



Scientific Paper Template

Section Headings: The Council of Biology Editors' *Scientific Style and Format* describes the following organizational sequence as widely used in most scientific fields, a paper-writing model often referred to as *IMRAD: Introduction, Methods, Results, and Discussion*.

Section heading	Function
Introduction	Introduces topic and general problem. Describes existing knowledge by summarizing relevant research. Identifies important gap in existing research. States hypothesis or research question.
Methods and Materials	Details experimental population and selection criteria. Describes location, materials, and laboratory/field procedures, including processes for data collection and analysis. Provides detail sufficient for replication. Overall quality of detail and description establishes methodological validity.
Results	Numeric data are summarized and reported. Important data sets are presented in graphs and tables.
Discussion	Hypothesis/research question restated. Data supporting or contradicting research question discussed. Conclusions drawn and final answers, however tentative, discussed with support from primary literature. Generalizability of findings and suggestions for further inquiry explored.

Verb Tense: In most scientific disciplines, the Introduction and Discussion sections employ present tense verbs, though the literature review portion of the Introduction may use past tense verbs when describing the findings of specific studies. Both the Methods and Results sections use past tense verbs.

Persuasion: The scientific report might seem an objective and explanatory document that presents only facts, but each major section includes some persuasive rhetoric. The Introduction must establish the existence of an important problem, identify a gap in existing research, and formulate a sound hypothesis. The Methods section must persuade the writer's peers that the experimental approach was scientifically valid. The Results and Discussion sections must persuade the reader that the findings interpreted are sound and contribute knowledge useful to the field.

Works Consulted

Council of Biology Editors. *Scientific Style and Format: The CBE Manual for Authors, Editors, and Publishers*. 6th ed. New York: NY, 1994. Print.