International Journal of High School Biology (IJHSB) – Manuscript Template

This template provides a clear, student-friendly outline for writing scientific articles. We use a standard academic style (12-point Arial, double-spaced, 1-inch margins) and divide the paper into labeled sections. The example sections below cover **Original Research**, **Review Article**, and **Short Communication** formats. General guidelines (font, spacing, referencing) are explained first, followed by section-by-section instructions. Citations to existing guidelines are provided as examples of common practice.

General Formatting and Style

- **Page Layout:** Use a standard font (e.g. 12-pt Arial) and double-space all text. Leave 1-inch margins on each side. Include page numbers (bottom center) on all pages. Use boldface headings for each main section, and Title Case for section titles.
- **Sections Order:** Organize the manuscript in the conventional order: Title, Author list and Affiliations, Abstract, Keywords, Introduction, Methods (or Materials and Methods), Results, Discussion (and/or Conclusions), Acknowledgments, and References. Use numbered or bulleted lists *sparingly* (only if needed) in the body.
- **Title Page:** On the first page, list the **manuscript title**, all **author names**, and their **affiliations**. Authors are listed in order of contribution (students first, then teacher/mentor last). Use superscript numbers to link each author to their institution (school/organization, city, state/country). Provide a corresponding author's email.
- **Abstract and Keywords:** On a new page, write an **Abstract** (a brief summary) followed by 3–6 **keywords**. The abstract should be concise (≈200–250 words) and clearly state the purpose, approach, main results, and conclusions of the work. Keywords are short phrases or terms that capture the main topics (for example: *"photosynthesis; climate change; freshwater ecology"*). These help others find your paper.
- **Figures and Tables:** Number figures (Figure 1, Figure 2, etc.) and tables (Table 1, Table 2, etc.) in the order they are cited in the text. Provide each with a brief title/caption. Refer to each figure or table in the text (e.g. "(Fig. 1)"). Keep illustrations clear and professional (use full words in legends, readable font, etc.).
- **Citation Style:** Use a consistent citation style throughout. We recommend a **numeric (Vancouver-style)** format, where references are numbered in the order they appear and cited as superscript numbers (e.g. "text of sentence^1,2."). When listing references, format author names as initials and surname, article titles in sentence case, journal names *italic*, volume *bold*, etc. (see example below). Alternatively, APA or Chicago styles are acceptable if used consistently.

1. Original Research Article (IJHSB Template)

This format is for reporting new experimental or analytical results. A full Original Research Article includes all standard sections. Each section below includes a brief instruction (in *italics*) and a placeholder for content.

Title

Enter a concise, descriptive title of your study (aim for ≤110 characters). Use sentence case: capitalize only the first word and any proper nouns.
(For example: "Effect of Urban Runoff on Nitrogen Levels in Local Streams").

Authors and Affiliations

List all author names in the order of contribution (student authors first, mentor/advisor last). After each name, include superscript numbers matching the list of affiliations below. Write each affiliation (school or institution, city, state and country) on a separate line. Indicate the corresponding author with an asterisk and provide contact email.
(Example: John Doe[1], Jane Smith[2], Dr. Emily Jones[3]. [1]Springfield High School, Springfield, USA; [2]Lincoln Academy, Lincoln, USA; [3]*Corresponding author*: emily.jones@example.edu)*

Abstract

Begin the Abstract on a new page (after the Title page). Summarize the study in one short paragraph (≈200–250 words). Include: the scientific problem or question, your main hypothesis or objective, key methods or approach (briefly), the most important results, and the main conclusion/implication. Write clearly and for a broad audience.
(For example: "We investigated how fertilizer runoff affects algae growth in ponds. We hypothesized that increased nitrate leads to algal blooms. In a controlled experiment with different nitrate levels, pond samples showed that high nitrate waters developed algal overgrowth 50% faster than low-nitrate samples. These results suggest urban fertilizer runoff may significantly impact freshwater ecosystems.")

Keywords

On a new line after the Abstract, list 3–6 keywords or phrases relevant to your paper. Separate by commas. These should be important topics or terms (e.g. "plant physiology, photosynthesis, chlorophyll").

Introduction

Explain the background and significance of your research question. Start by introducing the broad topic, then review what is already known (with citations) so readers understand the context. End the Introduction with a clear statement of your research objective or hypothesis. Why is this study important? What gap in knowledge are you addressing?
(Tip: Think of the Introduction as telling a story from general to specific. Give enough background so a peer can understand the experiment's purpose.)

Materials and Methods

Describe how you conducted your study. Include details of the experimental design, materials, equipment, data collection methods, and analysis. Write in past tense. Provide enough information for another student to replicate your work. For example, specify sample sizes, controls, and any statistical tests. You can use subheadings (e.g. "Participants", "Procedure", "Data Analysis") for clarity.
(Tip: Do not simply list items. Instead, write sentences explaining what you did, embedding material names and methods in the text. E.g. "We grew yeast cells in flasks containing 5% sugar solution at 30°C for 24 h.")

Results

Present the findings of your experiments. Use text supported by figures or tables. Describe each main result clearly and objectively. For each experiment or dataset, report what you observed (e.g. trends, differences) and include any relevant statistics. Refer to figures/tables by number (e.g. "Figure 2 shows…"). Do not interpret the results here; just state the outcomes.
(Example sentence: "In high-light conditions, plants had an average height of 15±1 cm, compared to 10±1 cm in low-light ($p < 0.01$, Fig. 1).")

Discussion

Interpret your results and explain their significance. Begin by summarizing the key findings in simple terms. Then discuss whether the results support your hypothesis and how they fit with existing knowledge (compare to literature with citations). Mention any unexpected results and possible explanations. Acknowledge limitations (sources of error, sample size, etc.). Conclude by stating the broader implications or applications of your work, and suggest future experiments or questions that arise. (A brief "Conclusion" sentence or paragraph can end this section.)
(Be careful not to overstate: stick to what your data show. E.g.: "Our data indicate X, which suggests Y under the tested conditions. These findings contribute to understanding Z.")

Acknowledgments

Optionally, acknowledge anyone who helped with the project but is not an author (for example, lab mentors, classmates who gave feedback, funding sources). This is also where you can mention any grants or scholarships that supported the work. Do NOT include your teachers/professors here—they are co-authors if they helped with the project.
(Example: "We thank Dr. Alice Roe for guidance in experimental design and the Lincoln Academy Chemistry Lab for equipment support. This research was funded by the State Science Foundation Grant #12345.")

References

Begin the References on a new page. List all works cited in the text. Number them in the order they appear (if using numeric style). Use a consistent citation format. For example, in Vancouver style list all authors (initials and surname), article title (sentence

case, not italicized), journal name italicized*, bold volume, page range, and year in parentheses. Web sources should include authors (if any), title, URL, and year. See examples:*

1. Doe J., Smith A.B. Title of the paper in sentence case. *Journal Name*. **12**, 34–39 (2023).
2. Nguyen T., Lee C. Another study on biology. *Science Journal*. **8**, 100–105 (2021).
3. Author(s) of web page. Title of web page. URL (Year).

(In the text, refer to these as [1], [2], etc., or as superscripts like^1 if following the journal's style.)

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2. Review Article (IJHSB Template)

This format is for literature reviews or overviews of a topic (no new experiments). The paper is usually organized by themes or subtopics. Follow general formatting as above (font, abstract, keywords).

Title, Authors, Affiliations

Same instructions as for Original Research. The title should reflect the review topic (e.g. "Impacts of Climate Change on Coral Reefs"). List authors (students first, mentor last) and affiliations as before.

Abstract

Write a brief summary (≈200–250 words) of the review's scope and main conclusions. Describe the topic and why it matters. Summarize the main findings of the literature (e.g. "Recent studies show X, Y, and Z"). Conclude with the overall insight or perspective gained.

Keywords

List 3–6 keywords relevant to the review topic (similar to research). For example, *"marine biology; climate change; coral reefs."*

Introduction

Provide background on the topic and explain the focus of the review. Define any important terms or scope. Explain why this area is important to study. State the goal of the review (e.g. "This review examines how A affects B"). Unlike an original research introduction, you do not have hypotheses; instead, set the stage for the discussion of existing knowledge.

(Subsection 1, e.g. "Background" or "Subtopic A")

Review and synthesize relevant literature on a specific aspect of the topic. Include key findings from other papers with citations. Organize in logical chunks using descriptive

headings (you can use multiple subsections). Each subsection should cover a coherent theme (e.g. “Molecular Mechanisms,” “Field Observations,” etc.).

(Subsection 2, Subtopic B)

Continue as above for additional themes. Use as many subsections as needed to cover the topic. Ensure each subheading is clear and each paragraph cites relevant sources.

(Add more subsections for your review content as necessary.)

Conclusions

Summarize the major insights from the reviewed literature. Highlight any consensus or controversies in the field. Suggest gaps in knowledge or questions for future research. This section wraps up the review by stating what has been learned and its significance.

Acknowledgments

Same as for Original Research (acknowledge any help, funding, etc.).

References

Same as for Original Research. List all sources cited in the review. Because reviews often cite many papers, be diligent with formatting. Ensure every reference is used in the text.

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3. Short Communication (IJHSB Template)

This format is for brief reports of new findings (often called “Short Article” or “Brief Communication”). Short communications are more concise than full research articles. They still include key sections but with tighter writing.

Title, Authors, Affiliations

Use the same format as above. The title should reflect the specific finding or focus. List authors and affiliations as usual.

Abstract

Short (≈150–200 words) summary of the main result. State the question, briefly describe the approach, highlight the key finding, and its implication. Since space is limited, focus on the most important outcome.

Keywords

List 3–6 relevant terms (same as above).

Introduction

Provide a brief introduction to the topic and why the question matters. In only 1–2 paragraphs, explain the context. State the specific objective or hypothesis. (Be concise – you might integrate some introduction with discussion in a short format.)

Materials and Methods (or Methods)

Concise description of methods. Cover only the essentials needed to understand the experiment. You may combine methods with Results if very brief, but a short methods paragraph is recommended.

Results and Discussion

Present the key findings and their interpretation together. You can combine the Results and Discussion into one section for brevity. Describe the main result(s) and immediately explain what they mean. Highlight the significance but keep it succinct. Include any figures or tables if helpful (typically ≤2–3 figures). Do not leave the reader guessing – clearly state the outcome and its implication.

(Example: "Treatment X increased growth by 20% compared to control. This suggests that X enhances growth under the tested conditions. While the sample size is small, the effect was statistically significant (p = 0.02), indicating a clear trend.")

Acknowledgments

Same as above (optional but recommended to thank contributors or funding).

References

Same guidelines as above. Because this article is short, use only the most relevant citations (even 5–10 key references may suffice). Format them consistently.

Notes: All sections above include brief instructions (in *italics*) to guide you. Replace the placeholder text with your own content. Keep paragraphs short (3–5 sentences) and use simple, clear language. This template is a starting point – you may adapt heading levels or add subheadings (e.g., "Results – Part 1", "Discussion – Part 2") if needed for clarity.

By following this structured template and the embedded guidance, student authors can confidently compose a complete IJHSB submission. For reference style, we have illustrated a Vancouver/numeric format consistently, but you may use APA or another consistent style if you prefer – just apply it uniformly.

Good luck with your writing!

IJHSB Editorial Team