

Student Sheet #2: Introduction to Circuits

Part 1: Circuit Brainstorm

Question: What do you think of when you hear the word “circuit?”

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Part 2: Circuit Diagram

Directions: Draw a **labeled** diagram in the box below showing your completed circuit that was able to light the bulb.

Part 3: Computer Simulation – “Circuit Construction Kit” (PhET) Directions: For each of the following, use the PhET simulation to create and draw each of the circuits indicated.

Directions: Draw the simple circuit you created using the PhET program. Make sure to include and **label** the following parts: 1 battery, 1 light bulb, and any wires you need.

Part 3 continued. . .

Directions: Draw the simple **series** circuit you created using the PhET program. Make sure to include and **label** the following: 1 battery, 2 light bulbs, and any wires you need.

Use the “voltmeter” in the tools section to find out the voltage across each light bulb:_____

Directions: Draw the simple **parallel** circuit you created using the PhET program. Make sure to include and **label** the following: 1 battery, 2 light bulbs, and any wires you need.

Use the “voltmeter” in the tools section to find out the voltage across each light bulb:_____

Directions: Experiment! Make and draw a new circuit in which you add resistors, more light bulbs, increase the number of batteries , change the materials etc. Have fun!