* Electricity will always follow the path of least resistance
* = ground
* Watts = Volts \* Amps
* Volt = water pressure, amp = amt of water
* AC = alternating current: flow of electric charge periodically reverses direction. standard outlets.
* DC = direct current: flow of electric charge is only in one direction.
* Resistor: reduces current flow and at the same time lower voltage levels w/in circuits (Measured in Ohms)
* 3 bands representing number, 4th represents quality/multiplier
* Ohm’s Law: states that the voltage (V) across a resistor is proportional to the current (I), where the constant of proportionality is the resistance (R)
* EX: if a 300 ohm resistor is attached across the terminals of a 12 volt battery, then a current of 12/300 = 0.04 amperes flows thru that resistor
* Potentiometer (pot) – variable resistor
* Anode: electrode thru which positive electric charge flows into a polarized electrical device
* Anode Current into Device
* Anode is usually the positive pole (+)
* Cathode: electrode from which a conventional current leaves a polarized electrical device
* Capacitor: used to store energy (measured in farads)
* Common types: ceramic or electrolytic
* Electrolytic have polarity, ceramic do not
* Diode: only allows an electric current to pass in one direction while blocking the current from flowing in the wrong direction
* LED: Light Emitting Diode – two-lead semiconductor light source, has polarity
* Long leg anode (+)
* Short leg cathode (-) usually has a flat piece cut out on it
* Relay: electrically operated switch, many use electromagnets to mechanically operate a switch, two pieces of metal that touch when electrified and send a high-amperage current to power something like a lightbulb
* Transistor: semiconductor device used to amplify and switch electronic signals and electrical power; two main types
* NPN: add a positive charge to make a connection between 2 negative signals
* PNP: add a negative charge to make a connection between 2 positive signals