**Vocabulary: Circuits**



**Vocabulary**

* Ammeter – a device used to measure current.
* Circuit – a path containing mobile charges.
* Current – the flow of electrical charge.
	+ In a metal wire, current is the flow of negatively charged particles (electrons).
	+ In circuit diagrams and in the Gizmo, current is shown as the flow of *positive charges* from one end of the wire to the other. The reason for this is historical artifact dating back to Benjamin Franklin.
	+ Current is measured in *amperes* (A).
	+ In equations, the symbol for current is *I*.
* Electron – a negatively charged particle that moves around the nucleus.
	+ The mass of an electron is less than one thousandth of the mass of a proton.
* Ohmmeter – a device used to measure resistance.
	+ An ohmmeter can only work when the battery is removed from the circuit. (The ohmmeter has its own battery that it uses to pass a small current through the circuit.)
* Ohm’s law – an equation that relates voltage (*V*), resistance (*R*), and current (*I*):

*V* = *IR*

* Parallel circuit – a circuit that contains two or more branches.
* Resistance – a material’s opposition to the flow of charge.
	+ Resistance is measured in *ohms* (Ω).
	+ In equations, the symbol for resistance is *R*.
* Resistor – a device that slows the flow of current.
* Series circuit – a circuit in which moving charges can only follow a single path.
* Voltage – a measure of the electrostatic potential energy in a circuit.
	+ Just as pressure causes water to flow through a pipe, voltage can be thought of as “electrical pressure” that causes electrical charge to flow through a circuit.
	+ Voltage is measured in *volts* (V).
	+ In equations, the symbol for voltage is *V*.