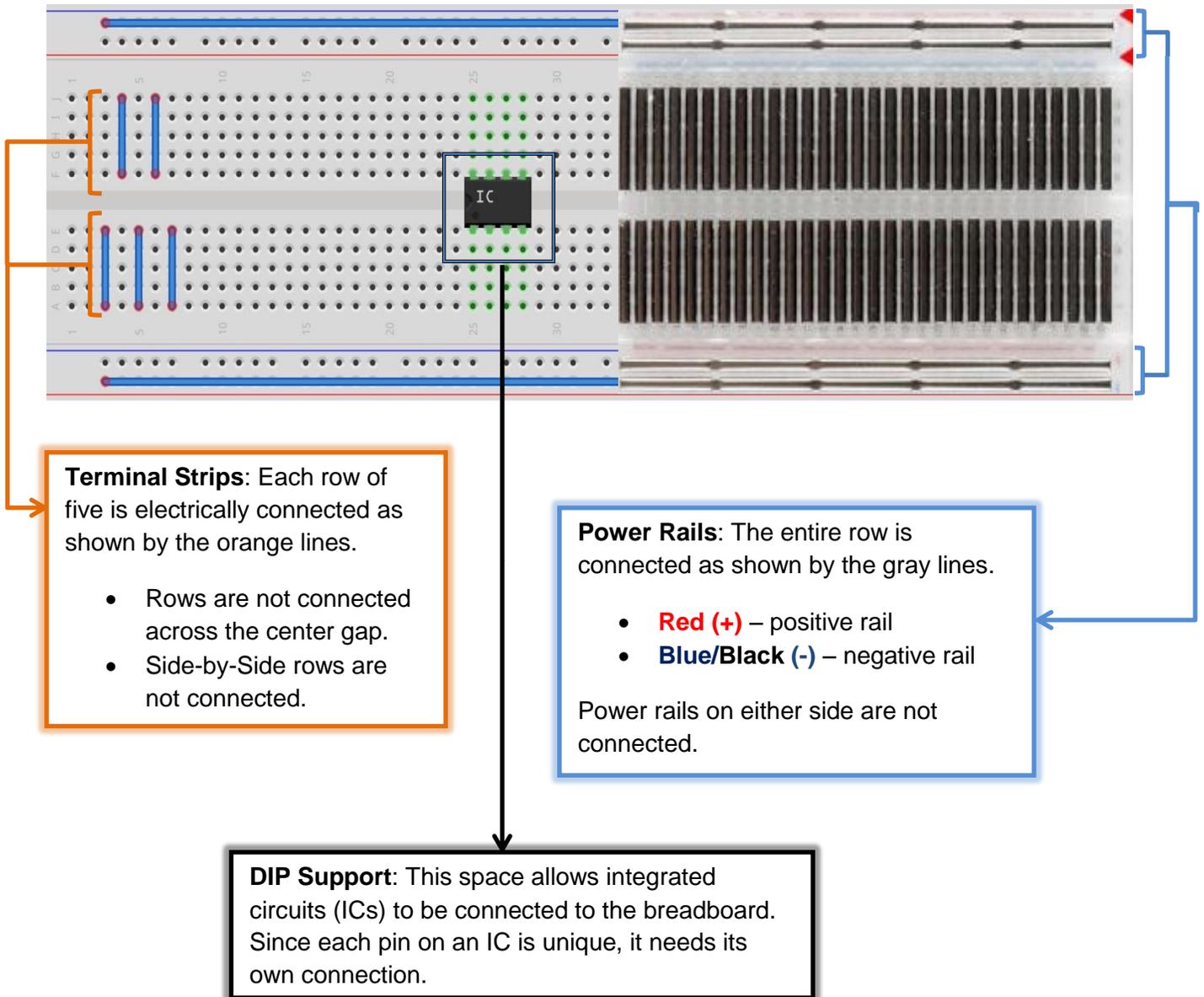


# Breadboards

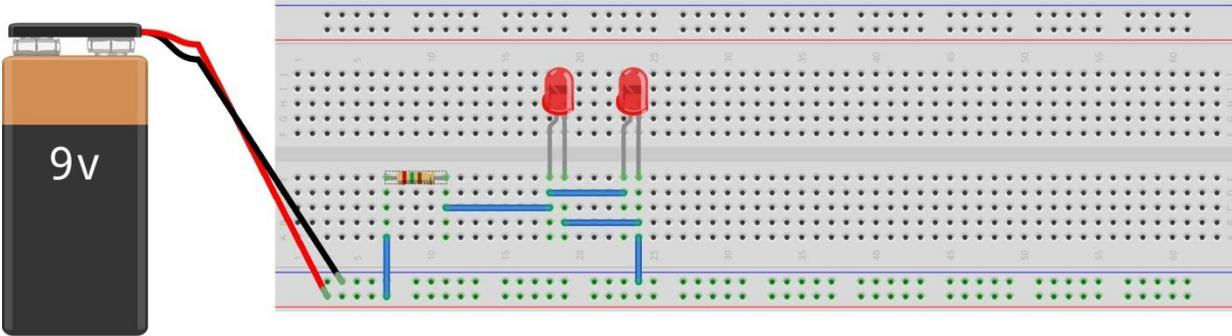
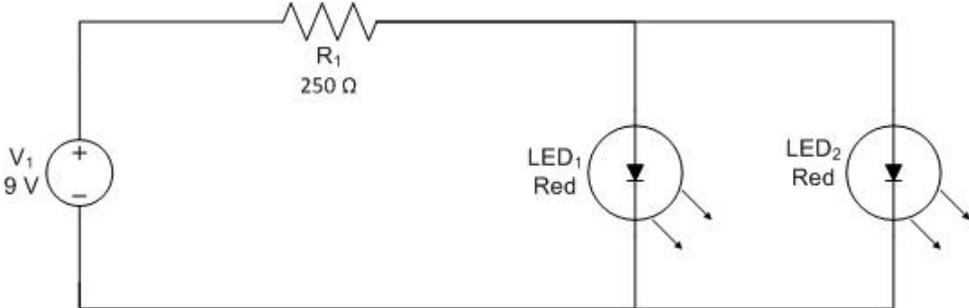
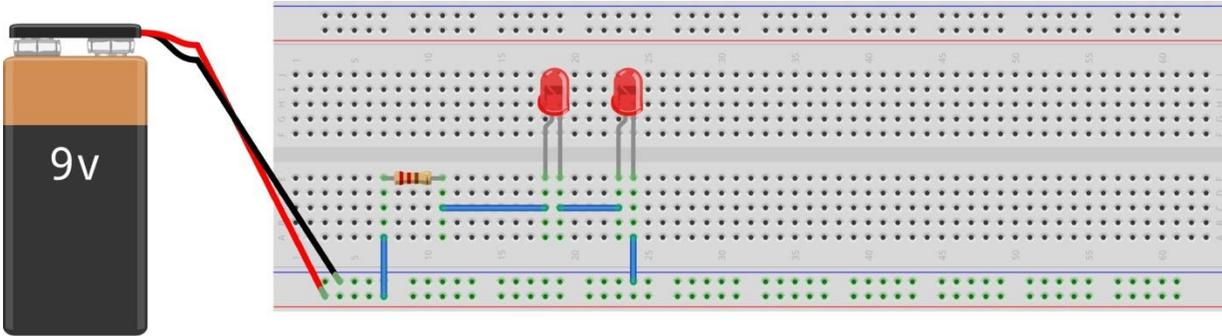
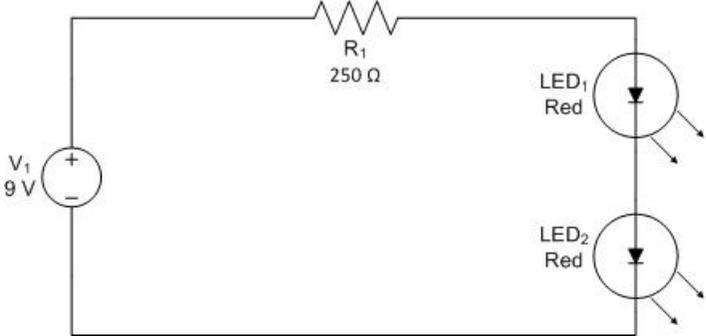
- Breadboards are fundamental when it comes to building circuits and prototyping a design.
- Breadboards require no solder which means components can be removed easily, and this is why breadboards are such a valuable tool in electric circuits.



- **Wire:** Solid core and stranded wire can both be used on breadboards, but because of the wire being removed and inserted, solid core is typically best.

Example:

Given a schematic of a series and parallel circuit, we will implement the designs on a breadboard.

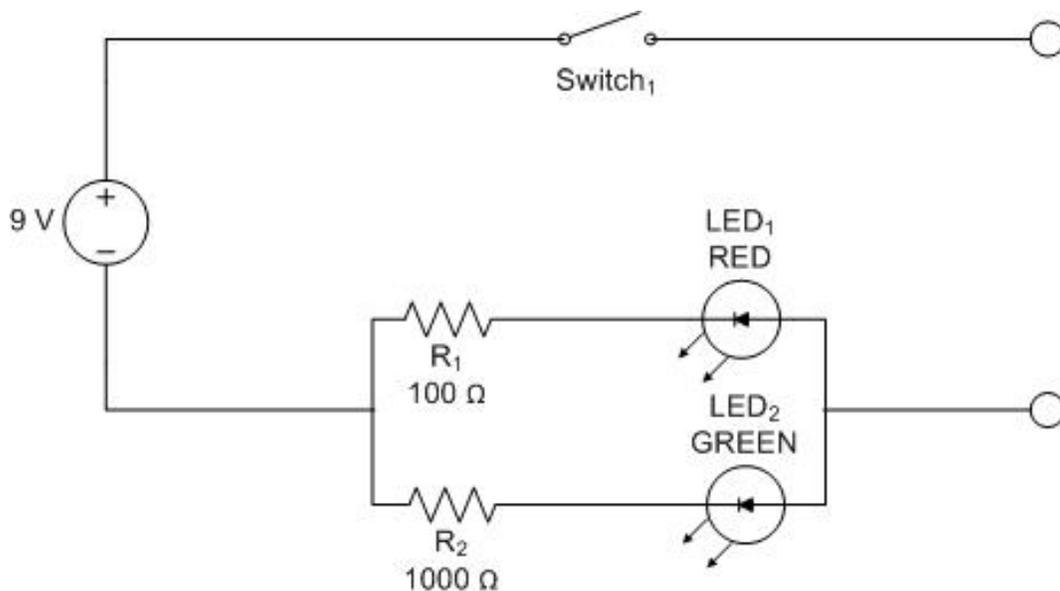


## Conductivity Meter

A conductivity meter is a device that measures how conductive a material is, or how easily current is able to pass through the material.

- In this exercise, you will be given the task to construct a conductivity meter on a breadboard following a schematic. Once the circuit is complete, you must test your circuit to make sure it functions properly.

When wiring your circuit together, make sure you pay close attention to your series and parallel connections. Also, double check certain components to make sure they are connected in



Looking at the two resistors, we can see that  $R_2$  is fairly larger than  $R_1$ . This means that  $R_2$  will block more current. With this information, what can be said about the material if the green LED is turned on?