LAB REPORTS & SCIENCE WRITING

Reports are written for a variety of reasons. While the format may vary according to your discipline, most have the following sections.

Introduction
- Begin with a general statement about the topic.
- Follow with background information, including a review of the relevant literature.
- Clarify key terms.
- Include the objectives or hypothesis of the experiment (i.e. what are you trying to DO).

The present tense is usually used.

Methods
- Write a clear set of instructions so the experiment can be replicated.
- Include all details even if they seem obvious to you.
- Explain why you did what you did.

This section is usually written in the past tense.

Results
- Answer the question: What do my results say?
- Highlight the most important findings.
- State what is significant about your findings.
- State what's in the tables/figures, etc. and refer to them in the text.
- Comment on but do NOT interpret the results in this section.

Use the present tense when discussing the tables and figures, e.g. Figure 5 shows... Table 1 indicates...

Discussion
- Interpret your results and relate them to the objectives of the research/study.
- Mention trends.
- Discuss how the results are the same or different from similar studies.
- Explain what the experiment has shown.
- Discuss unpredicted outcomes and provide reasons.

Use the present tense to explain the significance of and to interpret results, e.g. Removal of waste from the lake appears to positively affect ... This shows ...

Use the past tense to summarise findings, e.g. Studies of the economic feasibility showed that...

Use the past when discussing the study, e.g. Over 80% of the material used was found to be contaminated.

Remember

Figure 1. Label figures below the figure.

Table 1. Label tables above the table.

<table>
<thead>
<tr>
<th>Activity</th>
<th>S 1</th>
<th>S 2</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consults</td>
<td>226</td>
<td>299</td>
<td>525</td>
</tr>
<tr>
<td>Drop-ins</td>
<td>181</td>
<td>187</td>
<td>368</td>
</tr>
<tr>
<td>Workshops</td>
<td>719</td>
<td>357</td>
<td>1076</td>
</tr>
<tr>
<td>Total</td>
<td>1126</td>
<td>843</td>
<td>1969</td>
</tr>
</tbody>
</table>
Conclusion

- Sum up the main points of your findings and mention their implications.
- Make sure main points relate to the objectives/hypothesis stated in the Introduction.
- Make suggestions for future research which correspond to points made in the body of the report.
- Don’t include new information.

Use the past tense to discuss past research and the present or future tense to suggest future research, e.g. Although the study indicated that ...

Other research will determine the outcome of...

What else is needed?
Most reports also include the following:

- Summary
- Table of contents
- Lists of Figures/Tables
- Recommendations (sometimes included in the Conclusion)
- References
- Appendices

Final tips for clear and concise writing

Avoid unnecessary detail.
- “The data were collected…” NOT “The data were painstakingly collected …”

Refrain from using non-quantifiable descriptions.
- “The vehicle reached a speed of 180 kilometres an hour.” NOT “The vehicle reached a very high speed”.

Avoid using an informal style.:  
- “In summary, …” NOT “In a nutshell, …”

Go straight to the point.
- “Previous research shows ...” NOT “Studies conducted previously in the field have revealed …”

Use the passive form of the verb sparingly e.g. in the Methods section
- “A series of experiments were conducted.”

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