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Reports: guidelines for technical writing

When you write practical reports, be aware of accepted conventions or guidelines which apply to technical writing generally. Check with your lecturer regarding any specific requirements.

Standard of presentation

A written report should be of a professional standard - that is, well laid out, neatly presented and word processed if possible. Refer to your course guidelines for more specific requirements.

Technical terms

Show that you understand technical terms and that you are able to use them appropriately. For example:
The energy contained within a fluid is expressed as head, the unit being metres.

Sometimes you may be required to provide definitions of technical terms or key words. Check the task instructions and with your course tutor if you are not sure.

Language

Active or passive language

Scientific and engineering literature has commonly used **passive** language (e.g. ' A colour change was observed') rather than **active** language (e.g. 'I observed a colour change'). This has the effect of placing the emphasis on the experiment rather than the person conducting it and makes the report seem more objective. However, some subject areas accept the active form, particularly for a report written jointly with others (e.g. 'We observed a colour change').

Tenses

When writing practical reports you sometimes use **past tense** and sometimes **present** tense.

Write the **past tense** when you describe what you did in the practical.
Example:
The test tube was placed in the water bath at 30°C.

Use the **present tense** when you state generally accepted knowledge or generally true information.
Example:
Gravity exerts a force of 9.81 N/kg of mass.

Also write in the **present tense** when you refer to information contained in your report.
Example:
Figure 3 shows ....

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Numbers

Follow these conventions which apply to the use of numbers:

- In general, one digit numbers are written in words, e.g. six. Larger numbers are written as numerals, e.g. *27*.
- With standard units of measurement numerals are always used, e.g. *3 mL*.
- If values are smaller than one, insert a zero, e.g. *0.25* not *.25*.
- Use scientific or engineering notation for very large and very small numbers.

Example:	Number	Scientific	Engineering
	49100000	4.91×10^{7}	49.1×10^{6}
	0.000025	2.5×10^{-5}	25×10^{-6}

- Ensure you are working to an acceptable level of accuracy. For instance, 5, 5.0 and 5.00 indicate different degrees of precision.
- Carefully distinguish between a zero result and no result. Zero results should be shown as '0' and no results as ' - ' .

Units of measurement

When recording measured quantities, always use the apporpirate SI (Systeme International) units in the correct format, e.g. m^2, μL, s. In a table, the unit of measurement is given in the column heading.

Scientific diagrams

Keep all diagrams clear, simple and accurate. Give each a complete title and perhaps an indication of scale. To name the parts of a diagram, draw a straight line to each part and label it. Make sure these lines do not cross each other.

Example:

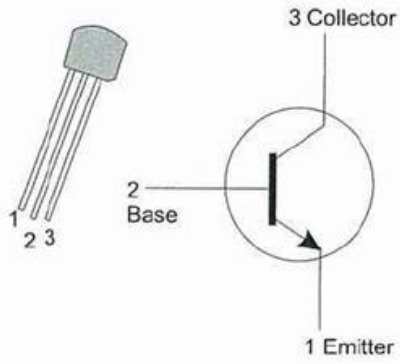

Figure 3 General purpose transistor

Acknowledgements

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