

# Guide to writing lab and field reports

The style and structure of a scientific report is similar across almost all fields of science, except for some minor differences in style and formatting. It is important to become familiar with the language and style used in your discipline, so pay careful attention to your course readings.

## Title

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- Use a descriptive and meaningful title

## Author

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- Don't forget to include all authors (and any other contributors)

## Abstract

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This is where you summarise what you did, how you did it and your results. Readers often scan abstracts to decide whether they will read it, so it needs to be clear, succinct and accurate.

- What was the problem?
- What experiment did you do? What data did you collect?
- How did you carry out the experiment or collect the data?
- What was the most important result?

## Introduction

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- What is the background to your study? Why is this important?
- What problem are you trying to address?
- What is your hypothesis / what are your research questions?
- How will this study be of benefit?
- What are some key terms the reader needs to know to understand your research?
- What will you include in your report?

## Methodology

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- What kind of data did you collect to answer your question?
- What criteria did you use to choose the data you collected?
- How did you collect data to answer your research questions/ experiment?
- Why did you choose that method? Has somebody else tried it before?
- Was it successful? Why? Why not?
- What did you do with the data?

## Reporting results

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- What was the problem/question you were trying to address in your introduction?
- How do the results answer the question/ problem in your introduction?
- What information from the results was unexpected/expected?
- What is the most important/surprising thing you observed from the results?
- What were the limitations of your data?

## Discussion of findings

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- Are your findings similar to other research?
- Do the findings answer your questions?
- What do the surprising /unexpected findings suggest?
- What was the most important finding and what does this mean?

## Conclusions

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- What was the problem/question and what did you find?
- What is the significance of what you found?
- What were the limitations of the data collection methods?
- What recommendations would you give for future research?

## References

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- Check your unit guide for your required referencing style.
- Create a list of sources that you have cited in-text. Appendices
- It is common to include the raw data (data that has not been summarised) in an appendix section. Ask your lecturer if you have to include an appendix section. Clearly label if more than one.

# Common phrases used in reports

## Introduction

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*Recently, researchers have shown an increased interest in ...*

*Previous studies have reported ...*

*An objective of this study was to investigate ...*

*Understanding the link between X and Y will help ...*

*The main issues addressed in this paper are: X, Y and Z.*

*Throughout this paper, the term X will refer to ...*

## Methods

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### Describing methodologies

*Different authors have measured X in a variety of ways...*

*Previous studies have based their criteria for selection on ...*

*The X method is one of the more practical ways of ...*

*It was decided that the best method to adopt for this investigation was to...*

*Method X was done according to the procedure of Smith (1973). A small sample was chosen because ...*

### Describing the process

*To assess whether and how Xs are produced and received, we measured ...*

*To see if the two methods gave the same measurement, the data was plotted and ...*

*The process was repeated several times in order to remove ...*

*For the purpose of analysis, two segments were extracted from each ...*

*The experiments were run using ...*

*To begin this process, ...*

*The first step in this process was to ...*

*The second method used to identify X involved ...*

## Reporting Results

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*Simple statistical analysis was used to ...*

*The correlation between X and Y was tested using ...*

*The differences between X and Y are highlighted in Table 1 ...*

*Data from this table can be compared with the data in Table 2 ...which shows ...*

*There was a significant positive correlation between...*

*No significant differences were found between ...*

*Unexpected observations to emerge from the data comparison were ...*

*Comparing the two results, it can be seen that ...*

## Discussion of findings

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*Prior studies that have noted the importance of ...*

*An initial objective of the project was to identify ...*

*The current study found that ...*

*Another important finding was that ...*

*Surprisingly, no differences were found in ...*

*This finding was unexpected and suggests that ...*

*A possible explanation for this might be that ...*

*Another possible explanation for this is that ...*

*This result may be explained by the fact that ...*

*Further research should be undertaken to investigate the ...*

## Conclusions

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In this investigation, the aim was to assess ...

The main goal of the current study was to determine ...

These experiments confirmed that ...

X made no significant difference to ...

The results of this study indicate that ...

This research extends our knowledge of ...

A limitation of this study is that ...

Further studies need to be carried out in order to validate ...

# Tips on language and style

	POOR EXAMPLE	GOOD EXAMPLE
BE TENTATIVE	<i>This experiment proves that ...</i>	<i>The results suggest/indicate/infer that ...</i>
BE OBJECTIVE	<i>Analysing this soil sample was an excellent/great/good/bad way to test for pollutants.</i>	<i>Analysing this soil sample was a useful method of testing whether ...</i>
BE PRECISE	<i>Charcoal samples were collected and analysed.</i>	<i>Charcoal samples were collected from... using... and analysed in the lab using... This method ensured that ...</i>
SUPPORTING EVIDENCE IN THE FORM OF IN-TEXT CITATIONS	<i>These dune fields formed after sand was transported onto the shoreline. Age estimates obtained from radio carbon dating of soils correspond to similar age estimates obtained earlier.</i>	<i>These dune fields formed after sand was transported onto the shoreline (Coutts 1970; McConnell and Van Waarden 1989; Roach 2004). Age estimates obtained from radio carbon dating of soils correspond to similar age estimates obtained by Coutts (1970).</i>

Note: For more information on being tentative, classifying and listing, reporting results, describing methods and discussing findings see the [Manchester Academic Phrasebank](#).