Your essay should be typed, double-spaced on standard-sized paper (8.5" x 11") with 1" margins on all sides. APA recommends using 12 pt. Times New Roman font.

Include a page header at the top of every page. To create a page header, insert page numbers flush right. Then type "TITLE OF YOUR PAPER" in the header flush left.

Major Paper Sections

Your essay should include four major sections: the Title Page, Abstract, Main Body, and References.

Title Page

The title page should contain the title of the paper, the author's name, and the institutional affiliation. Include the page header (described above) flush left with the page number flush right at the top of the page. Please note that on the title page, your page header should look like this:

Running head: TITLE OF YOUR PAPER

Pages after the title page should have a running head that looks like this:

TITLE OF YOUR PAPER

Type your title in upper and lowercase letters centered in the upper half of the page. APA recommends that your title be no more than 12 words in length and that it should not contain abbreviations or words that serve no purpose. Your title may take up one or two lines. All text on the title page, and throughout your paper, should be double-spaced.

Beneath the title, type the author's name: first name, middle initial(s), and last name. Do not use titles (Dr.) or degrees (Ph.D.).

Beneath the author's name, type the institutional affiliation, which should indicate the location where the author(s) conducted the research.

Abstract

Begin a new page. Your abstract page should already include the page header (described above). On the first line of the abstract page, center the word "Abstract" (no bold, formatting, italics, underlining, or quotation marks).
Beginning with the next line, write a concise summary of the key points of your research. (Do not indent.) Your abstract should contain at least your research topic, research questions, participants, methods, results, data analysis, and conclusions. You may also include possible implications of your research and future work you see connected with your findings. Your abstract should be a single paragraph double-spaced. Your abstract should be between 150 and 250 words.

You may also want to list keywords from your paper in your abstract. To do this, center the text and type Keywords: (italicized) and then list your keywords. Listing your keywords will help researchers find your work in databases.

**Headings**

APA Style uses a unique headings system to separate and classify paper sections. There are 5 heading levels in APA. The 6th edition of the APA manual revises and simplifies previous heading guidelines. Regardless of the number of levels, always use the headings in order, beginning with level 1. The format of each level is illustrated below:

<table>
<thead>
<tr>
<th>APA Headings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level</td>
</tr>
<tr>
<td>-------</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>5</td>
</tr>
</tbody>
</table>

Thus, if the article has four sections, some of which have subsection and some of which don’t, use headings depending on the level of subordination. Section headings receive level one format. Subsections receive level two format. Subsections of subsections receive level three format. For example:

**Methods** (Level 1)

**Site of Study** (Level 2)

**Participant Population** (Level 2)

Teachers. (Level 3)

Students. (Level 3)

**Results** (Level 1)

**Spatial Ability** (Level 2)

Test one. (Level 3)

Teachers with experience. (Level 4)

Teachers in training. (Level 4)

Test two. (Level 3)
Kinesthetic Ability (Level 2)

In APA Style, the Introduction section never gets a heading and headings are not indicated by letters or numbers. Levels of headings will depend upon the length and organization of your paper. Regardless, always begin with level one headings and proceed to level two, etc.

In-Text Citations: The Basics

**Note:** APA style requires authors to use the past tense or present perfect tense when using signal phrases to describe earlier research, for example, Jones (1998) found or Jones (1998) has found...

**APA Citation Basics**

When using APA format, follow the author-date method of in-text citation. This means that the author's last name and the year of publication for the source should appear in the text, for example, (Jones, 1998), and a complete reference should appear in the reference list at the end of the paper.

If you are referring to an idea from another work but NOT directly quoting the material, or making reference to an entire book, article or other work, you only have to make reference to the author and year of publication and not the page number in your in-text reference. All sources that are cited in the text must appear in the reference list at the end of the paper.

**In-Text Citation Capitalization, Quotes, and Italics/Underlining**

- Always capitalize proper nouns, including author names and initials: D. Jones.
- If you refer to the title of a source within your paper, capitalize all words that are four letters long or greater within the title of a source: Permanence and Change. Exceptions apply to short words that are verbs, nouns, pronouns, adjectives, and adverbs: Writing New Media, There Is Nothing Left to Lose.
  
  *(Note: in your References list, only the first word of a title will be capitalized: Writing new media.)*

- When capitalizing titles, capitalize both words in a hyphenated compound word: Natural-Born Cyborgs.
- Capitalize the first word after a dash or colon: "Defining Film Rhetoric: The Case of Hitchcock's Vertigo."
- Italicize or underline the titles of longer works such as books, edited collections, movies, television series, documentaries, or albums: The Closing of the American Mind; The Wizard of Oz; Friends.
- Put quotation marks around the titles of shorter works such as journal articles, articles from edited collections, television
Short Quotations

If you are directly quoting from a work, you will need to include the author, year of publication, and the page number for the reference (preceded by "p."). Introduce the quotation with a signal phrase that includes the author's last name followed by the date of publication in parentheses.

According to Jones (1998), "Students often had difficulty using APA style, especially when it was their first time" (p. 199).

Jones (1998) found "students often had difficulty using APA style" (p. 199); what implications does this have for teachers?

If the author is not named in a signal phrase, place the author's last name, the year of publication, and the page number in parentheses after the quotation.

She stated, "Students often had difficulty using APA style" (Jones, 1998, p. 199), but she did not offer an explanation as to why.

Long Quotations

Place direct quotations longer than 40 words in a free-standing block of typewritten lines, and omit quotation marks. Start the quotation on a new line, indented 1/2 inch from the left margin, i.e., in the same place you would begin a new paragraph. Type the entire quotation on the new margin, and indent the first line of any subsequent paragraph within the quotation 1/2 inch from the new margin. Maintain double-spacing throughout. The parenthetical citation should come after the closing punctuation mark.

Jones's (1998) study found the following:

Students often had difficulty using APA style, especially when it was their first time citing sources.

This difficulty could be attributed to the fact that many students failed to purchase a style manual or to ask their teacher for help. (p. 199)
Summary or Paraphrase

If you are paraphrasing an idea from another work, you only have to make reference to the author and year of publication in your in-text reference, but APA guidelines encourage you to also provide the page number (although it is not required.)

According to Jones (1998), APA style is a difficult citation format for first-time learners.

APA style is a difficult citation format for first-time learners (Jones, 1998, p. 199).

Authors:

APA style has a series of important rules on using author names as part of the author-date system. There are additional rules for citing indirect sources, electronic sources, and sources without page numbers.

Citing an Author or Authors

**A Work by Two Authors:** Name both authors in the signal phrase or in the parentheses each time you cite the work. Use the word "and" between the authors' names within the text and use the ampersand in the parentheses.

Research by Wegener and Petty (1994) supports...

(Wegener & Petty, 1994)

**A Work by Three to Five Authors:** List all the authors in the signal phrase or in parentheses the first time you cite the source.

(Kernis, Cornell, Sun, Berry, & Harlow, 1993)

In subsequent citations, only use the first author's last name followed by "et al." in the signal phrase or in parentheses.

(Kernis et al., 1993)

**In et al., et should not be followed by a period.**

**Six or More Authors:** Use the first author's name followed by et al. in the signal phrase or in parentheses.

Harris et al. (2001) argued...

(Harris et al., 2001)
Unknown Author: If the work does not have an author, cite the source by its title in the signal phrase or use the first word or two in the parentheses. Titles of books and reports are italicized or underlined; titles of articles, chapters, and web pages are in quotation marks.

A similar study was done of students learning to format research papers ("Using APA," 2001).

Note: In the rare case the "Anonymous" is used for the author, treat it as the author's name (Anonymous, 2001). In the reference list, use the name Anonymous as the author.

Organization as an Author: If the author is an organization or a government agency, mention the organization in the signal phrase or in the parenthetical citation the first time you cite the source.

According to the American Psychological Association (2000),...

If the organization has a well-known abbreviation, include the abbreviation in brackets the first time the source is cited and then use only the abbreviation in later citations.

First citation: (Mothers Against Drunk Driving [MADD], 2000)

Second citation: (MADD, 2000)

Two or More Works in the Same Parentheses: When your parenthetical citation includes two or more works, order them the same way they appear in the reference list, separated by a semi-colon.

(Berndt, 2002; Harlow, 1983)

Authors With the Same Last Name: To prevent confusion, use first initials with the last names.

(E. Johnson, 2001; L. Johnson, 1998)

Two or More Works by the Same Author in the Same Year: If you have two sources by the same author in the same year, use lower-case letters (a, b, c) with the year to order the entries in the reference list. Use the lower-case letters with the year in the in-text citation.

Research by Berndt (1981a) illustrated that...

Introductions, Prefaces, Forewords, and Afterwords: When citing an Introduction, Preface, Foreword, or Afterwords in-text, cite the appropriate author and year as usual.

(Funk & Kolln, 1992)

Personal Communication: For interviews, letters, e-mails, and other person-to-person communication, cite the communicators name, the fact that it was personal communication, and the date of the communication. Do not include personal communication in the reference list.

A. P. Smith also claimed that many of her students had difficulties with APA style (personal communication, November 3, 2002).

**Citing Indirect Sources**

If you use a source that was cited in another source, name the original source in your signal phrase. List the secondary source in your reference list and include the secondary source in the parentheses.

Johnson argued that...(as cited in Smith, 2003, p. 102).

**Note:** When citing material in parentheses, set off the citation with a comma, as above. Also, try to locate the original material and cite the original source.

**Electronic Sources**

If possible, cite an electronic document the same as any other document by using the author-date style.

Kenneth (2000) explained...

**Unknown Author and Unknown Date:** If no author or date is given, use the title in your signal phrase or the first word or two of the title in the parentheses and use the abbreviation "n.d." (for "no date").

Another study of students and research decisions discovered that students succeeded with tutoring ("Tutoring and APA," n.d.).

**Sources Without Page Numbers**

When an electronic source lacks page numbers, you should try to include information that will help readers find the passage being cited. When an electronic document has numbered paragraphs, use the abbreviation "para." followed by the paragraph number (Hall, 2001, para. 5). If the paragraphs are not numbered and the document includes headings, provide the appropriate heading and specify the paragraph under that heading. Note that in some electronic sources, like Web pages, people can use the Find function in their browser to locate any passages you cite.

According to Smith (1997), ... (Mind over Matter section, para. 6).

**Note:** Never use the page numbers of Web pages you print out; different computers print Web pages with different pagination.

**Footnotes and Endnotes**

When using either type of footnote, insert a number formatted in superscript following almost any punctuation mark. Footnote numbers should not follow dashes ( — ), and if they appear in a sentence in parentheses, the footnote number should be inserted within the parentheses.
Scientists examined—over several years\(^1\)—the fossilized remains of the wooly-wooly yak.\(^2\)

(These have now been transferred to the Chauan Museum.\(^3\))

When using the footnote function in a word-processing program like Microsoft Word, place all footnotes at the bottom of the page on which they appear. Footnotes may also appear on the final page of your document (usually this is after the References page). Center the word “Footnotes” at the top of the page. Indent five spaces on the first line of each footnote. Then, follow normal paragraph spacing rules. Double-space throughout.

\(^1\) While the method of examination for the wooly-wooly yak provides important insights to this research, this document does not focus on this particular species.

**Reference List: Basic Rules**

Your reference list should appear at the end of your paper. It provides the information necessary for a reader to locate and retrieve any source you cite in the body of the paper. Each source you cite in the paper must appear in your reference list; likewise, each entry in the reference list must be cited in your text.

Your references should begin on a new page separate from the text of the essay; label this page "References" centered at the top of the page (do NOT bold, underline, or use quotation marks for the title). All text should be double-spaced just like the rest of your essay.

**Basic Rules**

- All lines after the first line of each entry in your reference list should be indented one-half inch from the left margin. This is called hanging indentation.
- Authors’ names are inverted (last name first); give the last name and initials for all authors of a particular work for up to and including seven authors. If the work has more than seven authors, list the first six authors and then use ellipses after the sixth author’s name. After the ellipses, list the last author’s name of the work.
- Reference list entries should be alphabetized by the last name of the first author of each work.
- If you have more than one article by the same author, single-author references or multiple-author references with the exact same authors in the exact same order are listed in order by the year of publication, starting with the earliest.
- Capitalize all major words in journal titles.
- When referring to books, chapters, articles, or Web pages, capitalize only the first letter of the first word of a title and subtitle, the first word after a colon or a dash in the title, and proper nouns. Do not capitalize the first
letter of the second word in a hyphenated compound word.
• Italicize titles of longer works such as books and journals.
• Do not italicize, underline, or put quotes around the titles of shorter works such as journal articles or essays in edited collections.
• **Please note:** While the APA manual provides many examples of how to cite common types of sources, it does not provide rules on how to cite all types of sources. Therefore, if you have a source that APA does not include, APA suggests that you find the example that is most similar to your source and use that format. For more information, see page 193 of the *Publication Manual of the American Psychological Association*, sixth edition.

The following rules for handling works by a single author or multiple authors apply to all APA-style references in your reference list, regardless of the type of work (book, article, electronic resource, etc.)

**Single Author**

Last name first, followed by author initials.


**Two Authors**

List by their last names and initials. Use the ampersand instead of "and."


**Three to Seven Authors**

List by last names and initials; commas separate author names, while the last author name is preceded again by ampersand.

More Than Seven Authors


Organization as Author


Unknown Author


NOTE: When your essay includes parenthetical citations of sources with no author named, use a shortened version of the source's title instead of an author's name. Use quotation marks and italics as appropriate. For example, parenthetical citations of the source above would appear as follows: (Merriam-Webster's, 1993).

Two or More Works by the Same Author

Use the author's name for all entries and list the entries by the year (earliest comes first).


When an author appears both as a sole author and, in another citation, as the first author of a group, list the one-author entries first.


References that have the same first author and different second and/or third authors are arranged alphabetically by the last name of the second author, or the last name of the third if the first and second authors are the same.


**Two or More Works by the Same Author in the Same Year**

If you are using more than one reference by the same author (or the same group of authors listed in the same order) published in the same year, organize them in the reference list alphabetically by the title of the article or chapter. Then assign letter suffixes to the year. Refer to these sources in your essay as they appear in your reference list, e.g.: "Berdnt (1981a) makes similar claims..."


**Introductions, Prefaces, Forewords, and Afterwords**

Cite the publishing information about a book as usual, but cite Introduction, Preface, Foreword, or Afterword (whatever title is applicable) as the chapter of the book.


**Reference List: Articles in Periodicals**

**Basic Form**

APA style dictates that authors are named last name followed by initials; publication year goes between parentheses, followed by a period. The title of the article is in sentence-case, meaning only the first word and proper nouns in the title are capitalized. The periodical title is run in title case, and is followed by the volume number which, with the title, is also italicized or underlined.


**Article in Journal Paginated by Volume**
Journals that are paginated by volume begin with page one in issue one, and continue numbering issue two where issue one ended, etc.


**Article in Journal Paginated by Issue**

Journals paginated by issue begin with page one every issue; therefore, the issue number gets indicated in parentheses after the volume. The parentheses and issue number are not italicized or underlined.


**Article in a Magazine**


**Article in a Newspaper**


**Note:** Because of issues with html coding, the listings below using brackets contain spaces that are not to be used with your listings. Use a space as normal before the brackets, but do not include a space following the bracket.

**Letter to the Editor**


**Review**


**Reference List: Books**
Basic Format for Books

Author, A. A. (Year of publication). Title of work: Capital letter also for subtitle. Location: Publisher.

Note: For "Location," you should always list the city and the state using the two letter postal abbreviation without periods (New York, NY).


Edited Book, No Author


Edited Book with an Author or Authors


A Translation


Note: When you cite a republished work, like the one above, in your text, it should appear with both dates: Laplace (1814/1951).

Edition Other Than the First


Article or Chapter in an Edited Book


Note: When you list the pages of the chapter or essay in parentheses after the book title, use "pp." before the numbers: (pp. 1-21). This abbreviation, however, does not appear before the page numbers in periodical references, except for newspapers.

**Multivolume Work**


**Reference List: Other Print Sources**

**An Entry in an Encyclopedia**


**Work Discussed in a Secondary Source**

List the source the work was discussed in:


**NOTE:** Give the secondary source in the references list; in the text, name the original work, and give a citation for the secondary source. For example, if Seidenberg and McClelland's work is cited in Coltheart et al. and you did not read the original work, list the Coltheart et al. reference in the References. In the text, use the following citation:

In Seidenberg and McClelland's study (as cited in Coltheart, Curtis, Atkins, & Haller, 1993), ...

**Dissertation Abstract**


**Dissertation, Published**

**Dissertation, Unpublished**


**Government Document**


**Report From a Private Organization**


**Conference Proceedings**


**Reference List: Electronic Sources (Web Publications)**

**Article From an Online Periodical**

Online articles follow the same guidelines for printed articles. Include all information the online host makes available, including an issue number in parentheses.


Online Scholarly Journal Article: Citing DOIs

Because online materials can potentially change URLs, APA recommends providing a Digital Object Identifier (DOI), when it is available, as opposed to the URL. DOIs are an attempt to provide stable, long-lasting links for online articles. They are unique to their documents and consist of a long alphanumeric code. Many—but not all—publishers will provide an article's DOI on the first page of the document.

Note that some online bibliographies provide an article's DOI but may "hide" the code under a button which may read "Article" or may be an abbreviation of a vendors name like "CrossRef" or "PubMed." This button will usually lead the user to the full article which will include the DOI. Find DOI's from print publications or ones that go to dead links with CrossRef.org's "DOI Resolver," which is displayed in a central location on their home page.

Article From an Online Periodical with DOI Assigned

Author, A. A., & Author, B. B. (Date of publication). Title of article. Title of Journal, volume number, page range. doi:0000000/000000000000


Article From an Online Periodical with no DOI Assigned

Online scholarly journal articles without a DOI require the URL of the journal home page. Remember that one goal of citations is to provide your readers with enough information to find the article; providing the journal home page aids readers in this process.


Article From a Database


Abstract

If you only cite an abstract but the full text of the article is also available, cite the online abstract as other online citations, adding "[Abstract]" after the article or source name.


**Newspaper Article**


**Electronic Books**

Electronic books may include books found on personal websites, databases, or even in audio form. Use the following format if the book you are using is only provided in a digital format or is difficult to find in print. If the work is not directly available online or must be purchased, use “Available from,” rather than “Retrieved from,” and point readers to where they can find it. For books available in print form and electronic form, include the publish date in parentheses after the author's name.


taytay.html


**Chapter/Section of a Web document or Online Book Chapter**


NOTE: Use a chapter or section identifier and provide a URL that links directly to the chapter section, not the home page of the Web site.

Online Book Reviews

Cite the information as you normally would for the work you are quoting. (The first example below is from a newspaper article; the second is from a scholarly journal.) In brackets, write "Review of the book" and give the title of the reviewed work. Provide the web address after the words "Retrieved from," if the review is freely available to anyone. If the review comes from a subscription service or database, write "Available from" and provide the information where the review can be purchased.


Dissertation/Thesis from a Database


Online Encyclopedias and Dictionaries

Often encyclopedias and dictionaries do not provide bylines (authors' names). When no byline is present, move the entry name to the front of the citation. Provide publication dates if present or specify (n.d.) if no date is present in the entry.


Online Bibliographies and Annotated Bibliographies


Data Sets
Point readers to raw data by providing a Web address (use "Retrieved from") or a general place that houses data sets on the site (use "Available from").


**Graphic Data (e.g. Interactive Maps and Other Graphic Representations of Data)**

Give the name of the researching organization followed by the date. In brackets, provide a brief explanation of what type of data is there and in what form it appears. Finally, provide the project name and retrieval information.


**Qualitative Data and Online Interviews**

If an interview is not retrievable in audio or print form, cite the interview only in the text (not in the reference list) and provide the month, day, and year in the text. If an audio file or transcript is available online, use the following model, specifying the medium in brackets (e.g. [Interview transcript, Interview audio file]):


**Online Lecture Notes and Presentation Slides**

When citing online lecture notes, be sure to provide the file format in brackets after the lecture title (e.g. PowerPoint slides, Word document).


Nonperiodical Web Document, Web Page, or Report

List as much of the following information as possible (you sometimes have to hunt around to find the information; don't be lazy. If there is a page like http://www.somesite.com/somepage.htm, and somepage.htm doesn't have the information you're looking for, move up the URL to http://www.somesite.com/):


NOTE: When an Internet document is more than one Web page, provide a URL that links to the home page or entry page for the document. Also, if there isn't a date available for the document use (n.d.) for no date.

Computer Software/Downloaded Software

Do not cite standard office software (e.g. Word, Excel) or programming languages. Provide references only for specialized software.


Software that is downloaded from a Web site should provide the software's version and year when available.


E-mail

E-mails are not included in the list of references, though you parenthetically cite them in your main text: (E. Robbins, personal communication, January 4, 2001).

Online Forum or Discussion Board Posting

Include the title of the message, and the URL of the newsgroup or discussion board. Please note that titles for items in online communities (e.g. blogs, newsgroups, forums) are not italicized. If the author's name is not available, provide the screen name. Place identifiers like post or message numbers, if available, in brackets. If available, provide the URL where the message is archived (e.g. "Message posted to..., archived at...").

**Blog (Weblog) and Video Blog Post**

Include the title of the message and the URL. Please note that titles for items in online communities (e.g. blogs, newsgroups, forums) are not italicized. If the author's name is not available, provide the screen name.


Psychology Video Blog #3 [Video file]. Retrieved from http://www.youtube.com/watch?v=lqM90eQi5-M

**Wikis**

Please note that the *APA Style Guide to Electronic References* warns writers that wikis (like Wikipedia, for example) are collaborative projects that cannot guarantee the verifiability or expertise of their entries.

OLPC Peru/Arahuay. (n.d.). Retrieved April 29, 2011 from the OLPC Wiki:

http://wiki.laptop.org/go/OLPC_Peru/Arahuay

**Audio Podcast**

For all podcasts, provide as much information as possible; not all of the following information will be available. Possible addition identifiers may include Producer, Director, etc.


**Video Podcasts**

For all podcasts, provide as much information as possible; not all of the following information will be available. Possible addition identifiers may include Producer, Director, etc.

APA Tables and Figures 1

The purpose of tables and figures in documents is to enhance your readers' understanding of the information in the document. Most word processing software available today will allow you to create your own tables and figures, and even the most basic of word processors permit the embedding of images, thus enabling you to include tables and figures in almost any document.

General Guidelines

Necessity. Visual material such as tables and figures can be used quickly and efficiently to present a large amount of information to an audience, but visuals must be used to assist communication, not to use up space, or disguise marginally significant results behind a screen of complicated statistics. Ask yourself this question first: is the table or figure necessary? For example, it is better to present simple descriptive statistics in the text, not in a table.

Relation of Tables or Figures and Text. Because tables and figures supplement the text, refer in the text to all tables and figures used and explain what the reader should look for when using the table or figure. Focus only on the important point the reader should draw from them, and leave the details for the reader to examine on her own.

Documentation. If you are using figures, tables and/or data from other sources, be sure to gather all the information you will need to properly document your sources.

Integrity and Independence. Each table and figure must be intelligible without reference to the text, so be sure to include an explanation of every abbreviation (except the standard statistical symbols and abbreviations).

Organization, Consistency, and Coherence. Number all tables sequentially as you refer to them in the text (Table 1, Table 2, etc.), likewise for figures (Figure 1, Figure 2, etc.). Abbreviations, terminology, probability level values must be consistent across tables and figures in the same article. Likewise, formats, titles, and headings must be consistent. Do not repeat the same data in different tables.

Tables

Table Checklist

- Is the table necessary?
- Is the entire table single- or double-spaced (including the title, headings, and notes)?
- Are all comparable tables presented consistently?
- Is the title brief but explanatory?
- Does every column have a column heading?
- Are all abbreviations; special use of italics, parentheses, and dashes; and special symbols explained?
- Are all probability level values correctly identified, and are asterisks attached to the appropriate table entries? Is a probability level assigned the same number of asterisks in all the tables in the same document?
Are the notes organized according to the convention of general, specific, probability?
Are all vertical rules eliminated?
If the table or its data are from another source, is the source properly cited?
Is the table referred to in the text?

Tables

Data in a table that would require only two or fewer columns and rows should be presented in the text. More complex data is better presented in tabular format. In order for quantitative data to be presented clearly and efficiently, it must be arranged logically, e.g. data to be compared must be presented next to one another (before/after, young/old, male/female, etc.), and statistical information (means, standard deviations, N values) must be presented in separate parts of the table. If possible, use canonical forms (such as ANOVA, regression, or correlation) to communicate your data effectively.

Table 1

Dogs Scoring Above Average on Intelligence by Breed and Gender

<table>
<thead>
<tr>
<th>Breed</th>
<th>Male</th>
<th>Female</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dachshund</td>
<td>123</td>
<td>234</td>
<td>17.6</td>
</tr>
<tr>
<td>Terrier</td>
<td>456</td>
<td>567</td>
<td>31.1</td>
</tr>
<tr>
<td>Siberian Huskya</td>
<td>789</td>
<td>891</td>
<td>51.3</td>
</tr>
<tr>
<td>Totals (N = 3060)</td>
<td>1368</td>
<td>1692</td>
<td></td>
</tr>
</tbody>
</table>

*Note: Average score = 150. No animals were harmed during testing.
*Three huskies (one male, two female) escaped before testing was completed and are therefore included in the table.

Table Structure

The following image illustrates the basic structure of tables.
**Numbers.** Number all tables with arabic numerals sequentially. Do not use suffix letters (e.g. Table 3a, 3b, 3c); instead, combine the related tables. If the manuscript includes an appendix with tables, identify them with capital letters and Arabic numerals (e.g. Table A1, Table B2).

**Titles.** Like the title of the paper itself, each table must have a clear and concise title. When appropriate, you may use the title to explain an abbreviation parenthetically.

Example: *Comparison of Median Income of Adopted Children (AC) v. Foster Children (FC)*

**Headings.** Keep headings clear and brief. The heading should not be much wider than the widest entry in the column. Use of standard abbreviations can aid in achieving that goal. All columns must have headings, even the stub column (see example structure), which customarily lists the major independent variables.

**Body.** In reporting the data, consistency is key: Numerals should be expressed to a consistent number of decimal places that is determined by the precision of measurement. Never change the unit of measurement or the number of decimal places in the same column.

**Specific Types of Tables**

**Analysis of Variance (ANOVA) Tables.** The conventional format for an ANOVA table is to list the source in the stub column, then the degrees of freedom (df) and the *F* ratios. Give the between-subject variables and error first, then within-subject and any error. Mean square errors must be enclosed in parentheses. Provide a general note to the table to explain what those values mean (see example). Use asterisks to identify statistically significant *F* ratios, and provide a probability footnote.

<table>
<thead>
<tr>
<th>Table 3 ANOVA Table</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample ANOVA Table</td>
</tr>
<tr>
<td><strong>Subhead</strong></td>
</tr>
<tr>
<td>Row 1</td>
</tr>
<tr>
<td>Row 2</td>
</tr>
<tr>
<td>Row 3</td>
</tr>
<tr>
<td>Row 4</td>
</tr>
</tbody>
</table>

*Note: This is where authors provide extra information important to the data, such as findings that approach statistical significance depending on the *p* value: Significant at the *p*<0.05 level.*

**Regression.** Conventional reporting of regression analysis follows two formats. If the study is purely applied, list only the raw or unstandardized coefficients (*B*). If the study is purely theoretical, list only the standardized coefficients (*β*). If the study was neither purely applied nor theoretical, then list both standardized and unstandardized coefficients. Specify the type of analysis, either hierarchical or simultaneous, and provide the increments of change if you used hierarchical regression.
**Notes in Tables**

There are three types of notes for tables: general, specific, and probability notes. All of them must be placed below the table in that order.

**General** notes explain, qualify or provide information about the table as a whole. Put explanations of abbreviations, symbols, etc. here.

Example: *Note.* The racial categories used by the US Census (African-American, Asian American, Latinos/-as, Native-American, and Pacific Islander) have been collapsed into the category “non-White.” E = excludes respondents who self-identified as “White” and at least one other “non-White” race.

**Specific** notes explain, qualify or provide information about a particular column, row, or individual entry. To indicate specific notes, use superscript lowercase letters (e.g. \(^a, b, c\)), and order the superscripts from left to right, top to bottom. Each table's first footnote must be the superscript \(a\).

Example: \(^a\) n = 823. \(^b\) One participant in this group was diagnosed with schizophrenia during the survey.

**Figures**

**Figure Checklist**

- Is the figure necessary?
- Is the figure simple, clean, and free of extraneous detail?
- Are the data plotted accurately?
- Is the grid scale correctly proportioned?
- Is the lettering large and dark enough to read? Is the lettering compatible in size with the rest of the figure?
• Are parallel figures or equally important figures prepared according to the same scale?
• Are terms spelled correctly?
• Are all abbreviations and symbols explained in a figure legend or figure caption? Are the symbols, abbreviations, and terminology in the figure consistent with those in the figure caption? In other figures? In the text?
• Are the figures numbered consecutively with Arabic numerals?
• Are all figures mentioned in the text?

As tables supplement the text, so should each figure.

**Types of Figures**

**Graphs** are good at quickly conveying relationships like comparison and distribution. The most common forms of graphs are scatter plots, line graphs, bar graphs, pictorial graphs, and pie graphs. For more details and specifics on what kind of information, relations, and meaning can be expressed with the different types of graphs, consult your textbook on quantitative analysis. Spreadsheet programs, such as Microsoft Excel, can generate the graphs for you.

**Scatter plots** are composed of individual dots that represent the value of a specific event on the scale established by the two variables plotted on the x- and y-axes. When the dots cluster together, a correlation is implied. On the other hand, when the dots are scattered randomly, no correlation is seen.

![ Scatter Plot Graph ]

**Line graphs** depict the relationship between quantitative variables. Customarily, the independent variable is plotted along the x-axis (horizontally) and the dependent variable is plotted along the y-axis (vertically). See example Figure 1...
Bar graphs come in three main types: 1) solid vertical or horizontal bars, 2) multiple bar graphs, and 3) sliding bars. In solid bar graphs, the independent variable is categorical, and each bar represents one kind of datum, e.g. a bar graph of monthly expenditures. A multiple bar graph can show more complex information than a simple bar graph, e.g. monthly expenditures divided into categories (housing, food, transportation, etc.). In sliding bar graphs, the bars are divided by a horizontal line which serves as the baseline, enabling the representation of data above and below a specific reference point, e.g. high and low temperatures v. average temperature.
Pictorial graphs can be used to show quantitative differences between groups. Pictorial graphs can be very deceptive: if the height of an image is doubled, its area is quadrupled. Therefore, great care should be taken that images representing the same values must be the same size.

Circle (pie) graphs are used to represent percentages and proportions. For the sake of readability, no more than five variables should be compared in a single pie graph. The segments should be ordered very strictly: beginning at twelve o’clock, order them from the largest to the smallest, and shade the segments from light to dark (i.e. the smallest segment should be the darkest). Lines and dots can be used for shading in black and white documents.

Charts are used to represent the components of larger objects or groups (e.g. a tribal hierarchy), the steps in a process (as in a flow-chart), or the schematics of an object (the components of a cell phone).

Drawings and photographs can be used to communicate very specific information about a subject. Thanks to software, both are now highly manipulable. For the sake of readability and simplicity, line drawings should be used, and photographs should have the highest possible contrast between the background and focal point. Cropping, cutting out extraneous detail, can be very beneficial for a photograph. Use software like GraphicConverter or Photoshop to convert color photographs to black and white before printing on a laser printer. Otherwise most printers will produce an image with poor contrast.
Preparing Figures

In preparing figures, communication and readability must be the ultimate criteria. Avoid the temptation to use the special effects available in most advanced software packages. While three-dimensional effects, shading, and layered text may look interesting to the author, overuse, inconsistent use, and misuse may distort the data, and distract or even annoy readers. Design properly done is inconspicuous, almost invisible, because it supports communication. Design improperly, or amateurishly, done draws the reader’s attention from the data, and makes him or her question the author’s credibility.

The APA has determined specifications for the size of figures and the fonts used in them. Figures of one column must be between 2 and 3.25 inches wide (5 to 8.45 cm). Two-column figures must be between 4.25 and 6.875 inches wide (10.6 to 17.5 cm). The height of figures should not exceed the top and bottom margins. The text in a figure should be in a san serif font (such as Helvetica, Arial, or Futura). The font size must be between eight and fourteen point. Use circles and squares to distinguish curves on a line graph (at the same font size as the other labels). (See examples above.)

Captions and Legends

For figures, make sure to include the figure number and a title with a legend and caption. These elements appear below the visual display. For the figure number, type Figure X. Then type the title of the figure in upper and lowercase letters. Follow the title with a legend that explains the symbols in the figure and a caption that explains the figure:

*Figure 1. How to create figures in APA style. This figure illustrates effective elements in APA style figures.*

Captions serve as a brief, but complete, explanation and as a title. For example, “Figure 4. Population” is insufficient, whereas “Figure 4. Population of Grand Rapids, MI by race (1980)” is better. If the figure has a title in the image, crop it.
Graphs should always include a legend that explains the symbols, abbreviations, and terminology used in the figure. These terms must be consistent with those used in the text and in other figures. The lettering in the legend should be of the same type and size as that used in the figure.

**APA Abbreviations**

In APA, abbreviations should be limited to instances when a) the abbreviation is standard and will not interfere with the reader’s understanding and b) if space and repetition can be greatly avoided through abbreviation.

There are a few common trends in abbreviating that you should follow when using APA, though there are always exceptions to these rules. When abbreviating a term, use the full term the first time you use it, followed immediately by the abbreviation in parentheses.

According to the American Psychological Association (APA), abbreviations are best used only when they allow for clear communication with the audience.

*Exceptions*: Standard abbreviations like units of measurement and states do not need to be written out. APA also allows abbreviations that appear as words in *Meriam-Webster’s Collegiate Dictionary* to be used without explanation (IQ, REM, AIDS, HIV).

Do not use periods or spaces in abbreviations of all capital letters, unless it is a proper name or refers to participants using identity-concealing labels:

MA, CD, HTML, APA

P. D. James, J. R. R. Tolkien, E. B. White or F.I.M., S.W.F.

*Exceptions*: Use a period when abbreviating the United States as an adjective (U.S. Marines or U.S. Senator)

Use a period if the abbreviation is Latin abbreviation or a reference abbreviation:

etc., e.g., a.m. or Vol. 7, p. 12, 4th ed.

Do not use periods when abbreviated measurements:

cd, ft, lb, mi, min

*Exceptions*: Use a period when abbreviated inch (in.) to avoid confusion.

Units of measurement and statistical abbreviations should only be abbreviated when accompanied by numerical values:

7 mg, 12 mi, $M = 7.5$

measured in milligrams, several miles after the exit, the means were determined
Only certain units of time should be abbreviated.

Do not abbreviate:

day, week, month, year

Do abbreviate:

hr, min, ms, ns, s

To form the plural of abbreviations, add s alone without apostrophe or italicization.

vols., IQs, Eds.

*Exception:* Do not add s to pluralize units of measurement (12 m not 12 ms).

**Abbreviations in Citations**

Citations should be as condensed as possible, so you should know the basic rules of abbreviation endorsed by the APA to provide your readers with reference information.

Always abbreviate the first and middle names of authors, editors, etc.

Shakespeare, W., Chomsky, N.

Use the following abbreviations within citations (take note of capitalization):

<table>
<thead>
<tr>
<th><em>Book Part</em></th>
<th><em>Abbreviation</em></th>
</tr>
</thead>
<tbody>
<tr>
<td>edition</td>
<td>ed.</td>
</tr>
<tr>
<td>revised edition</td>
<td>Rev. ed.</td>
</tr>
<tr>
<td>Second Edition</td>
<td>2nd ed.</td>
</tr>
<tr>
<td>Editor(s)</td>
<td>Ed. or Eds.</td>
</tr>
<tr>
<td>Translator(s)</td>
<td>Trans.</td>
</tr>
<tr>
<td>No date</td>
<td>n.d.</td>
</tr>
<tr>
<td>Page(s)</td>
<td>p. or pp.</td>
</tr>
<tr>
<td>Volume(s)</td>
<td>Vol. or Vols.</td>
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<td>Number</td>
<td>No.</td>
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<td>Part</td>
<td>Pt.</td>
</tr>
<tr>
<td>Supplement</td>
<td>Suppl.</td>
</tr>
</tbody>
</table>
Statistics in APA

When including statistics in written text, be sure to include enough information for the reader to understand the study. Although the amount of explanation and data included depends upon the study, APA Style has guidelines for the representation of statistical information:

- Do not give references for statistics unless the statistic is uncommon, used unconventionally, or is the focus of the article
- Do not give formulas for common statistics (i.e. mean, \( t \) test)
- Do not repeat descriptive statistics in the text if they’re represented in a table or figure
- Use terms like respectively and in order when enumerating a series of statistics; this illustrates the relationship between the numbers in the series.

Punctuating Statistics

Use parentheses to enclose statistical values:

...proved to be statistically significant \( (p = .42) \) with all variables.

Use parentheses to enclose degrees of freedom:

\[ t(45) = 4.35 \]

\[ F(3, 87) = 2.11 \]

Use brackets to enclose limits of confidence intervals:

89% CIs [3.45, 2.7], [-6.0, 3.89], and [-7.23, 1.89]

Use standard typeface (no bolding or italicization) when writing Greek letters, subscripts that function as identifiers, and abbreviations that are not variables.

Use **boldface** for vectors and matrices:

\( v, \Sigma \)

Use *italics* for statistical symbols (other than vectors and matrices):

\( t, F, N \)

Use an **italicized**, uppercase \( N \) in reference to number of subjects or participants in the total sample.
\[ N = 328 \]

Use an italicized, lowercase \( n \) in reference to only a portion of the sample.

\( n = 42 \)

References:

Purdue University. The Purdue Online Writing Lab. General format. Retrieved from http://owl.english.purdue.edu/