Electricity Mini Labs

Name: _____

The first two parts of this lab use a virtual circuit tool to create and test different circuit designs.

[Click Here for the PHET Circuit Construction Kit]

Part 1: Building Circuits

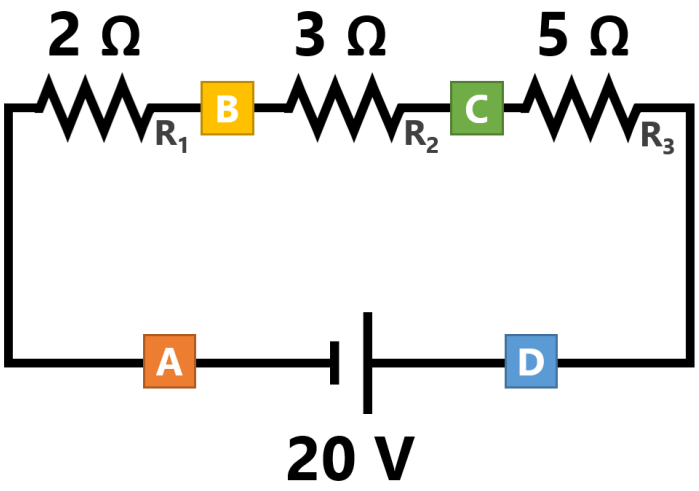
For each challenge, build a working circuit in the PHET Circuit Construction Kit and screenshot

Three lightbulbs each lit up with a different brightness *Hint: you may need to adjust resistances in the bulbs by clicking on them*	
Three lightbulbs and a switch that turns off one but leaves the others on	
Design a piece of art that involves the lightbulbs in a clever way. *Lightbulbs must light up*	

Part 2: Measuring Circuits

Build each of the circuits diagrammed below in the PHET circuit builder and use the ammeter and voltmeter to measure the properties in the tables on the right.

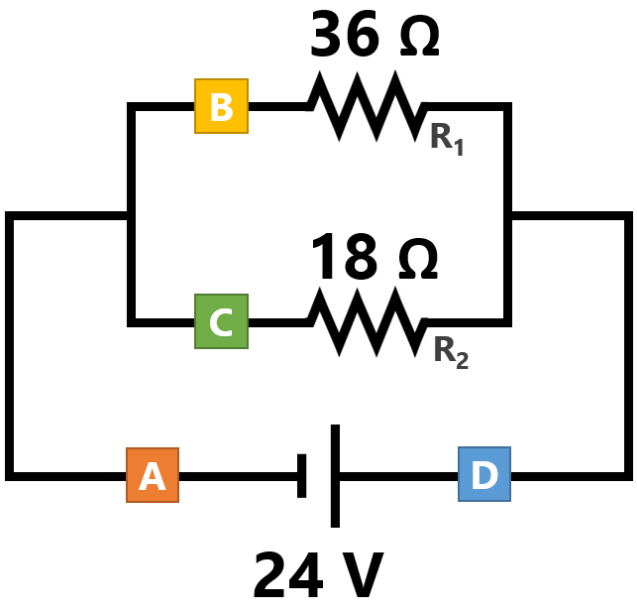
Circuit 1



Measure the voltage using the Voltmeter	
Voltage across R_1	
Voltage across R_2	
Voltage across R_3	

Measure the current using the Ammeter	
Current at point A	
Current at point B	
Current at point C	
Current at point D	

Circuit 2



Measure the voltage using the Voltmeter	
Voltage across R_1	
Voltage across R_2	

Measure the current using the Ammeter	
Current at point A	
Current at point B	
Current at point C	
Current at point D	

Part 3: Electrical Scavenger Hunt

Find three different examples or items around your house that have electrical properties printed on them. (for example, most chargers or appliances have power/voltage/current ratings). Take pictures of these items showing the label and the object itself and include in the table below
