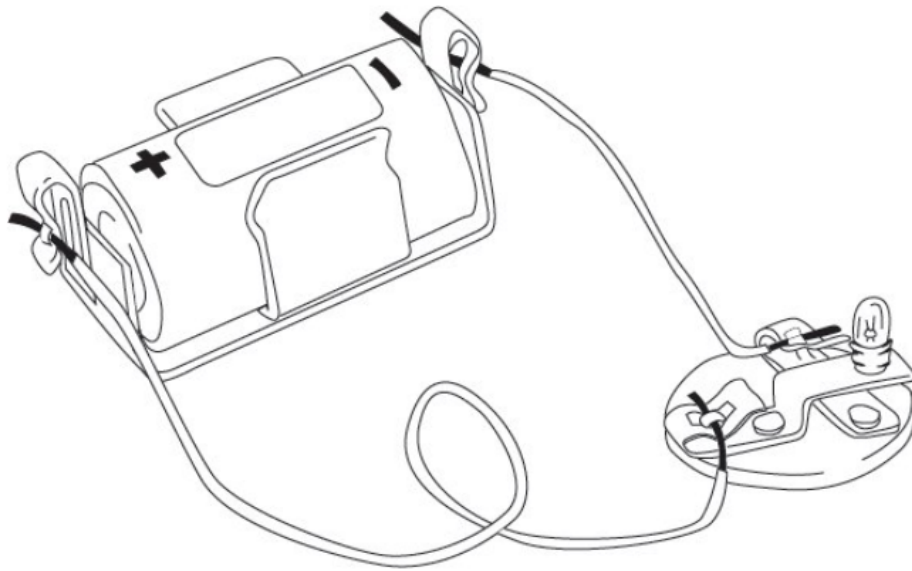
- 1) Chemical Energy from the batteries
- 2) Electrical Energy in the wires
- 3) Light and Heat Energy in the bulb

We will know that energy is being transferred through the system when the bulb emits light.

In order for this to happen, the circuit must be a closed circuit.

Closed circuits are circuits with complete paths and therefore a flow of current.

An open circuit is a circuit with incomplete paths, which means there is no flow of current.



The energy source in the circuit is the battery.

We see energy transfer from the battery to the wires, to the bulb, to the wires, and back to the battery.

We also see energy transformation in these places:

- Chemical energy in the battery → electrical energy which flows around the circuit
- Electrical energy → light energy within the bulb