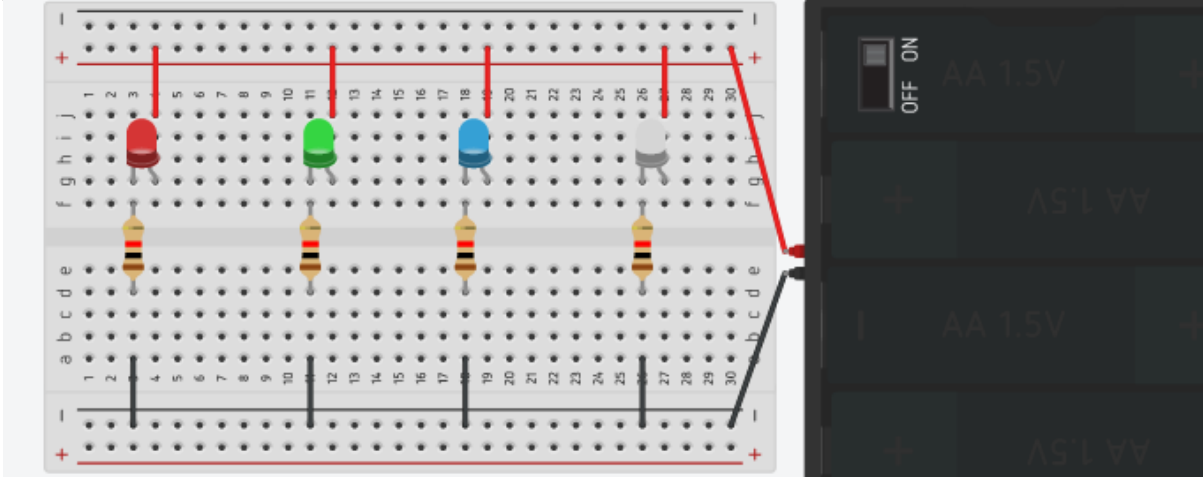


Name: _____

Date: _____

*Instructions: Below are diagrams you can recreate using TinkerCAD – Circuits. To receive full points, you must show Mr. Figueroa your **working simulation** of each design, and you must answer with your **observations** in your notebook. Make sure to also sketch the design in your notebooks and label the circuit elements with the names you see in the **Bill of Materials**. If you are finished early, please tell Mr. Figueroa and he will assign a secret circuit to you. If you finish the secret circuit, you will get extra points!*

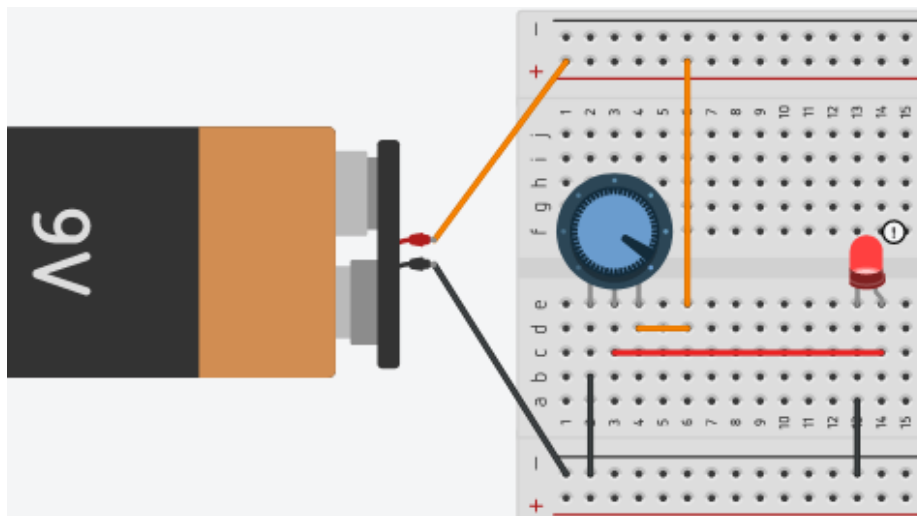
Design #1 - Bill of Materials: Resistors x4, Battery pack x1, LED x4.



Notebook Question #1 – What do you see when you turn the battery packs *switch* on and off?

Notebook Question #2 – What happens when you decrease the resistor value from 1 k-Ohm to 10 Ohm?

Design #2 - Bill of Materials: Potentiometer x1, Batteries x1, LED x1.



Notebook Question #3 – Why are we connecting the LED to the middle pin on the *potentiometer*?

Notebook Question #4 – When you turn the *potentiometer* all the way to its maximum *clockwise* position when happens to your LED? What does the “!” symbol indicate?