**NOTES 8.2: Electric Current**

**What is Current Electricity?**

The flow of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_called electrons in a complete circuit.

**Electric Circuit (Text page 281)**

Electric Circuit: A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ pathway that allows \_\_\_\_\_\_\_\_\_\_\_ to flow

****

* The person represents an \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in a circuit
* Stairs are the battery – the source of potential energy (\_\_\_\_\_\_\_\_\_\_ of stairs is the voltage)
* Potential energy lost only when person slides down – like when electrical energy is \_\_\_\_\_\_\_\_\_\_\_ to other forms of energy by a \_\_\_\_\_\_\_\_\_\_\_ i.e. light bulb uses electricity to produce light and heat
* At bottom electron/person has \_\_\_\_\_ potential energy remaining

**Four Basic Components in a Circuit**

1. **Source:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
2. **Conductor:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
3. **Load:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
4. **Switch:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Why does current flow through a circuit?**

Just like how water would flow from one section of a jar to another until both sides are even, 

In a battery, electrons will tend to flow from one side (the **negative** terminal) to the other side (the **positive** terminal) until both sides are even (**neutral**).

**Circuit Diagrams**



Draw the ***schematic diagram*** next to the circuit shown:

1. 
2. 
3. -
4.  **COMPLETE HANDOUT 3-15 NOW!!!!**

**What is CURRENT?**

Electric current is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

The units used for *current* are:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Measured using an \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

|  |  |
| --- | --- |
| **CONVENTIONAL CURRENT** | **ELECTRON FLOW** |
|  |  |



**On your own:** Draw arrows and labels to indicate the direction of ***conventional current*** and ***electron flow***. **With your partner:** Agree on the correct answers.

|  |  |
| --- | --- |
|  |  |
|  |  |

**Key Questions:**

1. What is the difference between ***potential*** and ***kinetic*** energy?
2. What is the difference between ***static*** and ***current*** electricity?
3. What is the difference between ***conventional current*** and ***electron flow***?
4. Use the charge of electrons to explain why electrons flow from negative to positive.
5. What is the definition of ***electric current***?
6. What unit is current measured in?

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