**Closed Circuits and Circuit Diagrams**

*\*Use page 221 to complete the notes\**

**Closed Circuits**

* When a source, load and conductor are connected in a way that allows current to flow it is called an **electrical circuit** 
  + For current to flow the circuit must form a **closed** loop

**Short Circuit:** a circuit with a **resistance** that is too low, making the current so high that it is dangerous

**Draw a simple closed circuit and include an arrow to show the flow of electrons**

**Drawing Circuit Diagrams**

Complete the table below using pg. 223 and 394 of the BC Science 9 Connections textbook

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Component** | | **Symbol** | **Quantity** | **Unit of Measurement** |
| **Source** | **Cell** |  | Electrical Potential Difference (V) | Volt (V) |
| **Battery** |  |
| **Conducting Wire** | |  | Current (I) | Ampere (A) |
| **Load** | |  | Resistance (R) | Ohm (Ω) |
| **Switch** | **Open** |  |  |  |
| **Closed** |  |
| **Ammeter** | |  |  | Measures amperes |
| **Voltmeter** | |  |  | Measures volts |

**TASK**

Complete the Activity on page 223 of the textbook

1. **A circuit with a cell that runs a buzzer without a switch**

**2) A circuit with a battery in which an open switch has turned off two light bulbs**

**3) A circuit with a battery, a closed switch, two light bulbs and a clock**