Science Writing and IMRaD: The Basics

ImRaD? What’s included?
Generally speaking, science writing follows this basic structure, otherwise known as IMRaD.

- [Abstract]*
- Introduction
- Methods and Materials
- Results and
- Discussion (sometimes referred to as Conclusions)

*Not every IMRaD draft has an abstract. Look for this component particularly in research papers or articles being prepared for publication, but also check your professor’s rubric to see if he/she/they require this component. Here’s a useful resource for thinking about and drafting your abstract.

How does this IMRaD structure work?
Think of IMRaD as a written/narrative representation of the scientific method (Scientific reports, 2021). Take a look at the scientific method (right) alongside the hourglass structure of the IMRaD draft (left) below. Check out the similarities!

Use the more familiar parts of the scientific method to ground your understanding of that IMRaD structure.

And, use that hourglass as a friendly reminder of which sections broaden to include or connect with prior research and/or future study (Introduction and Discussion), versus those which narrow toward the details of your specific study (end of introduction, Methods, Results, and beginning of discussion).
Taking IMRaD further: Does this form extend beyond science writing?
Absolutely! Don’t be surprised to find that you might use a variation of the IMRaD draft in an engineering draft, a psychology draft, a draft in the health sciences, or even in a master’s thesis in education.

References & Useful Resources


Writing a scientific manuscript. (2021, April 29). Butler Scientific Communications. https://butlerscicomm.com/writing-your-scientific-manuscript/