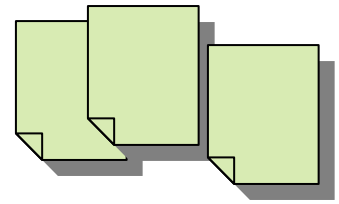


# Writing a Scientific Lab Report Outline



The **Introduction** should:

- move from broad to narrow topic (the hypothesis)
- state the problem/reason topic is of interest
- include at least one prior research referenced in a sentence
- provide background information with a clear sense of direction.
- include intext citations throughout the introduction.
- state the justification/significance of the study.
- state clear objectives and write a hypothesis as the last sentence of the introduction.

Introduction Outline:

Beginning = 1. Problem/reason topic is of interest \_\_\_\_\_  
\_\_\_\_\_

2. Recent studies show \_\_\_\_\_  
\_\_\_\_\_

3. Research done by \_\_\_\_\_ found that \_\_\_\_\_  
\_\_\_\_\_

Middle = Relevant Points

1. Main Point \_\_\_\_\_  
a. Explain \_\_\_\_\_  
b. Explain \_\_\_\_\_

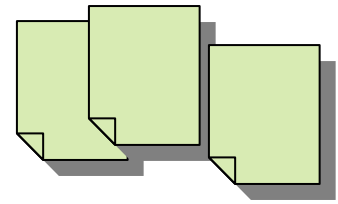
1. Main Point \_\_\_\_\_  
a. Explain \_\_\_\_\_  
b. Explain \_\_\_\_\_

1. Main Point \_\_\_\_\_  
a. Explain \_\_\_\_\_  
b. Explain \_\_\_\_\_

End = 1. objectives: (The purpose of this experiment) \_\_\_\_\_  
\_\_\_\_\_

2. State the hypothesis:  
If \_\_\_\_\_  
Then \_\_\_\_\_

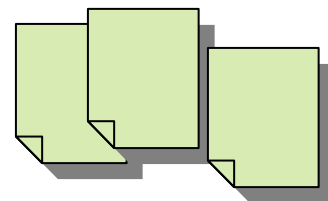
## Writing a Scientific Lab Report Outline



The **Materials and Methods** Section should:

- Be narrated in past tense (not 1<sup>st</sup> person – tell what *was done*, not what reader *should do*).
  - Be written in enough detail for someone else to repeat the experiment.
  - Include sample sizes.
  - Indicate the number of trials for each run.
  - Identify the experimental and control groups.
  - Not** contain any of the results.
  - Include methods of analysis and statistical evaluation given.
  - Include subtitles of separate procedures when appropriate (e.g., prepping agar).
  - Use of setup diagram is okay when appropriate.
  - Avoid beginning sentences with numbers.
- Don't: 50 mLs of Di-water was added to solute in a flask
  - Do: Agar solution was prepared by adding 50 mLs of Di-water to an Erlenmeyer flask containing 3g of agar powder.

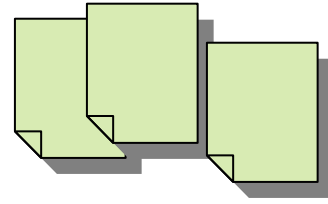
## Writing a Scientific Lab Report Outline



The **Results** Section should:

- Present data in text and in added tables, figures, and graphs.
- Tables, figures, and graphs are referenced within text (figure 3).
- Simply state facts and be written without comments, bias, or interpretation.
- Include the statistical tests that were applied to the data.
- Patterns and trends (e.g., eighty percent of the original control group).

## Writing a Scientific Lab Report Outline



The **Conclusion** Section should:

- Starts out narrow and expands to broader implications of study.
- Interpretations and speculations are with references of information presented.
- Support or lack of support for original hypothesis is well defined.
- Shortcomings of experiment and any unexpected findings are pointed out.
- The biological significance and import implications of the results are established.
- Suggestions for further studies based on the results obtained are defined.
- References to other work in this area are cited.