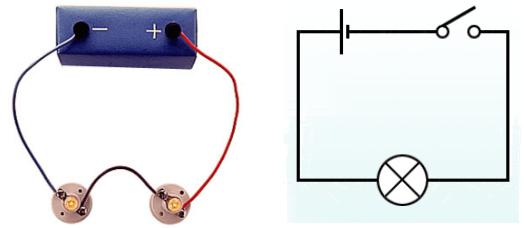


Parallel and Series

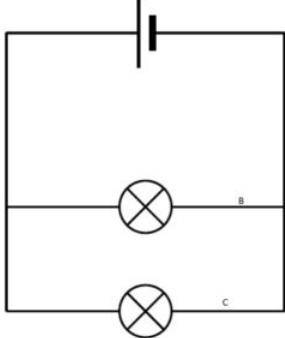
There are two types of circuit
Series and parallel.

The circuit in the pictures on the right show
series circuits.



In series circuits:

- The components are connected end-to-end, one after the other.
- They make a simple loop for the current to flow round
- If one bulb 'blows' it breaks the whole circuit and all the bulbs go out.

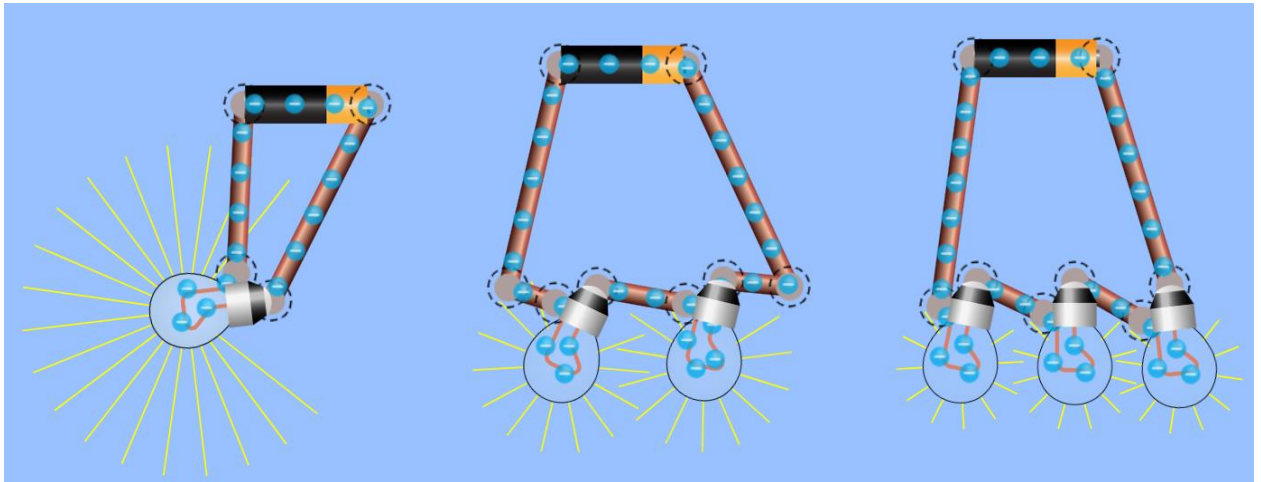


In parallel circuits:

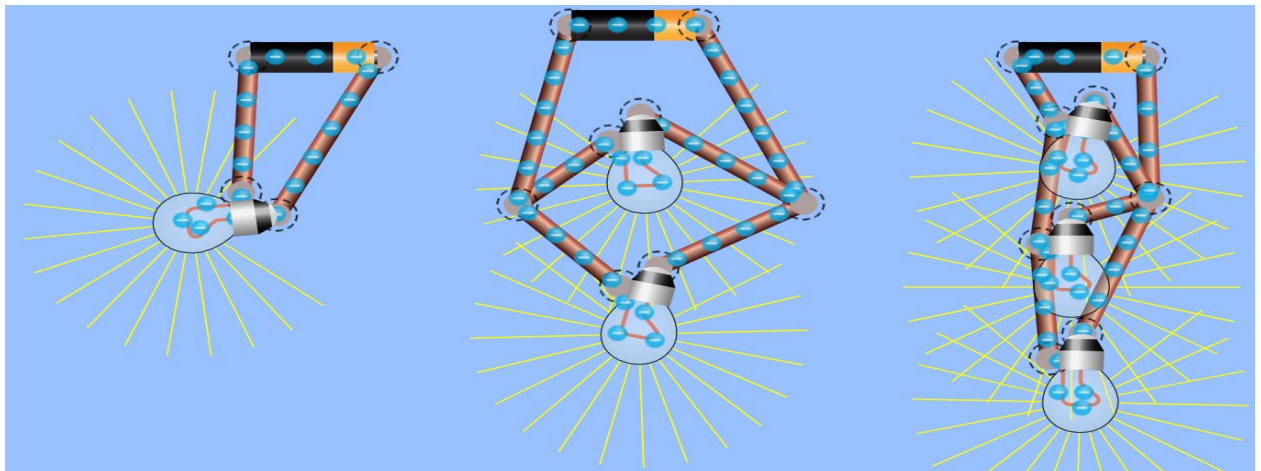
- The components are connected side by side.
- The current has a choice of routes
- If one bulb 'blows' there is still be a complete circuit to the other bulb so it stays alight.

Lamps in a circuit

- If you put more lamps into a series circuit the lamps will be dimmer than before



If you put more lamps into a parallel circuit the lamps will be the same brightness.



Parallel and Series

Diagram 1

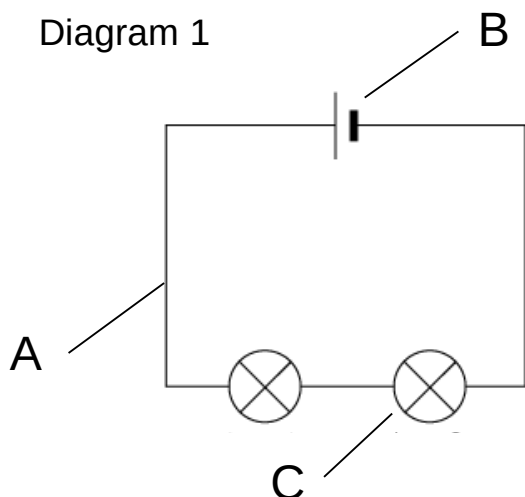
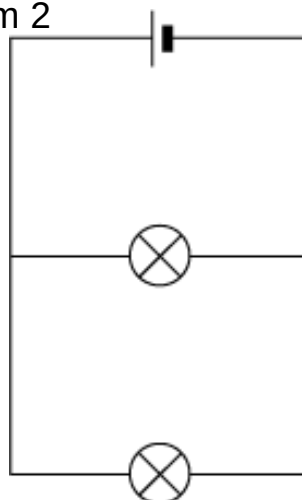


Diagram 2



1. What components do the letters A, B and C represent?

A..... B..... C.....

2. What is the name given to the way the bulbs are arranged in Diagram 1?

.....

3. What is the name given to the way the bulbs are arranged in Diagram 2?

.....

4. In a series circuit, like in Diagram 1, how is the brightness of the first bulb affected when the second bulb is connected? Explain why this happens?

.....

.....

5. In a parallel circuit, like in Diagram 2, how is the brightness of the first bulb affected when the second bulb is connected? Explain why this happens?

.....

.....

6. Explain one advantage of using a parallel circuit rather than a series circuit.

.....