

# Current Electricity & Circuits

(Sect. 12.1, 12.2, and 13.1)

In current electricity, electrons are allowed to \_\_\_\_\_ through a \_\_\_\_\_ in a \_\_\_\_\_ manner.

For current electricity to be used in a safe manner we use both \_\_\_\_\_ and \_\_\_\_\_

We use \_\_\_\_\_ (made up of cells) or energy that comes from \_\_\_\_\_.

## ***Circuits***

Much like your circulatory system, an electric circuit needs to have a \_\_\_\_\_ path in order for electrons to flow.

The following components make up a simple circuit:

Source: \_\_\_\_\_

Load: \_\_\_\_\_

Conducting Wire: \_\_\_\_\_

Switch: \_\_\_\_\_

## ***Circuits and Diagrams***

Part of Circuit	Symbol
Source	
Conducting Wire	
Switch	
Load	

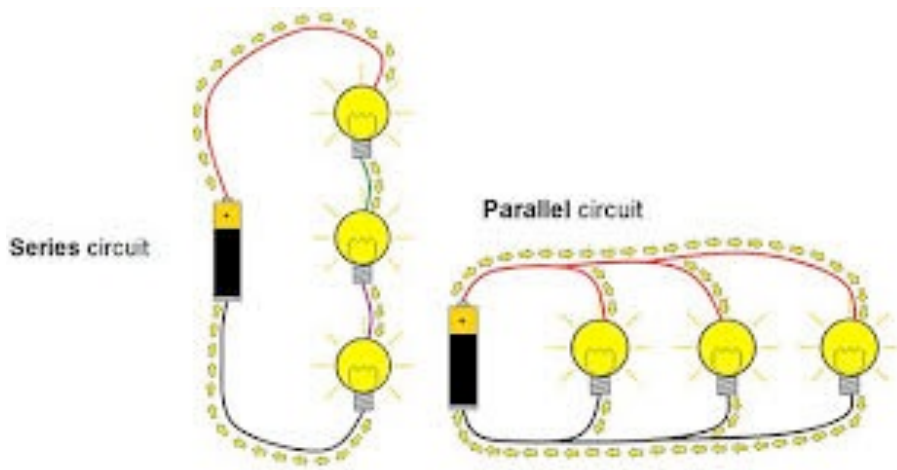
# Series vs. Parallel Circuits

## Series Circuits

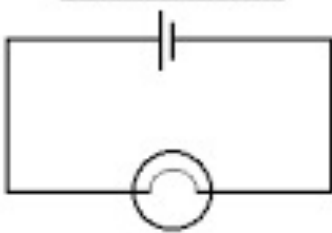
In a series circuit, electrons only follow \_\_\_\_\_. For example, if the toaster and coffee maker are plugged into the same outlet and the circuit breaks, both the toaster and the coffee maker will stop working.

## Parallel Circuits

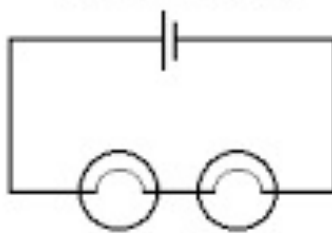
Go downstairs and check your circuit panel (breaker panel) at home. Note how your house is organized by area (kitchen, bathroom, mudroom, living room, etc...). This is an example of a parallel circuit. In a parallel circuit, electrons can flow down \_\_\_\_\_. These paths split in the same way water split into different streams from a river. If you blow the fuse regulating the pathway of your fridge, your stove will still work if it is regulated by a fuse on a different pathway.



Series Circuit 1



Series Circuit 2



Parallel Circuit

