Science 9 Physics Notes Lesson 3 Name:

*Current*

Objectives: By the end of the lesson you should be able to:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_­­­­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Remember…..Moving Electrons

* Because we can \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ electrons we can get them to move
* Because we can move them we can get them to do \_\_\_\_\_\_\_\_\_\_ for us!!

Moving Electrons

* To make electrons move we need:
  + ***\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*** *(i.e. a cell)*
  + *Something to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_them (i.e. positive/negative terminals)*
  + *Somewhere for them to move to (i.e \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_)*

***THIS IS AN ELECTRIC CIRCUIT!***

The Two Variables

* When electrons move through a circuit there are two things to keep in mind:
  + ***How \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ electrons are there?***
  + ***How much \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ do they have?***

The Number of Electrons

* The amount of electrons flowing through a circuit is called the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Current in measured in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**(A)** by an \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* 1 amp = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

***Remember a 1C = 6.24 X1018 electrons***

Circuit Flow

Electron Flow:

* Electrons are **repelled** by **negative** end of cell
* Electrons are **attracted** by **positive** end of cell
* Electrons move from **\_\_\_\_\_\_\_\_\_\_** to **positive**

Conventional Current:

* Flows from **\_\_\_\_\_\_\_\_\_\_\_\_\_** to **negative**
* Doesn’t actually happen!!!

Drawing Circuits

* Always in a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_shape
* Must use a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Lines represent \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Use appropriate \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to represent parts of the circuit
* All circuits have: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_

Circuit Symbols

Cell Light bulb Wires

Ammeter Voltmeter Resistor

Fuse Open Switch Closed Switch