**Circuit Lab 1**

Our question is:

How does the **number of lightbulbs** impact the **brightness of the bulbs?**

The variable we are changing (independent variable):\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Variables that need to be controlled *(List as many as necessary)*:



We will measure (dependent variable):\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Tools we need to use *(List as many as necessary)*:

* One battery pack with batteries
* Four lightbulbs in holders
* Extra wire

Our Prediction:

As you increase the number of lightbulbs, the brightness will: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Data**

*In the first column, list the three variations of the INDEPENDENT VARIABLE. Record your observations of the circuit in the second column.*

|  |  |
| --- | --- |
| Number of Bulbs | Observations: Which circuit was **BRIGHTEST**? **DIMMEST**? |
| One bulb |  |
| Two bulbs |  |
| Three bulbs |  |

**Conclusions:**

What happens when you add more lightbulbs to a series circuit?

What did you see in your lab?

Why do you think this happens?