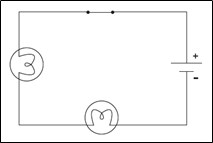
**Series and Parallel Circuits**



**Series circuit:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

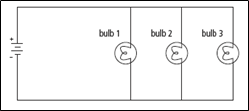
\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

With a series circuit, there is only \_\_\_\_\_\_\_\_\_ pathway through which current can flow. The current is \_\_\_\_\_\_\_ in \_\_\_\_\_\_\_ parts of the circuit.



Example of a series circuit:

Some decorative lights are connected in such a way that if one bulb burns out the rest of the lights \_\_\_\_\_\_\_\_\_\_ work.



**Parallel circuit:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
  
\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
  
\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

With a parallel circuit, the current \_\_\_\_\_\_\_\_\_\_\_ into different paths. In each path, the current is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.



Example of a parallel circuit:

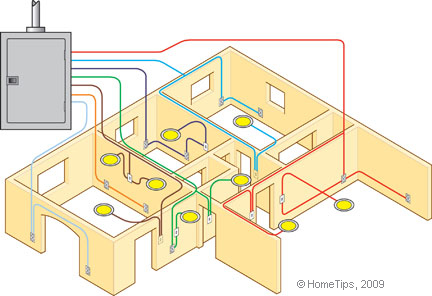
Appliances in your kitchen are connected so that if one appliance is turned off the rest \_\_\_\_\_\_\_\_\_\_\_ work.

In parallel circuits each device is controlled by its own switch without shutting off the others. When all the devices are on, a large amount of \_\_\_\_\_\_\_\_\_\_\_\_\_\_ is passing through the \_\_\_\_\_\_\_\_\_\_\_\_\_\_ near the source. When large amounts of current flow through a wire, it can get \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and it becomes a safety hazard.

Would having only one parallel circuit in your house be convenient? Why or why not?

In buildings, such as your school and house, many \_\_\_\_\_\_\_\_\_\_\_\_\_\_ parallel circuits are installed.

With this system large electrical cables carry \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_from a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to the building. This is then connected to a\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (\_\_\_\_\_\_\_\_\_\_\_\_\_\_), which connects to each of the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ inside the panel.



This separation of the parallel circuits helps to decrease the amount of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ flowing through the conductors, which decreases the chance of a possible fire being caused by extremely hot wires.

For a review of series and parallel circuits, watch this!

<https://youtu.be/O8GgRIIB1Yc>