LAB: **Light that Bulb**

**Purpose:** To study various arrangements of a battery and bulbs and the effects of those arrangements on bulb brightness

**Required Equipment:** size-D dry cell (battery)

bare copper wire

3 flashlight bulbs

3 bulb holders

**Discussion**: A dry cell (commonly called a battery) is a source of electric energy. Many arrangements are possible to get this energy from dry cells to flashlight bulbs. In this activity, you will test these arrangements to see which makes the bulbs brightest.

**Procedure**:

Step 1: Arrange one bulb (without a holder), one battery, and wire in as many ways as you can to make the bulb emit light.

Sketch each of your arrangements, including failures as well as successes. Label the sketches of the successes.

1. Describe the similarities among your successful trials.

Step 2: Use a bulb in a bulb holder (instead of a bare bulb), one battery, and wire. Arrange these in as many ways as you can to make the bulb light.

2. What two parts of the bulb does the holder make contact with?

Step 3: Using one battery, light all three bulbs.

Sketch each of your arrangements, and note the ones that work.