

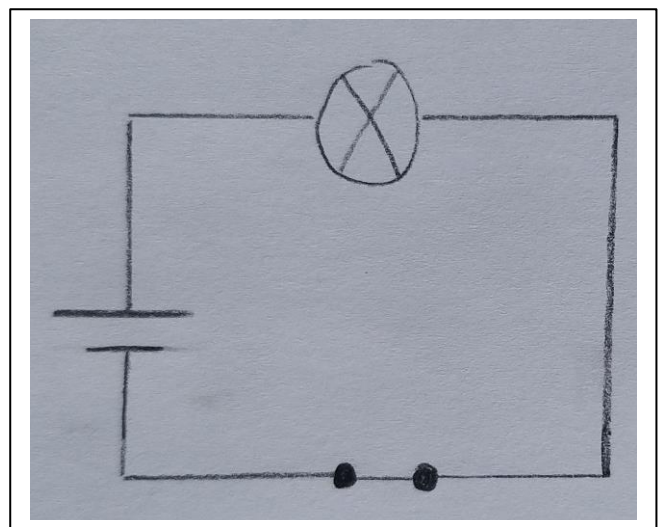
Drawing circuits activity

This week you need to start using the symbols that you have learnt, for the different electrical components, and put them into simple circuit diagrams. Refer to your textbook page 143 for guidance on drawing circuit diagrams and pages 154-158 for information on series and parallel circuits.

You will need a sharp pencil, circuit symbol page and a ruler to neatly complete your diagrams. Follow the example shown below to turn each picture into a circuit diagram.

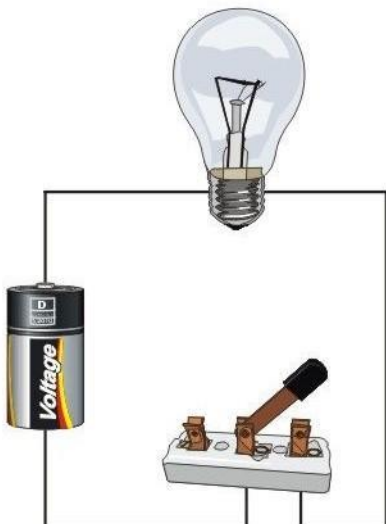
Example:

Series circuit with 1 bulb (load), 1 cell and 1 closed switch

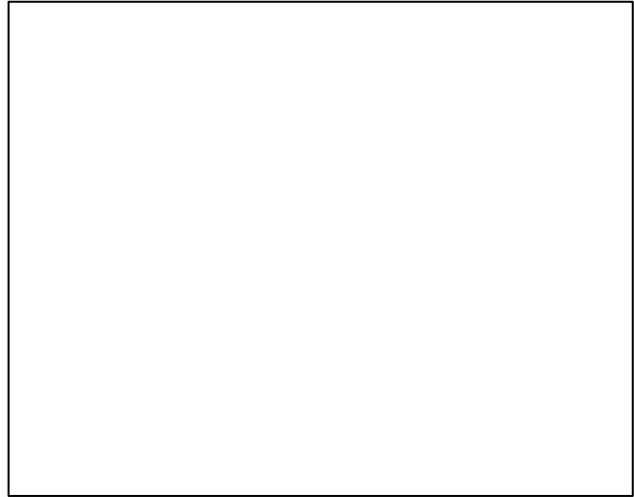


Now turn these pictures into circuit diagrams:

Series circuit with 1 bulb, 1 cell and 1 open switch

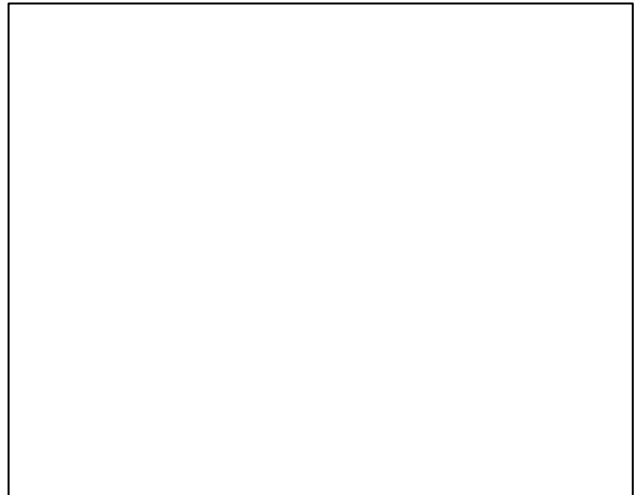
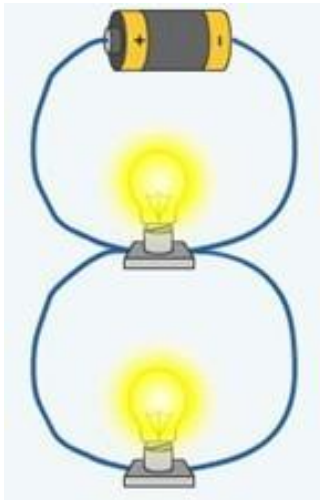


Series Circuit with 1 cell and 2 bulbs



A series circuit is one that has more than one component, but only one pathway in which current can flow. All components are connected end-to-end and if one resistor or component is damaged the flow of electrons cannot continue so the circuit is broken. As more and more resistors are added the overall current in the series decreases.

Parallel circuit with 1 cell and 2 bulbs



A parallel circuit has more than one resistor, but they are arranged on different pathways. This allows the current to flow in more than one route, so if one resistor is damaged, the circuit is still able to be completed and the other resistors will still function.

DRAW THESE CIRCUIT DIAGRAMS:

1. A series circuit with 1 cell, 2 light bulbs and a closed switch.
2. An open series circuit with 2 cells, 2 light bulbs and an open switch.
3. A closed series circuit with 4 cells and 1 light bulb.
4. A parallel circuit with 2 cells, 2 light bulbs (in parallel) and a closed switch.