Scientist: Per: Date:

Circuit Simulation phet.colorado.edu 🡪 Circuit Construction Kit: (DC) HTML5

1. Go to the “LAB” tab. Play around with the simulation and see what kind of circuits you can build.
2. Write at least 1 thing that you discovered:

1. Setup your circuit to look like this:
2. See what happens to the **current** when you increase or decrease the resistance, and the voltage. Change them ONE at a time, and record them on the table below. (Use whole numbers!)

|  |  |  |
| --- | --- | --- |
| Voltage -V(Volts) | Resistance -R(Ohms) | Current -I(Amps) |
| 9 Volts | 10 Ohms | .9 Amps |
| 9 Volts |  |  |
| 9 Volts |  |  |
| 9 Volts |  |  |
| 9 Volts |  |  |
| 9 Volts |  |  |

|  |  |  |
| --- | --- | --- |
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| 9 Volts | 10 Ohms | .9 Amps |
|  | 10 Ohms |  |
|  | 10 Ohms |  |
|  | 10 Ohms |  |
|  | 10 Ohms |  |
|  | 10 Ohms |  |

If you *increase* the Voltage, what happens to the Current?

If you *increase* the Resistance, what happens to the Current?

On the back, graph Voltage and Resistance Vs. Current

Circle the equation that makes the most sense:

I = VR I = $\frac{V}{R}$ I = $\frac{R}{V}$

Build 1-3 “crazy circuits” (You can use multiple batteries, lights or any items from the grab bag) Draw your circuits below.

 **Resistance vs. Current Voltage vs. Current**



Voltage

Current

Resistance

 Resitance