IMRaD Writing Structure

The Writing Center
Judith G. Gardner Center for Writing Excellence

Lots of STEM writing—lab reports, scientific writing, experiments, and research—follows the IMRaD (Introduction, Methods, Results, and Discussion) structure:

I — Introduction

- Explain the topic, the background information the reader needs to know to contextualize the experiment/research
- What other research already exists in the field regarding this issue?
- What question does this experiment/research seek to answer, and how?
- If there is a hypothesis or null hypothesis, they go in the introduction section
- May briefly discuss the results and conclusion of the experiment/research

M — Methods

- How was the experiment/research conducted?
- Should be detailed enough that the experiment could be replicated by a reader or future researcher
- May comment on the reasoning behind the method followed
- If the experiment is developed from other researchers' methods, cite them

R — Results

- Present what happened in the experiment/research. If there are data—figures, graphs, tables, etc.—they go in this section.
- Explains the data and results so the reader knows what is significant, particularly explaining figures and graphs so the reader can make sense of them
- Highlights significant trends and anomalies that might surprise readers, or that might feed into the discussion and conclusion
- Presents the data accurately and faithfully, not exaggerating the significance to support hypotheses
- Written in past tense, short and direct. Be as clear as possible!
- Focuses just on the results—not getting into analysis or discussion

D — Discussion

- Analyzes the data/results, drawing conclusions and attempting to answer the question or address the hypothesis
- States the main conclusions clearly and concisely at the start
- Puts the findings into context. What are other researchers saying about this issue?
- Explains the implications and significance of the findings, notes possible limitations and shortcomings of the experiment/research, and suggests future research directions

Style notes:

* Straightforward and concise is preferred, staying away from flowery or overly complex language.
* Some disciplines prefer first person, and others prefer third person passive voice.