SNC 1D

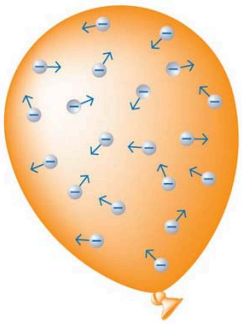
12.1 Current Electricity & 12.2 Electric Currents

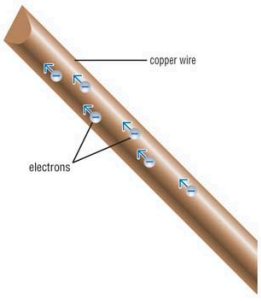
Learning Goals:

- ❑ I can define the following terms and state how they apply to common devices, such as a flashlight: current electricity, source, electric circuit, load, switch
- ❑ You will be able to apply the above terms to common devices such as the flashlight
- ❑ I can state examples of good conductors

Electron Flow

- **Static Electricity:** an imbalance of electric charge on an object, sometimes resulting in an electric discharge





- **Current Electricity** is the _____ through a _____.

When we have an electric discharge during static electricity (shocks, lightning), it is:

- An _____ and _____ path
- Occurs for a very _____ period of time

The flow of electrons in current electricity is:

- _____
- moving for much _____
- directed to power devices

Electrons _____ through a conductor. Examples of good conductors include:

*Human skin is a fair conductor

Good Conductors	
Silver	Copper
Gold	Aluminum
Magnesium	Tungsten
Nickel	Mercury
Platinum	Iron

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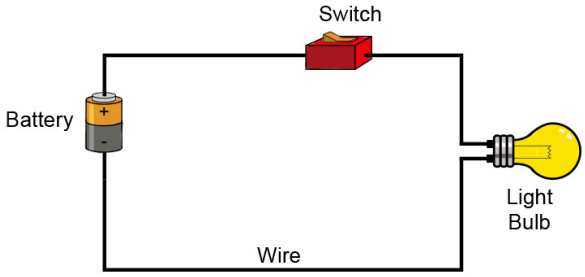
- In order to make electrons flow, we need _____of electrical energy, such as a _____ or a _____.
- If you are missing this source, then electrons will _____ and the object will not work
- Ex: dead batteries, power outages

Electric Circuit

- Electronic devices require a _____ in order to function
- An **electric circuit** is a _____ for electrons to flow.
- A simple electric circuit includes:
  1. _____ (battery)
  2. _____ (light bulb)
  3. _____
  4. _____ (optional on/off switch)



1. **Source:** can be as _____ and _____ as a battery, or as _____ as a generating station

2. **Load**: a device that _____electrical energy into other usable forms of energy.
   - Examples of this include: _____.

3. **Conducting wires:** _____all the parts of an electric circuit together.
   - Provide a pathway for electrons to flow between component
   - Typically made of _____

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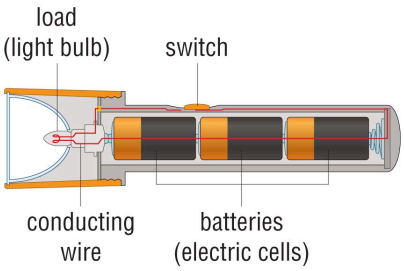
4. **Switch:** controls the flow of electrons in an electric circuit by _____ the circuit.
   - ❖ When a switch is *on* then the circuit is _____
   - ❖ When a switch is *off*, the circuit is _____ and the path for electron flow is _____
   - ❖ When the pathway is broken or incomplete, there is no _____



SUMMARY

- ❖ Static electricity involves the movement of electrons in an _____ way
- ❖ Current electricity involves the _____flow of electrons through a _____
- ❖ Current electricity requires a _____ of electrical energy to create a _____
- ❖ An electric circuit is a _____ that allows electrons to flow
- ❖ An electric circuit is made up of an energy source, conducting wires, a load and a switch

Homework

- ❑ Watch consolidation video > Physics > Module 8
- ❑ Read 12.1 p.507-508, Complete # 1-6
- ❑ Read 12.2 p.509-510, Complete #1-6