



Writing for Science

Make a good plan!

- What are the key points you want to make?
- Read through your results, take notes to use in an **outline**.
- What are the pieces of data you want to use in the report?
- Put the data in a logical order in the outline.
- An outline makes it easier to start and stop writing.

Begin writing your first draft.

- Put your notes into complete sentences.
- ***Now you will see the big picture!***

Peer-reviewed/Scholarly Science Paper looks like this:

- Title
- Keywords
- Abstract
- Introduction
- Methods
- Results (tables, graphs, figures, statistics)
- Discussion
- Summary/Conclusions
- References (Literature Cited)

Start writing from the middle!

Begin with the Methods and Results – these are the easiest parts to write.

Use your outline to begin writing the first draft of your methods results.

Don't be tempted to write or edit your Introduction because it is the hardest part to write.

Next, write the Discussion.

1. *Using your notes and results, describe and analyze your results.*
2. *What did your findings suggest?*
3. *Did your results match your prediction? Why or why not?*
4. *Recommend other experiments for further analyses.*

Next is the hardest part - write the Introduction.

1. Why are doing this experiment?
2. Give essential background information about the experiment.
3. Write a clear problem statement.
4. How are you going to test it?
5. Hypotheses.
6. In-text citations:

Refer the reader to ***references***.

Literature Cited (References)

Use American Psychological

Association Citation Formatting style (**APA**).

Now begin the challenging editing!

1. **Double-check your results.** (math, units)

2. **Check grammar and spelling.**

Watch out for science terms in spell-check.

3. **Be careful with abbreviations.**

-Write in entirety and abbreviate thereafter.

4. **Use active voice.**

"The frozen DNA samples were brought to the lab by the grad student."

Better to write:

"The grad student brought the frozen DNA samples to the lab."

5. **Be careful not to put too much information in one sentence!**

"Complimentary DNAs for two aquaporin water channel genes were amplified, and sequenced to initiate this study to confirm the presence of AQP3 mRNA bands exhibiting sizes of 1.2 and 1.3 and was observed through Northern blot analysis and microinjected into Squalus acanthias oocytes that significantly increased their permeability which suggests that a trans-cellular water absorption pathway may exist in this tissue."

6. **Make it concise.**

Write simply stated sentences:

Don't leave out important details.

Leave out needless words.

Instead of saying "In the absence of" write "without."

Also, "conduct an investigation of" simply write "investigate."

7. **Avoid ambiguity.**

- More than one meaning is ok for poetry but can be disastrous in science.

8. **Use positive phrases rather than negative ones, if possible.**

"The consistency of the DNA gel was not clear."

It is better to say, *"The DNA gel was cloudy."*

After final edits have been made -

Read your paper aloud to yourself or someone else!

This is always a great way to catch parts of your paper that need to be rewritten.

Write your abstract last.

The Abstract must be written **after** the paper is complete because it is a condensed summary of **everything** you have written.

The last page is Literature Cited (References).

The Writing Nook is a good source to learn APA citation formatting style.

The GMC Library is also a good source to learn APA.

"Science Writer?"

Do you like writing scientifically? Consider a career as a Science Writer. There is a growing need for them, and you can earn six figures or more once you are established as a good one!

And remember -

"Write to others as you would like them to write to you." - Unknown