

Name: _____

CHRISTMAS LIGHTS

Materials:

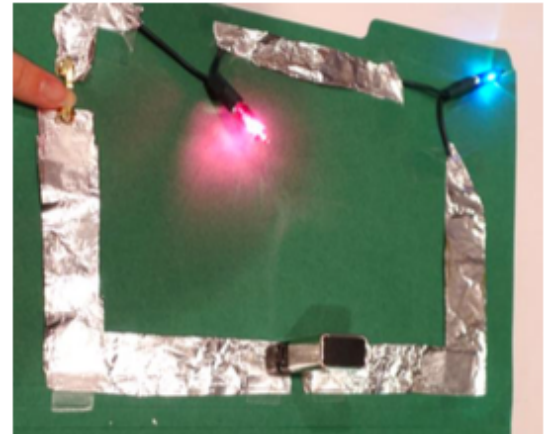
Green construction paper	3-4 holiday lights
3 brass fasteners	aluminum foil
9 volt battery	tape, scissors, markers

Procedures:

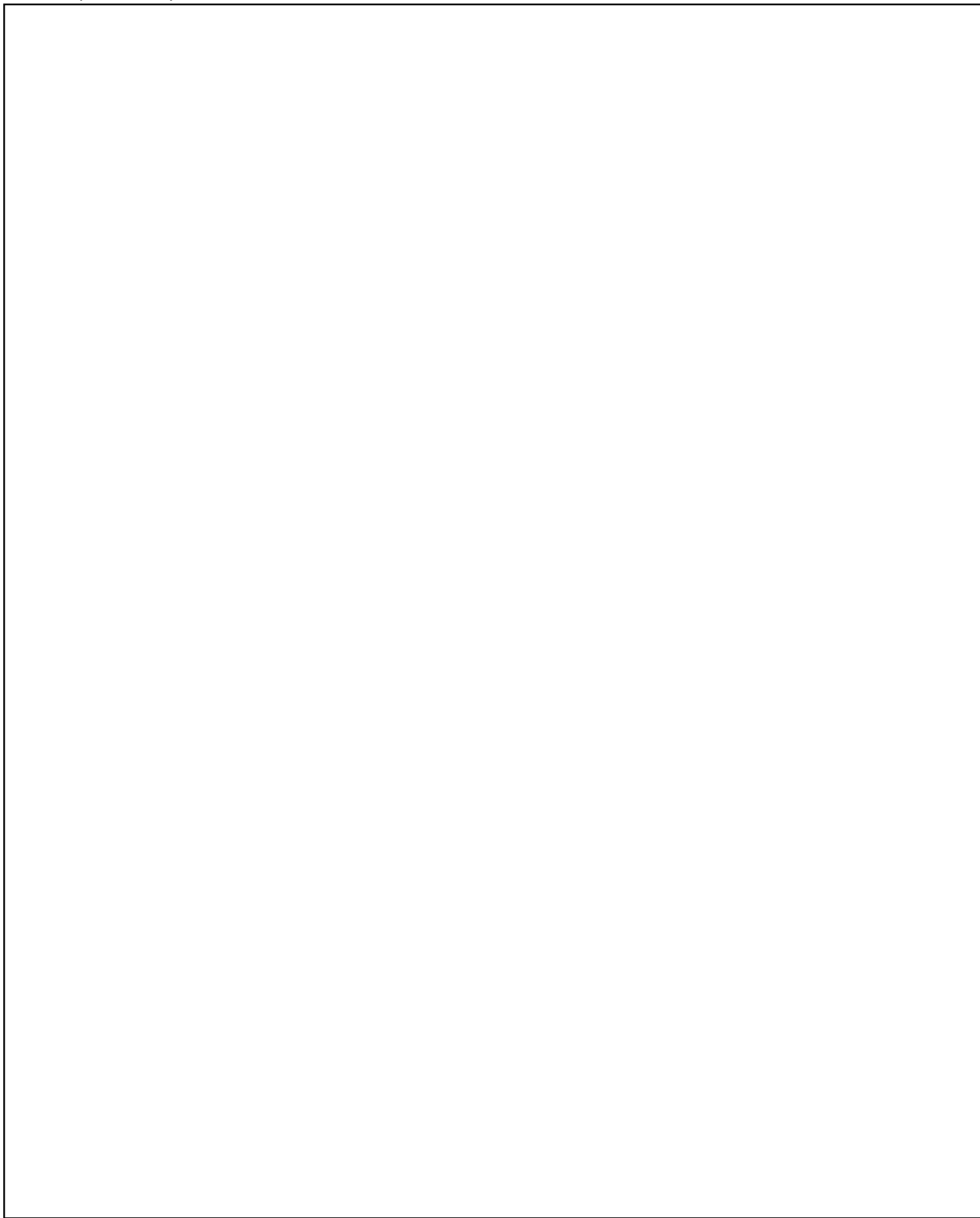
1. Draw an outline of a Christmas tree on your green paper.
2. Construct a series of circuits on the construction paper that will decorate and light up your tree. Your circuit will have a beginning that connects to one node of the battery followed by a series of connections of foil and lights that connect back to the other node of the battery. You will also create a switch to turn off/on your lights. This will create a closed circuit and when the battery is in place and the switch is turned on, your lights will light up.
3. When constructing your circuits, you will need to keep the following requirements in mind:
 - Leave a 1/4 inch space in aluminum foil for the battery.
 - Leave at least a one-inch gap in aluminum foil when placing a light.
 - When taping down the aluminum foil, make sure the metal is always touching metal.
 - Use three brass fasteners for a switch – two push down through folder with a 1-inch gap between them, one pushes up through the middle of the two and opens to act as a switch that can be turned on and off. (see photo)
 - You may only use 3-5 lights
 - You must use at least 5 separate pieces of foil.
4. You may decorate your tree with additional foil or by coloring.

Clean up:

1. You may keep your paper, brass fasteners and the foil.
2. You will need to return the lights and battery to your teacher.



Draw a picture of your circuit tree in the box below.

A large, empty rectangular box with a thin black border, intended for drawing a circuit tree. The box occupies the majority of the page below the instruction text.