



WRITING A SCIENTIFIC ESSAY

Purpose

Structure

| Introduce the Topic | Review Relevant Literature | Present Relevant Data | Interpret the Data | Synthesise Data and Theories | Refute the Major View | Clarify Research/ Data | Conclude the Topic | Provide Citation And Reference list |
|--|---|---|--|--|--|---|--|---|
| Description | | | | | | | | |
| <ol style="list-style-type: none"> 1. Define the problem or research area 2. Present the background context of the work 3. Introduce/ outline of how your research fits into the theoretical framework established around the area 4. State your viewpoint or argument | <ol style="list-style-type: none"> 1. Explain different perspectives of the problem 2. Critically Examine the material read | Either from your own research or from a literature search in an accurate, unbiased and factual manner | And relate this interpretation to the theoretical framework introduced earlier | Show the reader how the evidence you gathered supports your proposition | With reasons for why it is less acceptable than the view you are promoting | Identify where your data is incomplete or weak | <ol style="list-style-type: none"> 1. With suggestions as to where your efforts fits in within the long line of scientific work 2. State where your work could be extended or improved | <ol style="list-style-type: none"> 1. Clear Citation 2. Complete Reference list 3. Accepted Style 4. Accurately reproduced <p>Acknowledge work of other researchers so that readers can see how your point of view developed</p> |

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Academic words for reporting and connecting ideas

To introduce an additional idea

in addition, another reason/ aspect/example, furthermore, moreover, besides, also

To introduce an opposite idea or contrast

On the other hand, in contrast, in spite of, Although, still, nonetheless, instead, compare this with, alternatively, otherwise, on the contrary, rather

To give an example

For example, for instance, an example of this is, a further instance of this is,

To list ideas in order of time

First, first of all, first and foremost, second, more important, most important, more significantly, above all, most of all, concurrently, an additional

To introduce an explanation or make a stronger statement

In fact, indeed

To introduce a result

Accordingly, as a result, as a consequence, consequently, for these reasons, hence, therefore, thus

To point to evidence

It can be seen that, the evidence is that, in support of this

To make a tentative statement

Studies suggest that, perhaps, it would seem that, it tends to be the case that, studies indicate

Hedging Expressions

It should be the case that..... Viewed in this way.....

It might be suggested that.... There is every hope that...

It may be possible to obtain.... It is important to develop....

It is useful to study..... It is not known whether

One cannot exclude from..... It is/it is not difficult to conclude from...

Discipline Examples

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https://www.jcu.edu.au/_data/assets/pdf_file/0016/122452/jcuprd1_073077.pdf

Useful Links

Writing in the Sciences

https://www.jcu.edu.au/_data/assets/pdf_file/0006/122865/jcuprd1_071928.pdf

Reporting Results

<http://www.phrasebank.manchester.ac.uk/reporting-results/>

Discussing Findings

<http://www.phrasebank.manchester.ac.uk/discussing-findings/>

Writing and Speaking Guidelines for Engineering & Science

<http://www.writing.engr.psu.edu/>

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