**Basic Circuits LAB Activity**

**Name** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Class \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Objectives**:

Students will be able to….

• know the difference between a closed circuit and an open circuit.

• construct simple to more complicated series and parallel circuits

• explain the difference between a series and parallel circuit.

• use symbols to draw the different circuits they created.

**Vocabulary: Materials per group of students**

• Circuit **\*** Batteries

• Conductor **\*** Bulbs

• Current **\*** Sockets

• Electrons **\*** Switches

• Voltage **\*** Pieces of Insulated wire

• Series Circuit **\*** Lab Sheet

• Parallel Circuit **\*** Nail

• Resistance **\*** Aluminum Foil

**Symbols to use when you draw your circuits on the Lab Table:**

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**NAME \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Class \_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_**

**Follow the lab sheet instructions below: (This will be for a LAB Grade)**

|  |  |
| --- | --- |
| 1. Using one bulb, batteries, and wire, make one light turn on.

Draw:Now connect using aluminum foil, nail, wooden pencil/stick, or other materials. Which will allow the circuit to work? | 1. Now draw using the symbols above

What type of circuit is this? |
| 1. Now use 2 bulbs instead of one

DrawUnscrew a bulb, what happens? | 1. Now draw using the symbols above
 |
| 1. Is there any change with the bulb’s brightness when you used 2 instead of one?
 | 1. What do you think will happen if you added another bulb?
 |
| 1. Add a switch to your circuit with two bulbs

Draw**Follow the lab sheet instructions below:** | 1. Explain what makes this a closed circuit.

What would make this an open circuit? |
| 1. Using bulbs, wire, and batteries, create a parallel circuit.

Draw | **10.** Unscrew one bulb, what happens?Draw |
| **11**. Add a switch, does adding a switch make a difference? | **12**. What do you think will happen if you added more lights? |

**13**. Look at the diagram below and **label all the parts** AND …

 **tell if each is a series or parallel** circuit. ( Load, Circuit, Power Source )

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