

In this tutorial, we construct a model for electric current that we can use to predict and explain the behavior of simple electric circuits.

**I. Complete circuits**

- A. Obtain a battery, a light bulb, and a single piece of wire. Connect these in a variety of ways. Sketch each arrangement below.

Arrangements that <i>do</i> light the bulb	Arrangements that <i>do not</i> light the bulb

You should have found at least four different arrangements that light the bulb. How are these arrangements similar? How do they differ from arrangements in which the bulb does not light?  
*two contacts w/ lightbulb - one on bottom, one on side of bulb - use both terminals of battery*

State the requirements that must be met in order for the bulb to light.

*see above*

- B. A student has briefly connected a wire across the terminals of a battery until the wire feels warm. The student finds that the wire seems to be equally warm at points 1, 2, and 3.

Based on this observation, what might you conclude is happening in the wire at one place compared to another?

*equal amount of heat energy being created & released*

