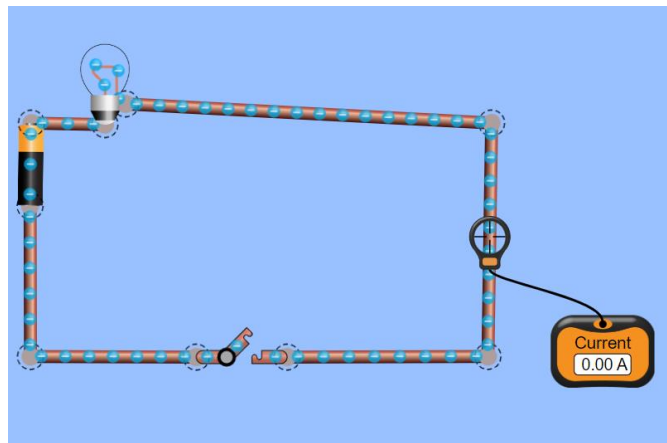


Investigating Electric Current

Name: _____ Date: _____

Set Up

1. **Go to the PhET Simulation:** <https://bit.ly/2N6tmg1>
2. **Choose:** LAB
3. Create the following circuit. Leave the switch open.
4. Set the battery voltage to 30 V.



Investigation

1. Close the switch. Record the current.
2. The meter must be in _____ (parallel / series) with the circuit.
3. What is the current? _____
4. Move the ammeter around in the circuit. What is the current in the various spots of the circuit? Did it change?
5. Open the switch. Add a second bulb in the top row in series with the other one. Close the switch.
 - a) What happened to the brightness of the bulbs?
 - b) What is the current in the circuit now? _____

6. Open the switch. Add a third bulb in the top row in series with the other two. Close the switch.

a) What happened to the brightness of the bulbs?

b) What is the current in the circuit now? _____

7. Predict what would happen if you added a fourth bulb in series.

a) Predict what will happen to the brightness of the bulbs?

b) What do you think the current will be? _____

8. Open the switch. Add the fourth bulb in the top row in series with the other three. Close the switch.

a) What happened to the brightness of the bulbs?

b) What is the current in the circuit now? _____

c) Was your prediction correct?