



Author Guidelines for Preparing Manuscripts

For *Advances in Biology Laboratory Education*, a Publication of the Association for Biology Laboratory Education (ABLE)

These guidelines were prepared to assist presenters of **major workshops, mini workshops, and posters** in the preparation of their manuscripts for publication in the ABLE workshop & conference publication, *Advances in Biology Laboratory Education*. As it is not possible to provide guidelines for every usage, this document attempts to address the most common questions.

Manuscript preparation

All manuscripts are to be prepared by copying and pasting your manuscript text into the appropriate ABLE Publication Template (abstract, extended abstract OR full article). These templates are already formatted to follow our guidelines and can be found at:

<https://www.ableweb.org/volumes/author-guidelines/>.

Manuscript submission

Your manuscript is due to the ABLE Editor *no later than the August 15th immediately following the annual conference*. (Of course, your submission is very welcome any time before that date!) All manuscripts should be submitted electronically via the form on:

<https://www.ableweb.org/volumes/author-guidelines/>.

You will need the following to complete your submission:

- ONE Manuscript/Abstract file (using the MS Word template and following the guidelines below).
 - Accepted file types are .doc or .docx, 10 MB or smaller.
 - Please name your manuscript with the last name of the FIRST AUTHOR in the following format:
 - Majors: LastNameofAuthorMajor.docx
 - Minis: LastNameofAuthorMini.docx
 - Posters: LastNameofAuthorPoster.docx

- Supplemental File (if applicable)
 - Upload as a single file. This may include a video, student data, a document with images, etc.
 - Accepted file types are pdf, doc, docx, xls, xlsx, zip, and mp4 that are 10 MB or smaller.
 - Please name your Supplemental File with the last name of the FIRST AUTHOR in the following format:
 - LastNameofAuthorSupplemental.docx (or appropriate file type suffix)
- Supplemental File List (if applicable)
 - Upload a separate document that contains a bulleted list of file names AND descriptions of each of your supplemental files, as you want them to appear on the web.
 - Accepted file types are pdf, doc, docx.
 - Please name your Supplemental File LIST with the last name of the FIRST AUTHOR in the following format:
 - LastNameofAuthorSupplementalList.docx (or appropriate file type suffix)
- Poster File (if applicable)
 - Upload the file of your poster presented at ABLE.
 - Accepted file types are ppt, pptx or pdf, 10 MB or smaller.
 - Please name your Poster File with the last name of the FIRST AUTHOR in the following format:
 - LastNameofAuthorPoster.ppt (or appropriate file type suffix)
- Please enter all the information requested in the online Manuscript Submission webpage. Some of this information will be redundant with the content of your manuscript (see Format of Publication Manuscripts below) but is needed by our website managers to efficiently catalog your manuscript once the volume is published on our website.
- If a manuscript is not submitted for a conference presentation, the conference program abstract for that contribution will be published.

Format of Publication Manuscripts

The format described below applies to all **major workshop** manuscripts. Presenters of **mini workshops** may submit either an extended abstract (up to two pages with tables and/or figures) or a short (≤ 10 page) manuscript following the same format as major workshop manuscripts (described below). In the absence of either an extended abstract or a short manuscript submission, the mini workshop abstract that was printed in the conference program will be published. Presenters of **posters** may submit their poster file (pdf, ppt or pptx) and either an extended abstract (up to two pages with tables and/or figures) **or** a short (≤ 10 page) manuscript following the same format as major workshop manuscripts (described below). In the absence of a poster submission, the poster abstract that was printed in the conference program will be published.

Please submit your manuscript adhering to the following format (use the appropriate ABLE Publication Template available from the ABLE website which is pre-set to the format below).

To preserve the template formatting, use Paste and Match Format in the Edit menu (Mac) or Paste Merge Formats in the Edit menu (Windows). The template has comments to help guide you through the process of correctly formatting your manuscript. Please delete the template comments as you correctly format each component of your manuscript. The format is also described below:

The beginning of your article includes the following:

- **title** in 19-point bold Calibri font, align left
- **authors** in 10-point bold Calibri, align left
- **mailing address** in 10-point Calibri for each author, align left. List institution, department, street address, city state or province (as abbreviation), mailing code, country.
- an **abstract** (in 9-point Calibri), written as a single paragraph, full-justified
- **keywords** (3-8) in 9-point Calibri
- **Citation** in 9-point Calibri
- **Correspondence to:** author name and email in 9-point Calibri, align left

Primary Headings:

Enter a line break after each heading.

Introduction: A general introduction, written for the instructor, should provide the objectives of the laboratory exercise and contain relevant background information (*e.g.*, level of difficulty, time required to prepare and set up, time required for students to perform) to assist the reader in assessing how the exercise can best be used. This introduction is distinct from that in the Student Outline.

Student Outline: This section should contain the text that is distributed to the students.

Materials: A list of materials and equipment required by students in the laboratory (specify quantities as per number of students). In short manuscripts for **mini workshops** and **poster** presentations, the Materials section may be very brief and abbreviated.

Notes for the Instructor: This section should highlight critical steps in the experimental procedure and issues relating to safety in the laboratory. Remember that many of the persons who will attempt to use your exercise may have little or no expertise in the topic(s) covered. Lacking your knowledge and experience, they may encounter problems which are not apparent in your description of the Student Outline. Address any problems the technicians had in preparing for your workshop and the major questions and problems participants had during your workshop. Detailed instructions should be included in appendices.

Acknowledgments: Acknowledge those who contributed to the exercise.

Cited References: Include only those references cited in the text. Use the name-year citation format in the text of the manuscript and list these cited references in Cited References alphabetically. We are using the Council of Science Editors (CSE) style for in-text citations and Cited References formats starting in 2016. References given as further reading should also be cited in the body of the text. For example: “For further reading see Street (1973, 1989), Baker and Carpenter (1976), Allen (1981), and Dodds et al. (1985).” so they may be included in the list of Cited References.

About the Author(s): A short biography should be written in paragraph form and typically includes academic training, current position, extraordinary awards or achievements, and research and teaching interests.

Appendices: Include addresses of suppliers, instructions for the preparation of media and chemicals, rearing of animals, growing of plants, and any other special instructions and information. If there is more than one appendix refer to them as APPENDIX A, APPENDIX B, etc., and give each a concise title. Supplemental materials such as website contents or prepared text materials may be submitted separate from your manuscript via the ABLE Manuscript Submission website. After editorial review, supplemental materials may be posted to the ABLE Publication website and linked to your Publication article.

Manuscript Preparation

Use the ABLE Publication Template for the correct format

Base font: 10-point Calibri

Line space: Single, enter a line break after each primary, secondary and tertiary heading.

Margins: 1.25” top; 1.00” bottom; 0.75” both sides

Justification: Full, except left justification for references

Columns: The article should be in one column.

Sections: The Student Outline begins on a new page and ends on a page separate from Materials.

Pagination: Page numbers are pre-set in the Footer, right justified (in the ABLE Publication Template) and every manuscript will have independent pagination starting with page 1.

Authors do not enter page numbers in the Footer.

Headings (as described in the ABLE Publication Template)

In general use no more than **four levels of organization**: primary headings (centered, bold, and ALL CAPS in 10-point Calibri font), secondary headings (left-hand margin and bold 10-point), tertiary headings (left-hand margin and in italic 10-point), and quaternary (left-hand margin, underlined, and in 10-point). It is not necessary to have secondary headings unless complexity of the text calls for them; tertiary headings may be used directly under primary headings if they introduce limited material.

Body or paragraph

Indent the first line of each paragraph 1/2 inch (0.50"). Use full justification and do not break words at the right-hand margin anywhere in the manuscript. (This includes hyphenated words as well as words divided between syllables.) Give the scientific and colloquial names the first time a plant or animal is mentioned. Scientific names should appear in *italics* and not be underlined.

Spelling should follow American English (e.g., behavior, center, color, liter, pipet). For general matters of spelling use *Webster's New Collegiate Dictionary*; if two or more spellings of a word are given, the first listed is the one preferred (with the exception of formulae and appendices).

Use 10-point Calibri as the base font. All portions of the manuscript should be **single-spaced**, including text, titles of tables, figure legends, references cited, and appendices. However, insert a single line break before and after each primary, secondary, and tertiary heading. Consult the ABLE Publication Template to guide you in this formatting.

Tables

When possible, use the TABLE feature in MS Word to create your tables. Please do NOT use spaces or tabs to align the columns of your table. Identify each table with a bold numeric reference and title, centered at the top of the table (see example below). When possible, the table should be centered within the page.

Table 6. Number of aquatic insects in stream sample

Pollution-intolerant	Intermediate	Pollution-tolerant
caddisfly larvae	beetle larvae	blackfly larvae
dobsonfly larvae	crane flies	midge larvae
mayfly larvae	damselflies	

Graphics

Embed each graphic in your document as a graphic file. **ENSURE that you have copyright or cite your copyright-free source.** Include a centered figure legend below the graphic (using narrower margins on both sides), as shown in the example below.

Figure 1. Typical results for simulated growth of catfish as a function of protein content of the diet. Growth was simulated in tanks with temperature set at 25°C, oxygen set at 10 mg/liter, and with a feeding rate which was varied to match the feed consumption rate of the fish.

Documentation and Cited References

When citing references in the text, use the form "Jones (1981)" if the author's name is part of the sentence and "(Jones 1981)" if it is not. If there are more than two authors use the form: "Barnes et al. (1984)"; however, use all names in the Cited References. Provide multiple citations in chronological order; for example, Ball (1945), Ashe (1967), and Cook (1987).

Provide page number(s) for material that is quoted directly from a source. For example: Haldane (1927:21) once wrote "comparative anatomy is largely the story of the struggle to increase surface in proportion to volume."

We are using the Council of Science Editors (CSE) style for text citations and Cited References formats. Additional references and further readings should be cited directly within the body of the text or appear in an appendix. Pay particular note of the use of punctuation and capital letters in the samples below. Include DOI if available. Some examples of Cited References entries are given below:

Books:

Lane N. 2009. *Life ascending: the ten great inventions of evolution*. New York (NY): Norton.

Sokal RR, Roth FJ. 1973. *Introduction to biostatistics*. San Francisco: Freeman.

On-line Journal Articles, including ABLE Publication, include website address and/or DOI:

Beck CW, Migabo S, Blumer LS. 2011. Substrate size selection by bean beetles. In: McMahon K, editor. *Tested studies for laboratory teaching*. Volume 32. *Proceedings of the 32nd Workshop/Conference of the Association for Biology Laboratory Education (ABLE)*. p. 25-31. <http://www.ableweb.org/volumes/vol-32/v32reprint.php?ch=3>

Journal Articles (do not abbreviate titles of journals):

Bednarski AE, Elgin SCR, Pakrasi HB. 2003. An inquiry into protein structure and genetic disease: introducing undergraduates to bioinformatics in a large introductory course. *CBE Life Sciences Education*. 4(3):207-220. DOI: 10.1187/cbe.04-07-0044

Breslin PAS, Beauchamp GK. 1997. Salt enhances flavour by suppressing bitterness. *Nature*. 387:563. DOI: 10.1038/42388

Hanauer DI, Jacobs-Sera D, Pedulla ML, Cresawn SG, Hendrix RW, Hatfull GF. 2006. Teaching scientific inquiry. *Science*. 314(5807):1880-1881. DOI: 10.1126/science.1136796

Copyright

The manuscript must be accompanied by letters of permission from copyright holders to include any copyrighted material in your manuscript.

Style and Usage

Do not use underlining anywhere in the text; scientific names should be in italics. Hyphenate compounds used as adjectives (3-year-old male, 10-mL pipet, 3-minute intervals). Use serial commas, *including* that preceding the conjunction (left, right, and center; *not*: left, right and center). Leave one space after punctuation that ends sentences (periods, question marks, etc.) and only one space after colons, semicolons, commas, and other internal punctuation marks.

Numbers and Mathematics

Use decimals rather than fractions, except in equations. Decimals not preceded by a whole number should always be preceded by a zero (0.75).

Use numerals for numbers greater than nine except when starting a sentence (associated abbreviation or symbol should be spelled out as well: “Eleven grams,” but “About 11 g”; “Fifteen percent,” but “More than 15%”).

Spell out numbers one through nine *except* when used with units of measure or time (6 mm, 3 days, 4 years, but five students, seven observations), or in a series that includes at least one number greater than nine (1 syringe, 3 beakers, and 25 test tubes). Use commas in numbers of four digits or more (1,000) except in catalog numbers.

In giving ranges, use “from 10.1 to 31.0 mm,” but “the range is 10.1–31.0 mm” (i.e., use “to” when it is preceded by “from”).

Specify currency as U.S. or Canadian dollars (\$40 US, \$48 CDN).

Units of Measure

Use the metric system for all measures (20 kg, 6 g, 30 km). A list of accepted abbreviations that can be used in text, tables, and figures of manuscript, without explanation or punctuation, appears below. Other measures should be spelled out (e.g., dozen, day, inch, second, minute, hour, month, week, year).

°C degrees Celsius m meter mm millimeter cm centimeter µg microgram M molar g gram µL microliter X magnification kg kilogram mL milliliter nm nanometer km kilometer mg milligram

Miscellaneous

Italicize all Latin words and abbreviations, except those commonly used (e.g., i.e.). Periods and commas should be placed within closing quotation marks. A semicolon and colon should be placed outside closing quotation marks.

Final Check Before Submission

Authors are strongly advised to carefully review their manuscript to check that it follows the ABLE Publication format and to ensure that the manuscript has the authors intended placement of Tables and Figures. To aid in your final review, save your manuscript as a pdf document and then check the placement of Tables and Figures. Placements may change if there is text that provides website addresses. Text that describes html hyperlinks will be converted to html link text (blue active link text) and text following it will shift up. This problem may be corrected by placing extra line breaks prior to the text (Figure legend) that is shifting, so text following an image cannot shift above a Figure.

The Contact author will receive a manuscript proof (pdf document) from the ABLE Editor(s) for review and approval prior to on-line publication.