

Check List for a Scientific Paper

Overall Writing Expectations

- Appropriate grammar and spelling is employed throughout?
- Sentences are concise (not run on)?
- Structure of each section is clear and easy to follow?
- Transitions are effective between paragraphs and major sections?

Formatting the Paper

The student and faculty mentor should decide on an appropriate format for the overall paper as well as in text citations plus the reference list. Students often benefit from following the Guidelines for Authors associated with a peer-reviewed journal relevant to the field of interest (i.e. Conservation Biology for students studying the Conservation Sciences). This offers exposure to the publication process and orients students to the expectations of publishers.

Title and Abstract

- Is the title informative and indicates specifically what the study is about?
- Are the question(s) / objectives of the project stated clearly in the abstract?
- Are methods summarized briefly in the abstract?
- Are major findings and conclusions stated in the abstract?

Introduction

- Is the question/objective stated clearly?
- Includes background material that is relevant to the question?
- Hypotheses (if any) and reasoning behind hypotheses are stated?
- Statements on how the work advances relevant disciplines/sub disciplines?
- Written in past tense when referring to the project?
- Uses present tense when discussing another published work?

Material and Methods

- Written in the past tense?
- Hypothesis testing clearly described?
- Procedures followed during the experiment explained clearly?
- Treatments and controls clearly described?
- Sampling regime, sample sizes and number of trials indicated clearly?
- Design of the study is clear and complete?
- Includes descriptions of how the data were analyzed (i.e. specific statistical tests used)?

Results

- Written in the past tense?
- Major results summarized in the text?
- Tables and figures referenced fully and in association with individual results?
- Trends in the data described?

Figures & Tables

Every table and figure makes a unique and important contribution to the paper?

Figures and tables are easy to read and interpret?

Tables and figures are numbered sequentially?

Figure legends located below figures and table captions located above tables?

Figure axes labeled and units of measurements indicated?

Captions/legends sufficiently complete to allow the tables/figures to stand- alone?

Discussion

Major conclusions that can be drawn from the results are stated clearly?

Conclusions put in the context of the material in the Introduction?

Are specific examples from the Results section quoted to substantiate conclusions?

Are the conclusions justified by the results?

Are the results critically analyzed for possible errors or bias?

Are the results of this study compared with results of similar investigations?

If results differ from other investigations, are reasons offered?

Addresses problems that arose and how could they be avoided in the future?

Are suggestions for future research provided?