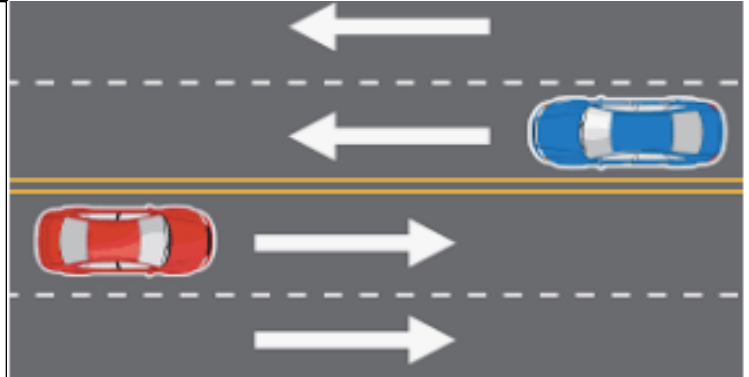
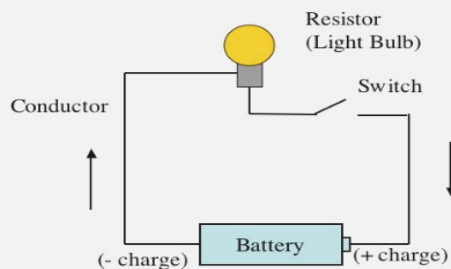


Circuits 101

In its simplest form, a circuit is like a two-lane road. Traffic in one lane goes north and the other lane goes south. If a car tries to go north in the southbound lane, CRASH!



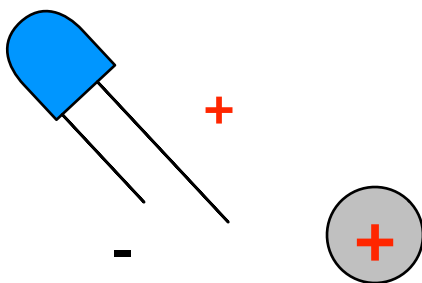
Basic Electrical Circuit (Drawing)



With circuits, you have energy running with a positive charge (+) or a negative charge (-). As long as + goes to + and - goes to -, everything works.

On an LED the long prong needs to be connected with + charge and the short prong needs to be connect with - charge.

On a cell battery, there is a + side and a - side. The + side is marked with the plus sign. The other side is -.

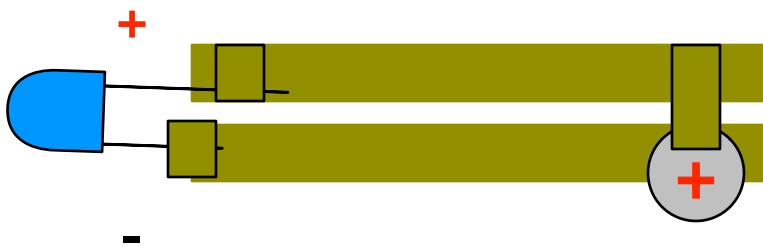


Stick the battery between the prongs so that the + prong is touching the + side of the batter and the - prong is touching the - side of the battery.

The LED should light up.

We can also use things like wire, copper tape, and aluminum foil to move electricity between the battery and LED. Items that are good at moving electricity are described as conductive. Many metals are conductive.

Follow the diagram below and use copper tape to attach an LED and a battery.



If we wanted light that stay on forever, that would be all we need to do. However, we generally want lights that can turn on and off. To do this, we need to add a switch.

To make a switch we make a gap in the line of copper tape that connects the positive charges and create a flap we can connect and disconnect at will.

