Project # 2 (pg. 17) Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Build the circuit and draw a complete schematic. Include Battery voltage, voltage drop across motor, and electron flow.

In a brief explanation, how does a typical electric motor work? Use the following terms in your explanation: Coil, Magnet, Loops, Magnetic field.

In this project, you are converting electrical energy into \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_energy!

(Remember, energy isn’t created or destroyed, it only changes form….)

In a brief explanation, how are an electric motor and a generator related? State one application for each.

Project #5 (pg. 18)

Build the circuit and draw a complete schematic. Label all components, voltages, voltage drops, and electron flow.

The lamp and motor are wired in a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_circuit. What happens to the total voltage in the circuit?

Why does the motor spin slower when the fan blades are on the motor?

Current (amps) is measured using a multimeter that is wired INTO the circuit. (like it was a component itself). Try to get a current measurement (amps) in a couple of different places within the circuit. Write down your measurements, are they all the same?

Project #6 (pg 18)

Build and draw the schematic. Again, label all voltages, drops, electron flow, AND try to obtain current measurements in the ‘series’ and ‘parallel’ portions of this circuit.

Describe what happens to the voltage from the batteries in this parallel circuit. (This would explain why the motor spins faster in this circuit compared to the previous circuit.)

What did you notice about the current (amps) measurements in the parallel circuit?

How does this compare to the current measurements in the series circuit (project #5)?