

AUTHOR CHECKLIST

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Author(s): _____

Title of Manuscript: _____

Type of Submission: ORIGINAL RESEARCH or REVIEW ARTICLE (select ONE)

Declaration:

| I (print name of corresponding author), | , confirm to the |
|--|------------------|
| best of my knowledge that this manuscript meets all the criteria listed below. | |

SIGNATURE: _____

DATE OF SUBMISSION: _____

A. ETHICAL ISSUES

- There were no animal or human subjects in this study.
 OR
- Human subjects were treated in accordance with the Nuremberg Codex.
 OR
- The animal subjects in this study were cared for appropriately, in compliance with ARRIVE regulations on the protection of animals in research.
- □ The manuscript, data and figures are written/created by the authors. Any other material has been referenced appropriately and author credit has been given.
- □ I have read the detailed information available <u>here</u>, and confirm that this submission adheres to all requirements outlined in the 'Authorship' and 'General Requirements' sections.

B. TITLE AND ABSTRACT

- $\hfill\square$ The title is clear, concise and relevant to the investigation.
- \Box Abstract is under 250 words.
- □ The abstract introduces the aim of the investigation/review.
- \Box The key methods are outlined in the abstract.
- Summary of results are provided, and their significance is extrapolated.
- Overall, the abstract serves as a synopsis of the manuscript and is focused, appropriate and concise.

C. INTRODUCTION

- □ The introduction has a clear thesis statement (key idea/central message) that prevails throughout, this is easy to follow and immediately clear to the reader.
- Has provided enough information to contextualise methods, results and discussion sections later in the manuscript, without giving too much away.
- □ Key terms are well defined within the narrative (dictionary definitions should be avoided).
- The introduction starts by introducing the broad background and progressively narrows down to the focus of the investigation/review.
- Schematics are included, *where appropriate*, to illustrate key concepts to the reader.
- □ The introduction ends by outlining the purpose and significance of the investigation/review.
- □ Citations, including peer-reviewed citations, are included throughout.

D. METHODS AND MATERIALS (ORIGINAL RESEARCH)

- □ Key <u>methodological details</u> are outlined allowing enough detail for the investigation to be reproduced. Experimental details are not included– these are specific aspects of the Methods that were used to generate your results (should be in the Results section).
- □ Subheadings are used, *where appropriate*.
- □ There are sufficient levels of controls within the investigation.
- Statistical tests/calculations are outlined, *where appropriate*.

E. RESULTS SECTION (ORIGINAL RESEARCH)

- □ Results section is presented in a clear and logical order.
- Data are presented coherently, allowing for links between data sets to be alluded.
- Experimental details are outlined before describing any data.
- Clear reference to data is provided within the narrative (e.g. *in Fig.* 1).
- A description of the data is provided to the reader, outlining key trends/relationships, not individual data points.
- Primary interpretations are drawn which describe the results.
- □ Where appropriate, statistical tests are shown with explanations guiding the reader.

F. DISCUSSION SECTION (ORIGINAL RESEARCH)

- Discussion starts by briefly reinforcing the results.
- Results are tied together to provide insight into the aim outlined in the introduction. Scientific rationale is provided for results collected.
- Does not overstate or understate the significance of the results.
- □ Results are discussed in the wider context (e.g. industrial, technological, immunological etc.).
- □ There is critical evaluation of data collected, i.e. a comparison to literature values, extensions to the investigation / future work etc.
- □ If significant errors are present in data, an explanation as to why these may have occurred.
- A brief conclusion is provided, giving an overall insight into the investigation.
- □ Peer-reviewed citations are included throughout.

G. MAIN BODY (REVIEW ARTICLE)

- □ Key (i.e. the source being cited a significant amount of times by other authors) peer-reviewed citations are included throughout.
- □ There is <u>constant</u> and <u>critical</u> evaluation of analysis throughout and provision of counter arguments to support this.
- Evaluation allows for a judgement to be reached.
- Constant reference as to why points are significant, and links are made between points.
- □ Future directions for research in the field have been suggested, and/or a new theoretical orientation for the research reviewed has been provided.

H. FIGURES, TABLES AND DATA

- Figure legends are detailed and allow for the reader to visualise the Figure without it being present. Figure legends should be below the text and Tables legends should be above.
- □ Figures are constructed to a professional standard, see '<u>Youth STEM Matters Graphical</u> <u>Presentation Guide</u>'.
- Any Figures *etc* are referenced within the text in a logical order.

I. REFERENCES

- Peer-reviewed sources are included (sources consulted should be reputable and trusted, ideally with peer-reviewed papers being the main type of source used).
- □ Follows Vancouver/IEEE citation format (e.g. …text [1].).
- □ Figures are referenced where appropriate in the figure legend. If diagrams are self-constructed this must be made explicit (i.e. Diagram constructed by author, adapted from Ref... compiled from Ref...).
- A bibliography is included and is in the correct format.

J. WRITING STYLE

- The article is written using third person language, avoiding words like 'me', 'l', 'we', 'our', etc.
- The article is written using the past tense.
- □ The article is clear and concise.
- The article has been subdivided into appropriate sections.
- The language used is understandable to a young person of a similar educational stage to the author (check this by asking a classmate or relative to read your article and see if they understand it!).
- The article is written in English.