*Type of the Paper (Research Article, Review, etc.) in Section (Section name)*

Paper Title

**Abstract**: A single paragraph of about 150~300 words (500 maximum). For research articles, abstracts should give a pertinent overview of the work. We strongly encourage authors to use the following style of structured abstracts, but without headings: (1) Background: Place the question addressed in a broad context and highlight the purpose of the study; (2) Methods: Describe briefly the main methods or treatments applied; (3) Results: Summarize the article's main findings; and (4) Conclusions: Indicate the main conclusions or interpretations. The abstract should be an objective representation of the article, it must not contain results which are not presented and substantiated in the main text and should not exaggerate the main conclusions.

**Keywords**: keyword 1; keyword 2; keyword 3 (List three to ten pertinent keywords specific to the article; yet reasonably common within the subject discipline.)

**1. Introduction**

The introduction should briefly place the study in a broad context and highlight why it is important. It should define the purpose of the work and its significance. A moderate literature review should be conducted to outline the current state of the research with key publications cited. Please highlight controversial and diverging hypotheses when necessary. Based on the literature review, one should outline the needs in the research filed, which lead to the aims of this study and its potential values. As far as possible, please keep the introduction comprehensible to scientists outside your particular field of research. References should be in APA style and should be inserted with the Word’s Citation function (Thornton & Sokoloff, 1998; Bollen, 1989). See the end of the document for further details on references.

For most research papers, it is highly recommended to clearly state the hypotheses to be tested and the corresponding research questions to be answers. The final paragraph of the introduction should usually summarize in clear terms the research questions to be addressed. Usually, if there are more than one research questions, the methods and results sections should also include discussions specific for each of the research questions.

**2. Research Design, Data collection and analysis Methods, Materials (if apply)**

Research Design, Data collection and analysis Methods should be described with sufficient details to allow others to replicate and build on published results. New methods and protocols should be described in detail while well-established methods can be briefly described and appropriately cited.

Intervention studies involving animals or humans should have been ethically conducted and approved by your institution.

If there are multiple research questions or if multiple studies are needed to answer a single research question, the paper should include subsections of methods and designs for each of the studies to be conducted.

2.1. Study 1: Investigation of such and such

Some general introduction here to outline what research questions are to be answered by study 1, what are the methods and designs in general, and how the results should answer the questions. If needed, literature support for the design should also be included.

2.1.1. Design of Study 1

Discuss the research design in responding to research questions to be answered.

2.1.2. Data collection and analysis methods for Study 1

Discuss the data collection procedures and the types of data to be collected. Provide details of population backgrounds, sample sizes, etc. Then discuss the analysis methods and the possible outcomes expected. Brief literature review may be needed to support your use of methods. Discuss how different outcomes may answer the research questions.

2.1.3. Additional materials and conditions for Study 1 (if apply)

Discuss additional materials and conditions if needed.

2.2. Study 2: Investigation of such and such (if apply)

Some general introduction here to outline what research questions are to be answered by study 1, what are the methods and designs in general, and how the results should answer the questions. If needed, literature support for the design should also be included.

2.2.1. Design of Study 2

Discuss the research design in responding to research questions to be answered.

2.2.2. Data collection and analysis methods for Study 2

Discuss the data collection procedures and the types of data to be collected. Provide details of population backgrounds, sample sizes, etc. Then discuss the analysis methods and the possible outcomes expected. Brief literature review may be needed to support your use of methods. Discuss how different outcomes may answer the research questions.

2.2.3. Additional materials and conditions for Study 2 (if apply)

Discuss additional materials and conditions if needed.

**3. Results**

This section may be divided by subheadings. It should provide a concise and precise description of the experimental results, their interpretation as well as the experimental conclusions that can be drawn.

3.1. Results of Study 1

Some general introduction if needed

3.1.1. Meaningful title of results of Study 1 (e.g. student difficulties in learning force motion)

Details of results, tables, diagrams, interview quotes, etc.

3.1.2. Discussion and Inferences for Study 1

Discuss the findings and what can be implied in responding to the research questions. When possible, also discuss alternative possibilities and weakness of this study.

3.1.3. Conclusions for Study 1

Discuss the conclusions that can be drawn from Study 1. Make these specific to answering the research questions. When possible, also discuss alternative possibilities and weakness of the conclusions.

3.2. Results of Study 2 (if any)

Some formatting examples are given below:

Figures, Tables and Schemes

All figures and tables should be cited in the main text as Figure 1, Table 1, etc. It is best to have vector based diagrams using Word’s drawing tool or copied from Excel. If a bitmap diagram is to be used, the minimum dpi should be no less than 300 dpi (600 dpi recommended).

|  |  |
| --- | --- |
| In general, a labeling text box should be transparent and without boarder.  (**a**) | A text box can be placed inside the rectangle shape to create boxed texts.  (**b**) |

**Figure 1.** This is a figure, Schemes follow the same formatting. If there are multiple panels, they should be listed as: (**a**) Description of what is contained in the first panel; (**b**) Description of what is contained in the second panel. Figures should be placed in the main text near to the first time they are cited. A caption on a single line should be centered.

**Table 1.** This is a table. Tables should be placed in the main text near to the first time they are cited.

|  |  |  |
| --- | --- | --- |
| **Title 1** | **Title 2** | **Title 3** |
| entry 1 | data | data |
| entry 1 | data | data |
| entry 2 | data | data 1 |

1 Tables may have a footer.

Bulleted lists look like this:

• First bullet

• Second bullet

• Third bullet

Numbered lists can be added as follows:

1. First item

2. Second item

3. Third item

The text continues here.

Formatting of Mathematical Components

Please use Word’s native equation editor to create equations. This is an example of an equation:

|  |  |
| --- | --- |
| , | (1) |

the text following an equation need not be a new paragraph. Please punctuate equations as regular text.

**4. Discussion and Synthesis**

Authors should discuss the results of all studies and how they can be interpreted in perspective of previous studies and of the working hypotheses. The findings and their implications should be discussed in the broadest context possible. Future research directions may also be suggested.

**5. Conclusions**

This section is not mandatory, but can be added to the manuscript if the discussion is unusually long or complex.

**Supplementary Materials:** The following are available online at *(to be completed)*.

**Appendix A**

The appendix is an optional section that can contain details and data supplemental to the main text. For example, explanations of experimental details that would disrupt the flow of the main text, but nonetheless remain crucial to understanding and reproducing the research shown; figures of replicates for experiments of which representative data is shown in the main text can be added here if brief, or as Supplementary data. Mathematical proofs of results not central to the paper can be added as an appendix.

**References:**

Bollen, K. A. (1989). *Structural Equations with Latent Variables.* New York, NY: Wiley.

Thornton, R. K., & Sokoloff, D. R. (1998). Assessing student learning of Newton’s laws: The force and motion conceptual evaluation and the evaluation of active learning laboratory and lecture curricula. *Am. J. Phys., 66*(4), 338-352.