# Writing a Thesis

# **Overall Structure**



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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

Statement	Move
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

## 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





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 <u>Writing Like a Scientist</u>

# **Typical Introduction Moves**



3. Fill the gap(s)

i. Introduce what this work did to address the gap

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ii. Summarize your key findings

# **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



results

2. Present important aspects of the results

i. Describe iii. Identify ii. Highlight important unexpected key findings trends

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# 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