Writing a Thesis
Overall Structure

Larger width means broader concepts and ideas, which are usually accessible to a larger audience

Write order?

From Write Like a Scientist
Larger width means broader concepts and ideas, which are usually accessible to a larger audience.

Write order?
1. Literature as you go
2. Methods/Background as you do them/use them
3. Results once you finish methods
4. Discussion to think about impact
5. Introduction
6. Abstract
7. Title
8. Acknowledgements

From *Write Like a Scientist*
# Moves

A man gets into a car accident and breaks his wrist.  
Setting the context of the joke.

He goes to the hospital, where a doctor puts him in a cast.  
Furthering the plot

Before he leaves, the man asks the doctor, “Hey, when this is all better, will I be able to play the piano?”  
Setting up the punchline

“Sure!,” the doctor says. “You’ll be fine in just a few weeks.”  
Furthering the plot

“Cool! I’ve always wanted to play an instrument.”  
Delivering the punchline

Each sentence should have a purpose.

From [Write Like a Scientist](https://www.write-like-a-scientist.com)
What are the moves?

[1] Seasonal acceleration of the Greenland Ice Sheet is influenced by the dynamic response of the subglacial hydrologic system to variability in meltwater delivery to the bed via crevasses and moulins (vertical conduits connecting supraglacial water to the bed of the ice sheet). [2] However, limited direct observations of subglacial water pressure mean that the spatiotemporal evolution of the subglacial hydrologic system remains poorly understood. [3] In this study, we simultaneously measured moulin and borehole hydraulic head and ice velocity in the Paakitsoq region of western Greenland. [4] We show that ice velocity is well correlated with moulin hydraulic head but is out of phase with that of nearby (0.3-2 kilometres away) boreholes, indicating that moulins connect to an efficient, channelized component of the subglacial hydrologic system, which exerts the primary control on diurnal and multi-day changes in ice velocity. [5] These observations suggest that decreasing late-season ice velocity may be caused by changes in connectivity in unchannelized regions of the subglacial hydrologic system (Adapted from Andrews et al. 2014).
Typical Abstract Moves

1. Describe what your project was about
   i. Identify the broad area of your research and its importance
   ii. Identify the gap(s) you address in your project
   iii. Describe the purpose of your project

2. Identify the methods used

3. Summarize your results
   i. Report the principle findings of your project
   ii. Make a concluding statement about your results

From *Writing Like a Scientist*
Typical Introduction Moves

1. Describe the background of your study
   i. Introduce the general area of research
   ii. Establish the importance of this area of research
   iii. Identify critical evidence from the literature

2. Identify the gap(s)

3. Fill the gap(s)
   i. Introduce what this work did to address the gap
   ii. Summarize your key findings

From Writing Like a Scientist
Typical Results Moves

1. Introduce a set of results
   - i. Briefly note how a particular set of results was obtained
   - ii. Reference a graphic or table showing appropriate data

2. Present important aspects of the results
   - i. Describe important trends
   - ii. Highlight key findings
   - iii. Identify unexpected results

From Writing Like a Scientist
For next week

Outline of paper, including specific moves. (Roughly subsection level of detail.)

For example:
Introduction:
1. Identify project
   i. Improving performance of ML algs in robots.
   ii. Small robots don’t have space to store ML algs