Science 9 – Introduction to Current and Circuits (Current Electricity Notes 1)

Static Electricity

- _____ that builds up on an object.
- This charge is '_____" in an uncontrolled way (when you rub your feet on the carpet and then shock someone, or like lightning).

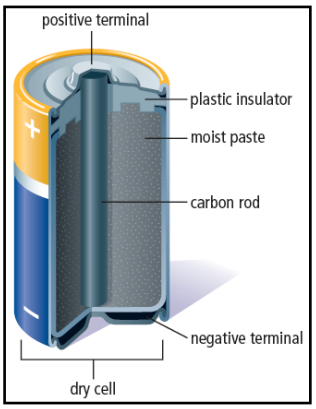
Current Electricity

- Charge is used in a _____ way – by allowing it to travel through a _____.
- A circuit is a _____ for _____ to flow through.
- The charges flow from an energy source such as a _____ to a device that uses the energy.

Parts of a Circuit

Source

- The energy source in a circuit provides _____.
- Wall plugs: electrical energy is delivered by _____.
- _____: energy from _____ _____ is turned into electrical energy
- A _____ is a combination of one or more cells.

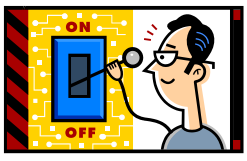


Load

- A load is a device that _____ electrical energy into _____.
  - A toaster converts electrical energy into _____ energy.
  - A motor converts electrical energy into _____ energy (the energy of movement).
  - Light bulb converts electrical energy into _____ energy and _____ energy.

Switch

- The switch controls the _____ of _____.
- When a switch is _____, the pathway is _____ so no charge flows through the circuit.
- When a switch is _____ the path is _____ and current does flow through the circuit.



Drawing Circuit Diagrams

- When we draw diagrams of circuits, the different parts are represented by the symbols in the table on the right.

Example 1

A simple circuit with a single cell, a switch and a light bulb.

PART OF CIRCUIT	SYMBOL
Conducting Wire	
Cell	
Two-Cell Battery	
Open Switch	
Closed Switch	
Light Bulb (lamp)	
Ammeter	
Voltmeter	
Resistor	

Series and Parallel Circuits

In circuits, it is possible to have 2 different pathways:

Series: current must travel through _____ in circuit	**Parallel:** current _____ and some will go through each device

Example 2

*A circuit consisting of a battery of **2 cells** in series, an open **switch**, and **2 lamps** in parallel.*