Grade 9 Natural Sciences Worksheet

Current electricity and ammeters

Investigative question

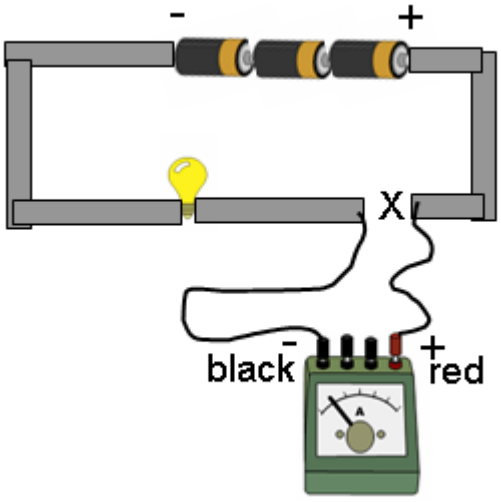
How can the current strength be measured in a circuit?

Aim

To learn how to connect an ammeter in a circuit.

Apparatus

Circuit board and components, 3 torch cells
ammeter



Method

1. Set up a circuit containing three cells and one light bulb.
2. Connect the ammeter in series to the light bulb at position X by doing the following:
   - connect the positive terminal of the ammeter to the connectors which are connected to the positive terminal of the cell
   - connect the negative terminal of the ammeter to the connectors which are connected to the negative terminal of the cell
3. Read the dial on the ammeter.

Results

1. The ammeter reading is _____. [1]

Answer the following questions

1. Draw a circuit diagram showing the above circuit. [4]

2. The ammeter measures current strength. What is the current strength measured in? [1]

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Rubric to assess practical work

Category	Levels of achievement			
	4	**3**	**2**	**1**
Handling apparatus	Learner can manipulate apparatus and helps others in the group / sets up apparatus entirely unassisted. [4 marks]	Learner is confident and can set up the circuit with minimal assistance. [3 marks]	Learner is unsure of what to do but attempts to set up the circuit with prompting. [2 marks]	Clumsy, not confident, little basic understanding of circuits. [1 mark]

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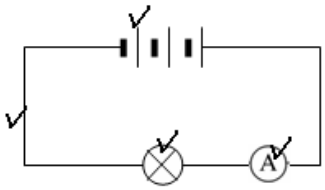
Suggested Solutions

Question number	Possible marks	Solution
Results	1	1A
1	4	
2	1	Current strength is measured in amperes.
Practical work	4	See rubric in Appendix of Assessment Tools.

Rubric to assess practical work

Category	Levels of achievement			
	4	3	2	1
Handling apparatus	Learner can manipulate apparatus and helps others in the group / sets up apparatus entirely unassisted. [4 marks]	Learner is confident and can set up the circuit with minimal assistance. [3 marks]	Learner is unsure of what to do but attempts to set up the circuit with prompting. [2 marks]	Clumsy, not confident, little basic understanding of circuits. [1 mark]