



## Vocabulary: Circuit Builder



### Vocabulary

- Circuit – a path containing mobile charges.
- Closed circuit – a circuit that has a complete path for charge to flow.
- Conductor – a material that contains easily moveable charges.
- Current – the flow of electrical charge.
  - In a metals, current is the flow of negatively charged particles (electrons).
  - In a battery, your body, or other wet places, current is the flow of both positive and negative charges.
  - When current flows through a closed circuit, charges flow in a complete loop through the wire and battery.

Note: By convention, current is shown flowing from the positive terminal of a battery to the negative terminal. In a wire, current is the flow of electrons from the negative terminal to the positive terminal. The convention was established before the discovery of the electron. You can see both representations of current in the *Circuit Builder* Gizmo.

- Electron – a negatively charged particle that moves around the positively charged center of an atom.
  - In a metal, current is the flow of electrons.
- Fuse – a safety device that melts when current is too high, breaking a circuit.
- Insulator – a material that does not contain easily moveable charges.
- Open circuit – a circuit that has a break that prevents the flow of current.
- Parallel circuit – a circuit that contains two or more branches.
- Series circuit – a circuit where moving charges can only follow a single path.
- Short circuit – an unwanted electrical connection with very low resistance to current.
  - Short circuits can produce high levels of current and dangerously high temperatures.

