Making Electric Circuits

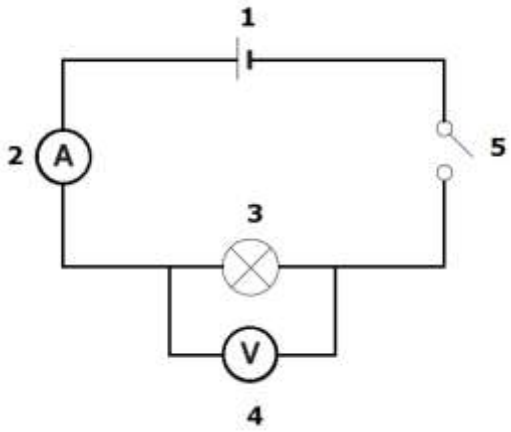
Instructions to Students

In this experiment you will construct some simple electrical circuits and measure the current and voltages around them.

Objectives

- to recognise a variety of circuit components as symbols and real objects,
- to correctly connect a series electrical circuit,
- to correctly read the current in a circuit and the potential difference across a component.

1. Do you recognise the components in this circuit? Copy the circuit A diagram AND table1 into your book and write the names of the components into the table..

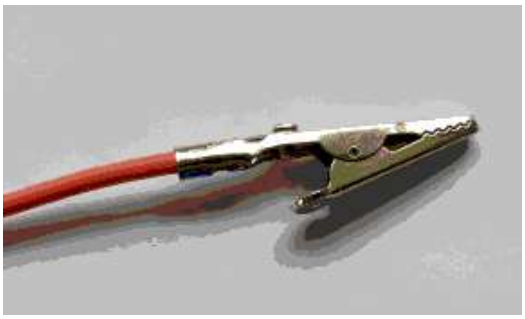


Circuit A

Number	Component name
1	
2	
3	
4	
5	

Table 1

2. Connect the five items as they are shown in the diagram, using connecting leads and crocodile clips to join them together on the circuit board.



Crocodile clip

Circuit board with one component added

Do not connect the battery until your teacher has checked your circuit.

Copy table 2 into your book and write down the values of current and potential difference on the two meters in the table.

Current	_ _ _ _ Amps
Potential difference	_ _ _ _ Volts

Table 2

3.

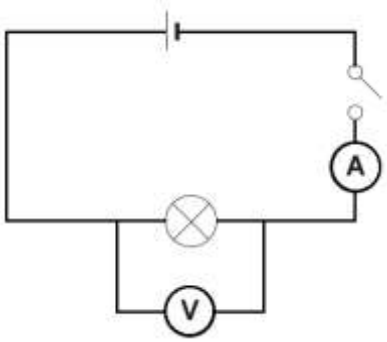
Results table

Copy the results table shown below into your book
Include your results from Circuit A

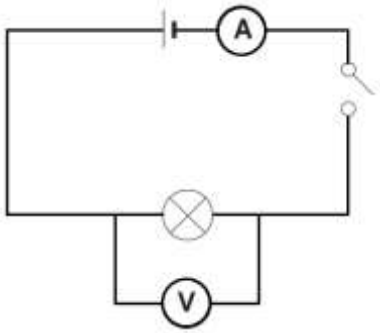
Circuit	A	B	C
Current	_ _ _ _ _ A	_ _ _ _ _ A	_ _ _ _ _ A
Voltage	_ _ _ _ _ V	_ _ _ _ _ V	_ _ _ _ _ V

Results Table

Copy circuits B and C into your book. Connect the two circuits in turn and again write down the meter readings in the results table.



Circuit B



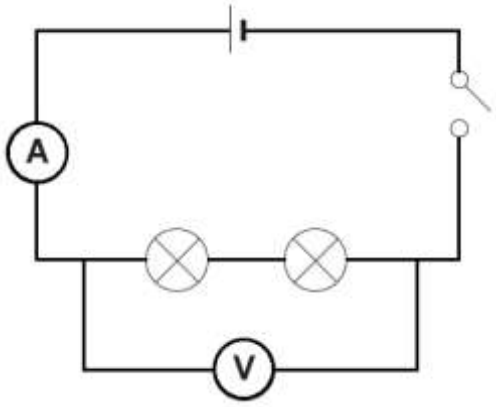
Circuit C

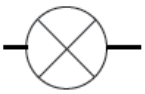
Question?

What can you say about the current around a series circuit like the one you have used here?

Extension activity

If you have two lamps available, connect this circuit. How do the meter readings change?



We say that the two components  in this circuit are '**in series**'.

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