

The transcription of the diagram in Stephen B. Heard's *The Scientist's Guide to Writing* (Chapter 8, page 76) outlines the canonical structure of a modern scientific paper:

Figure 8.1 Canonical structure of the modern scientific paper.

Sections in black ("IMRaD") are the core elements that tell the paper's story. Sections in italics are supporting material with administrative or archival functions.

Front Matter

- Title
- Byline and author affiliations
- Keywords, word counts, and other details

Abstract

Introduction

- General context of the work
- Narrower research area and statement of its importance
- Identification of a gap or other need for research
- Specific research question meeting the identified need
- Summary of approach to answer the research question
- Announcement of principal findings

Methods

- Materials, species, field sites, mathematical techniques, etc. used in the research
- Observational/experimental procedures followed
- Methods for analysis of data

Results

- Results of observations, experiments, or modeling in text, tables, and/or figures
- Comparisons among results (e.g., observation vs. theory or treatment vs. control)

Discussion

- Interpretation of results to answer research questions
- Consideration of possible weaknesses
- Relationship of results to previous literature and broader implications of having answered research question
- Prospects for future progress

Back Matter

- *Acknowledgements*
- *References cited*
- *Appendices or online supplements*
- *Data archives*

Source: Heard, Stephen B. The Scientist's Guide to Writing: How to Write More Easily and Effectively in the Biological and Sciences. Princeton University Press.