Names of group members _____ _____ _____
(2-3 people per group)

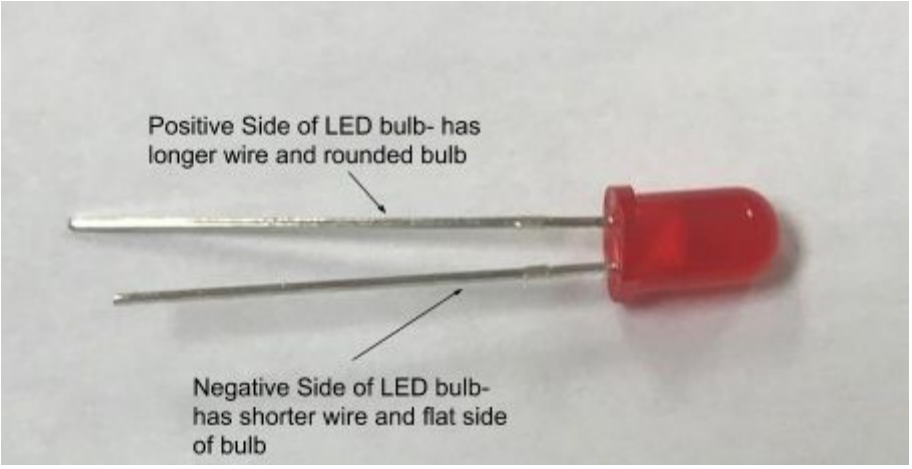
Paper Circuits: Engineering Assignment

Objective: Using your knowledge of simple and parallel circuits, create a card or picture with a light-up LED component that can be turned on and off with a switch.

Materials:
Copper conductive tape, 1-2 LED bulbs, one CR2032 button battery, construction paper, tape, glue, markers, brads, paperclips

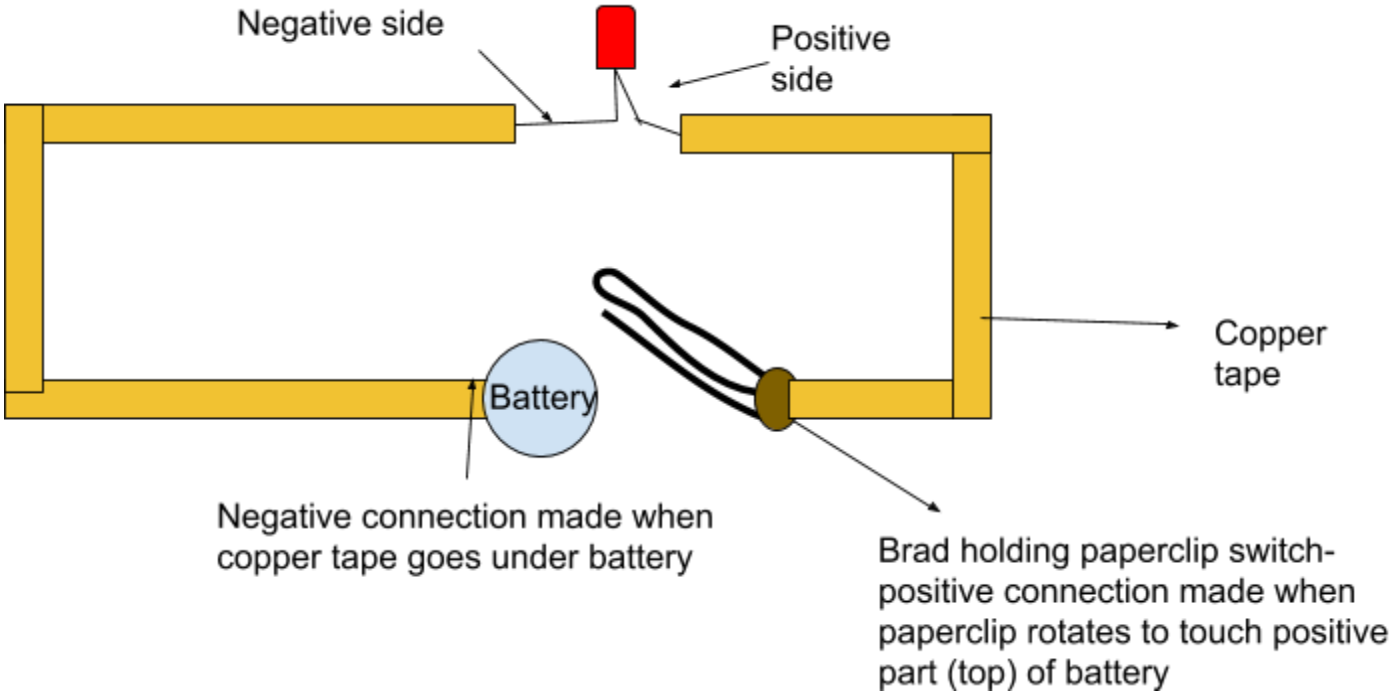
Instructions:
You will need to plan and draw a picture or card with a light up component. You will need to make a simple circuit with one light or a parallel circuit with two lights.

As you plan your circuit, please keep in mind that the LED bulb will only work in one direction because it only allows electricity to flow in one direction. Make sure the positive part of the bulb connects to the positive part of the battery.



When making bends in the copper tape you can fold it back on itself or tear pieces and overlap them.

Sample Simple Circuit Drawing:



Draw your plans on the following sheet and gain approval from your teacher.

✓	Circuit checklist
	Do you have a connection with the positive and negative parts of the battery?
	Have you marked where the positive and negative sides of the LED go?
	Do you have a switch (a way to turn your circuit on and off?)
	If using two LED's do you have a PARALLEL circuit?

Our Plan (front/visible parts)

Teacher initials

Our circuit plan:

Teacher initials

Now that your plan is approved, use a pencil to draw the approved circuit design in pencil on the actual paper where you will build your circuit. Then, you can simply put the copper tape, switch, battery, and LED bulb directly on your paper. (See example below)