

FORMATTING GRAPHICS AND VISUALS

Statistics and results from data analysis are often best presented in the form of a table, and a theoretical model or pages of information are often best presented in a well-designed visual such as a chart or graph. The American Psychological Association (APA) distinguishes between two types of visuals: tables and figures. Both are used to provide a large amount of information concisely and to promote greater understanding of a text. This article explains how to format tables and figures according to **APA Style 7th Edition**. See [APA Style 6th edition formatting for tables and figures here](#).

TABLES

Tables are organized in a row and column format and provide information that is not already given in the text. Tables should also be able to stand alone and be understandable without the accompanying text. Therefore, having a descriptive title for the table is important and so is using a “note” to explain any symbols, abbreviations, or asterisks used in the table.

When inserting a table in your work, include the following information (also exemplified by Table 1):

1. **Table number**, aligned left, bolded, and presented in sequence: **Table 1**, **Table 2**, etc.
2. **Table title**, aligned left, italicized, and offering a brief description the table: *Title of Table*
3. **The table itself**, without shading or vertical borders; use horizontal borders only for clarity such as a top and bottom border or to separate a row containing the sums of column data.
4. **Table note**, double-spaced below the table, after the label “note” in italics: *Note*.

Use a callout such as “See Table 1” in the paragraph before the table to point the reader to it.

Table 1

Example of a Table: Purdue Global Career Outcomes Rate, 2018.

Graduates	% Employed	% Continuing education	% Military service
All graduates	91	6	2
Master’s degrees	97	1	1
Bachelor’s degrees	92	5	2
Associates degrees	85	11	4

Note. “Career outcomes rate” is not the same as an employment rate—it includes graduates who are (1) employed (whether full or part time) (2) participating in a program of voluntary service, (3) serving in the U.S. Armed Forces, or (4) enrolled in a program of continuing education. Adapted from “Career Outcomes Surpass National Average” by Purdue University Global, 2020.

(<https://www.purdueglobal.edu/about/purdue-global-one-pager-1.jpg>). Copyright by Purdue University Global.

Table Notes

Table notes are only used when needed, and there can be up to three notes per table, ordered by type:

1. **General Note:** General notes are given first. Table 1 in this article has a general note. General notes provide definitions, keys, and copyright statements for any information that came from a source.
2. **Specific Note:** Specific notes provide information about individual columns or rows. If, for example, a specific column or cell's data needed explanation, a superscript letter such as "a" would be placed by the data, e.g. X^a, and the same superscript letter would be placed before the note about it.
3. **Probability Note:** Probability notes explain asterisks (*) or other symbols that provide probability values used in statistical hypothesis testing used for ruling out something occurring due to chance alone. In statistical testing, researchers use a **probability level** between 0 to 1 to describe the chance of an event occurring, with 0 meaning the event will never occur and 1 meaning the event will always occur.

In a table or figure, **probability levels** are assigned asterisks to indicate a range in probability such as $*p < .05$ and $**p < .01$, and $***p < .001$ (APA, 2020). The fewest number of asterisks indicates the largest probability and the greatest number of asterisks indicates the smallest probability level. Plus (+) and minus (-) signs are also used in probability notes to show **confidence intervals**. For example, the results of an opinion poll may show 56% of the respondents prefer candidate A. If the confidence interval is ± 3 , then 53%-59% of the population agrees with those sampled.

Probability notes may also provide **confidence levels** to indicate how certain the researcher is that the general population will agree with the poll respondents. For example, if the confidence level is 95%, then there is a 95% certainty that 53% to 59% of the population agrees with those polled. Researchers typically use a 95% confidence level.

Example of a general note, specific note, and probability note:

Note. The poll revealed that respondents prefer candidate A. YA = ages 18-30. A = ages 31-43.

Adapted from "Title of Article," by A. Author, Copyright Year, *Publication Title*, vol(issue) page-page.

(URL). Copyright year by Copyright holder or Copyright License or In the public domain.

Data are for all genders.

$*p < .05$. $**p < .01$.

In the example above, the notes are double spaced, and each type of note begins on a new line with the first note providing general information about the table including a copyright note for the data used in the table. **A reference entry is also required** for that source on the reference list for the paper. The second note gives specific information about the data in the rows, and the third note provides the probability (p) values.

Table Checklist

- Is the table necessary?
- Is the table mentioned in the text?
- Is the table inserted under the paragraph where it is first mentioned?
- Is the title brief but explanatory and one double-spaced line below the table number?
- Are all vertical borders in the table eliminated?
- Does every column have a heading including?
- Are the notes in the following order: general note, specific note, probability note?
- Are all abbreviations, symbols, and special uses of dashes, italics, or boldface explained?
- If the table is for statistical testing, are probability levels identified?
- If more than one table is used, are probability level asterisks consistent from table to table?
- With statistical testing data, are confidence intervals reported and consistent for all tables?
- If all or part of a copyrighted table is reproduced or adapted, does the general table note give full credit to the copyright owner and have a corresponding reference entry?

FIGURES

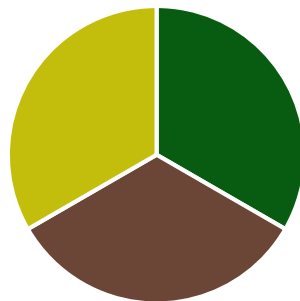
Figures include visuals such as charts graphs, pictures, maps, etc. When inserting a figure in your work, include the following information (also exemplified in Figure 1):

1. **Figure number**, aligned left, bolded, and presented in sequence: **Figure 1**, **Figure 2**, etc.
2. **Figure title**, aligned left, italicized, and offering a brief description the table (See Figure 1).
3. **The figure itself**
4. **Figure note**, double-spaced below the table after the label “note” in italics: *Note*.

Use a callout such as “See Figure 1” in the paragraph before the figure to point the reader to it.

Figure 1

Example of a Figure: The Three Elements of APA Style



Note. This pie chart was created with the Microsoft Word Chart tool located on the Insert tab. The tool automatically creates a key below the figure for the chart’s sections, so for the APA Style note, a textbox with a white background is inserted over the Microsoft Word formatting to provide the color key, which is as follows: Yellow = formatting, green = in-text citations, and brown = references.

The Chart tool in [Microsoft Word](#) and [Microsoft PowerPoint](#) provides options for various types of graphs and charts. With so many types to choose from, it's important to carefully consider which type will best present the information. For example,

- a column chart displays categories of variables;
- a bar chart demonstrates comparisons between single items;
- a pie chart shows percentages;
- a scatter plot illustrates correlations; and
- a line graph demonstrates relationships.

The [Microsoft Office Support](#) webpage provides examples of these types of charts and more.

Figure Notes

As with tables, there can be up to three notes under the figure, ordered by type: (a) general information about the figure including a copyright statement for compiled data or images from the Internet, (b) specific information about individual sections, bars, graphs, or other elements of the figure, and (c) probability explanations as discussed in the section on tables.

Copyright Statements for Compiled Data

When you use data and information in your table or figure that was compiled from research, the figure must contain a general note with a copyright statement identifying the copyright holder of that information. Because you are using this information for an academic purpose that is not for profit, you will not need to also acquire permission from the copyholder. It is considered "fair use" for students and scholars to use information that has been previously published if the information is attributed to the copyright holder with proper documentation.

Use the following copyright statement template in a note for reproduced data that came from a journal or book:

Journal: Note. From [or Adapted from] "Title of Article," by A. A. Author, year, *Journal Title*, Volume(Issue), p. xx. (DOI or URL). Copyright year by Name of Copyright Holder or Creative Commons License such as [CC BY-NC](#) or In the public domain.

Book: Note. From [or Adapted from] *Title of Book* (p. xx-xx), by A. A. Author, year, Publisher (DOI or URL). Copyright year by Name of Copyright Holder or Creative Commons License such as [CC BY-NC](#) or In the public domain.

Copyright Statements for Images

Images are different than compiled data. Permission is required to use a copyrighted photograph or a screenshot of someone else's entire data table. It is an act of plagiarism to use a copyrighted image or work without permission unless that image

- has a Creative Commons license, which allows for reprinting or
- is in the Public Domain.

Copyright statements for images vary based on the source from where it was retrieved. For a reprinted or adapted image, use the following template at the end of a general note:

From [or Adapted from]. *Title of Work*, by A. Author, year of publication, Site Name if different than author name (DOI or URL). Copyright year by Name of Copyright holder or Creative Commons license such as [CC BY-NC](#) or In the public domain. Reprinted or Adapted with permission (if permission for using a copyrighted work was sought and granted).

Figures 2 through 4 use the above copyright statement template for images from different sources.

Figure 2

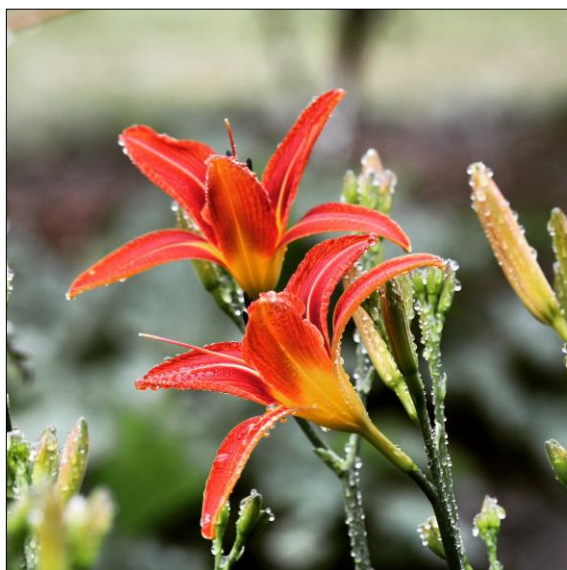
Copyrighted Photograph Used With Permission of the Copyright Holder



Note. From *Water Lily*, by S. Carlson, 2009. Copyright 2009 by S. Carlson. Reprinted with permission.

Figure 3

Photograph With a [Creative Commons License](#) for Reproduction Without Permission



Note. From *Lilies After Rain*, by C. Cairns, 2015, Flickr. (<https://flic.kr/p/vDHife>). CC BY 2.0.

Figure 4

Photograph in the Public Domain



Note. Public domain works are not protected by copyright law or have expired copyrights such as works published before January 1, 1924. From *Study of a Cellist*, by A. Modigliani, 1909, Abcgallery. (<http://www.abcgallery.com/M/modigliani/modigliani12.html>). In the public domain.

Reference Entries for Figures

In addition to a copyright attribution, include a reference entry for any source credited in a figure note. Below is the APA Style (7th ed.) reference entry template for a photograph:

Author last name, First initial. Middle initial. (year). *Title of Photograph* [Photograph]. Site or Source Name. URL

Figure Checklist

- Is the figure necessary?
- Is the figure mentioned in the paper's text?
- Is the figure inserted under the paragraph where it is first mentioned?
- Does the text explain how the figure is relevant to the discussion in the paper without repeating all the information from the figure in the text?
- Does the figure title provide a brief explanation?
- Are all elements of the figure clearly labeled?
- Are all figures numbered consecutively?
- Is proper credit given to the source of the figure in the figure note?
- Has a reference entry been provided for the source of the figure?
- Is the resolution clear enough to be read and understood?

References

American Psychological Association. (2020). *Publication manual of the American Psychological Association* (7th ed.). <https://doi.org/10.1037/0000165-000>

CITING GRAPHICS AND VISUALS IN APA STYLE

Sometimes writers find that a picture is, indeed, worth a thousand words. Statistics and laboratory results, for instance, are often best presented in the form of a table, and a well-designed chart or graph can sum up pages of text. The American Psychological Association (APA) distinguishes between two types of graphics or visuals: tables and figures. This tutorial explains using, citing, and providing copyright statements for tables and figures in APA style.

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USING GRAPHICS AND VISUALS

When using graphics and visuals, writers should address the following:

- The visual is essential to the meaning of the text as the friendly reminder in Figure 1 explains.
- You may want to analyze or further discuss the visual in your text, but avoid repeating the same information provided by the visual.
- All graphics should be clearly labeled and easy to understand.
- Readers expect consistency throughout a paper, and this also applies to visuals (figures and tables). Figures and tables of equal importance should be similar in size, numbered consecutively, and use the same font.
- Readers should be able to interpret the figure or table without the text, so all abbreviations and symbols should be consistent as well as defined or explained in the table notes or figure captions.



Figure 1. Friendly reminder. Visuals should add to the meaning of the text and not merely be used to occupy space or force an essay to meet a word or page requirement.

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TABLES

Tables often compare data and are organized in a row and column format. Tables are numbered as in "Table 1," titled according to the table content, and captioned with a note below the table that



explains any abbreviations or symbols and provides source and copyright information. Table 1, a “Quick Table” template in Microsoft Word 2007, illustrates basic table design with rows and columns, a title, headings, and a note below the table.

Table 1

Enrollment in Local Colleges, 2005

College	New students	Graduating students	Change
<i>Undergraduate</i>			
Cedar University	110	103	+7
Elm College	223	214	+9
Maple Academy	197	120	+77
Pine College	134	121	+13
Oak Institute	202	210	-8
<i>Graduate</i>			
Cedar University	24	20	+4
Elm College	43	53	-10
Maple Academy	3	11	-8
Pine College	9	4	+5
Oak Institute	53	52	+1
Total	998	908	90

Note. + = more students enrolled than graduated; - = more students graduated than enrolled. From “Quick Tables,” by Microsoft Word, 2007. Copyright 2007 by Microsoft Word.

The following guidelines apply to tables in APA style.

- Tables with fewer than two rows or columns are not needed. The information or data should be presented in the text only with appropriate in-text and reference citations.
- Refer to each table in the text and describe its contents: “Table 1 shows these results” or “As illustrated in Table 2, . . .”
- Number tables consecutively in the order they appear in the text.
- Create a title that offers a brief explanation of the table.
- Capitalize only the first word of the title and words normally capitalized in sentences.
- Provide a heading for each row and column, even the first column.
- Separate rows with horizontal lines, but do not use vertical lines to separate columns.
- Place notes directly below the table.
- Double space tables; however, to fit on the page or make a table easier to read, single or one-and-a-half line spacing is acceptable (APA, 2016b).
- Use Times New Roman, 12-point font.
- There can be up to three notes, ordered by type: general information about the table, specific information about individual columns or rows, and probability explanations, which explain any asterisks or symbols used in data from statistical testing. Refer to the [Probability Notes](#) section for more details.



Probability Notes

Probability notes are used in statistical hypothesis testing that rules out something occurring due to chance alone. In statistical testing, researchers use a **probability level** between 0 to 1 to describe the chance of an event occurring, with 0 meaning the event will never occur and 1 meaning the event will always occur.

In a table or figure, **probability levels** are assigned asterisks to indicate a range in probability such as $*p < .05$ and $**p < .01$, and $***p < .001$ (APA, 2010). The fewest number of asterisks indicates the largest probability and the most asterisks indicate the smallest probability level.

Plus (+) and minus (-) signs are also used in probability notes to show **confidence intervals**. For example, the results of an opinion poll may show 56% of the respondents prefer candidate A. If the confidence interval is ± 3 , then 53%-59% of the population agrees with those sampled.

Probability notes may also provide **confidence levels** to indicate how certain the researcher is that the general population will agree with the poll respondents. For example, if the confidence level is 95%, then there is a 95% certainty that 53% to 59% of the population agrees with those polled. Researchers typically use a 95% confidence level.

Example of a probability note:

Note. The poll revealed that respondents prefer . . . YA = ages 18-30. A=ages 31-43. Adapted from "Title of Article," by A. Author, Year, Copyright Year by Copyright Holder.

Data are for all genders.

$*p < .05$. $**p < .01$.

In this example, the first note provides general information about the content in the table such as definitions and the copyright information; the second note, on a separate line, provides more specific information about the data in the rows or columns; and the final note, on another new line, provides the probability (p) levels.

Table Checklist

- Is the table necessary?
- Is the table referred to in the text?
- Is the table inserted as close to where it is mentioned in the text as possible?
- Is the title brief but explanatory?
- Does every column have a heading?
- Are all abbreviations, symbols, and special uses of dashes, italics, or boldface explained?
- Are the notes in the following order: general note, specific note, probability note?
- Are all vertical lines eliminated?
- If the table is for statistical testing, are probability levels identified? If more than one table is used, are probability level asterisks consistent from table to table? With statistical testing data, are confidence intervals reported and consistent for all tables in the paper?
- If all or part of a copyrighted table is reproduced or adapted, do the table notes give full credit to the copyright owner?

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FIGURES

All visuals that are not tables are figures. Figures include charts, as shown in Figure 2, graphs, pictures, maps, and more. Below are some APA 6th edition (2010) guidelines specific to figures:

- Number figures consecutively (*Figure 1; Figure 2, Figure 3 . . .*).
- Always refer to the figure within the text (Figure 1 illustrates . . . ; Figure 2 demonstrates . . .).
- Figure titles and a caption providing a short explanation go below the figure.
- Captions should be descriptive and specific.
- In the caption, capitalize the first word and words normally capitalized in sentences.

Figure Checklist

- Is the figure necessary?
- Is the figure inserted as close to where it is mentioned in the text as possible?
- Does the figure title describe the figure content?
- Are all elements of the figure clearly labeled?
- Are all figures numbered consecutively?
- Is the figure mentioned in the text?
- Is proper credit given to the source of the figure in the figure caption?
- If copied and pasted into the text, is the resolution clear enough to be understood?

Does the text explain how the figure is relevant to the discussion in the paper without repeating all the information from the figure in the text?

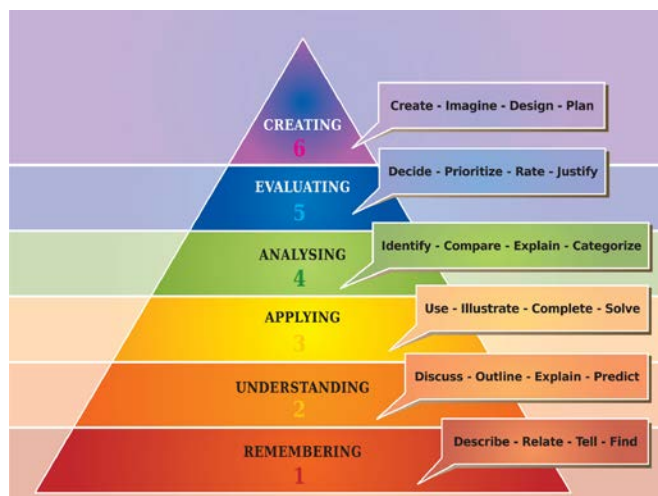


Figure 2. Chart of Bloom's taxonomy for the ways of learning. Charts and graphics such as this are "figures." Writers can create and insert graphics and illustrations similar to this pyramid with the Microsoft Word SmartArt tool.

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CREATING VISUALS

[Microsoft Word](#) and [Microsoft PowerPoint](#) allow writers like the student hard at work in Figure 3 to create tables and charts and insert them directly into their documents and presentations. The types of charts and graphs available include column, bar, pie, scatter, line, area, bubble, radar, stock, surface, and doughnut. With so many types of visuals to choose from, writers should carefully consider which type will best present the information. For example,



- a column chart displays categories of variables;
- a bar chart demonstrates comparisons between single items;
- a pie chart shows percentages;
- a scatter plot illustrates correlations; and
- a line graph demonstrates relationships.

The [Microsoft Office Support](#) webpage provides examples of these types of charts and more. Some of those examples are pasted below in Figures 4-8 with example APA style captions for graphics or images from a website.



Figure 3. Hard at work. With practice, creating tables in Microsoft Word and Excel can be a cinch and add much-needed context to your writing and research!

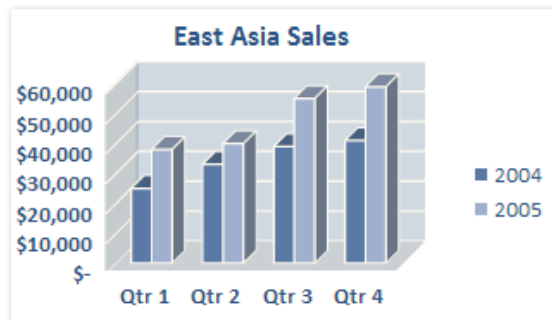


Figure 4. Clustered column chart. From “Available Chart Types,” by Microsoft Office Support, 2016 (<http://bit.ly/29NFxZv>). Copyright 2016 by Microsoft. Used with permission from Microsoft.

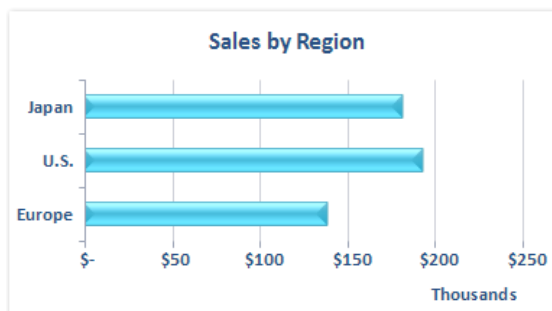


Figure 5. Bar chart in 3-D. From “Available Chart Types,” by Microsoft Office Support, 2016 (<http://bit.ly/2aaEx6p>). Copyright 2016 by Microsoft. Used with permission from Microsoft.



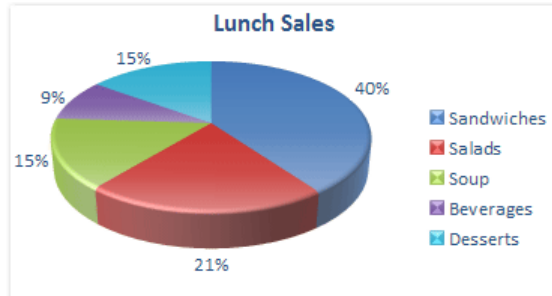


Figure 6. Pie chart in 3-D. From “Available Chart Types,” by Microsoft Office Support, 2016 (<http://bit.ly/29USa4l>). Copyright 2016 by Microsoft. Used with permission from Microsoft.

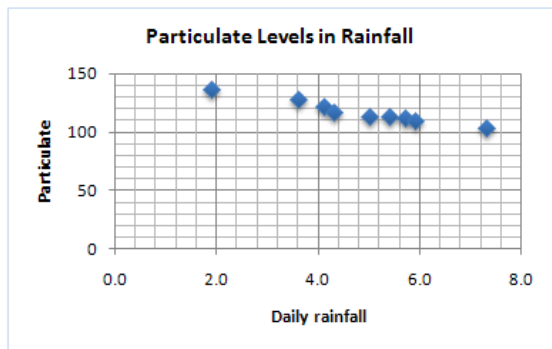


Figure 7. XY (scatter) chart. From “Available Chart Types,” by Microsoft Office Support, 2016 (<http://bit.ly/29N8R2h>). Copyright 2016 by Microsoft. Used with permission from Microsoft.

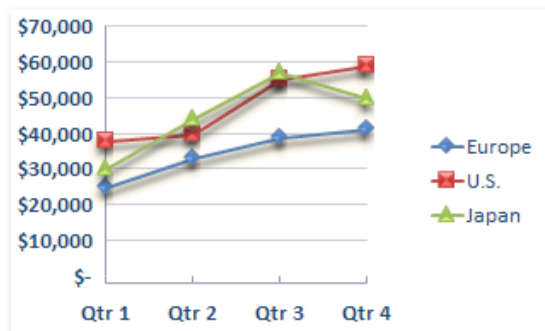


Figure 8. Line chart with markers. From “Available Chart Types,” by Microsoft Office Support, 2016 (<http://bit.ly/2a8DtNj>). Copyright 2016 by Microsoft. Used with permission from Microsoft.

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CREATING VISUALS WITH COMPILED DATA

If you are creating an original figure or table from data you have compiled from a source as shown in Figure 9, in addition to a caption under the visual that credits the source, you need to cite the source in-text where you refer to the visual and in corresponding reference list citation.

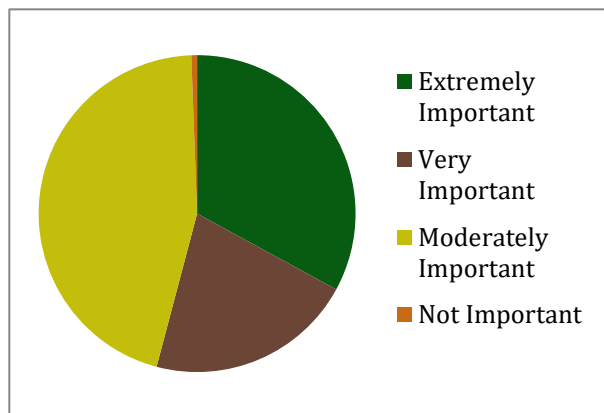


Figure 9. The importance of the congress vote on economy. Adapted from “CNN Opinion Research Poll” by CNN Opinion Research Corporation 11, 2010 (<http://i2.cdn.turner.com/cnn/2010/images/08/16/rel11e.pdf>). Copyright 2010 by CNN Opinion Research Corporation 11.

The caption for Figure 9 provides the copyright statement for a source that is a webpage. Use the following template for the copyright note if the compiled data came from a journal or book:

Journal: Adapted from “Title of Article” by A. A. Author, year, *Journal Title*, *Volume*, p. xx. Copyright year by Copyright Holder. Reprinted [or Adapted] with permission.

Book: Adapted from *Title of Book* (p. xxx), by A. A. Author, year, Place of Publication: Publisher. Copyright year by Copyright Holder. Reprinted [or Adapted] with permission.

Sample in-text citations for the source of data compiled into a table or figure:

The pie chart in Figure 9 illustrates that . . . (CNN Opinion Research Corporation 11, 2010).

The results from the CNN Opinion Research Corporation 11 (2010) poll in Figure 9 show . . .

Sample reference citation for the information in Figure 9 that came from a webpage:

CNN Opinion Research Corporation 11. (2010, August 6-10). CNN opinion research poll. Retrieved from <http://i2.cdn.turner.com/cnn/2010/images/08/16/rel11e.pdf>

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CITING PHOTOGRAPHS

If you use your own photography in your paper or you own the copyright license as Purdue Global owns the copyright licenses for the photographs in Figures 1, 2, and 3, you will not need to cite the photographs or provide a copyright notice. However, borrowed images, such as those in Figures 10-12, must be cited in a caption with a copyright statement and in a corresponding reference citation (APA, 2016a). In APA style, photographs are figures, so the copyright statement follows a figure number. The APA Style Blog provides citation examples for image from various sources such as books, journals, or webpages here: <http://blog.apastyle.org/apastyle/2016/01/navigating-copyright-part-4.html>. The following examples show how to cite photos from some commonly used image sources according to APA style guidelines.

Example 1. Unpublished photo used with permission of the photographer.

- **Template for Caption Under Image:** *Figure #.* From [or adapted from (if it's only part of an image)] "Title of Image," by Name of Photographer, year. Copyright [year] by Name of Copyright Holder. Reprinted with permission.



Figure 10. From "Water Lily" by S. Carlson, 2009. Copyright 2009 by S. Carlson. Reprinted with permission.

- **Sample reference citation for an unpublished photograph from a photographer:**
Carlson, S. (Photographer) (2009). Water lily [Photograph]. Retrieved from the photographer.

Example 2. Photograph with Creative Commons License permitting reproduction and use:

- **Template for Caption Under Image:** *Figure #.* From [or adapted from (if it's only part of an image)] "Title of Image," by Name of Photographer, year. Create commons license abbreviation.



Figure 11. From "Lilies After Rain" by C. Cairns, 2015. CC BY 2.0

- **Sample reference citation for photograph published online with a [creative commons license](https://creativecommons.org/licenses/by/2.0/).**
Cairns, C. (Photographer) (2015, July 6). Lilies after rain [Online Image]. Retrieved from <https://flic.kr/p/vDHife>



Example 3. Photograph in the Public Domain (may be reproduced and used without permission)

- **Template for Caption Under Image:** *Figure #.* From [or adapted from (if it's only part of an image)] "Title of Image," by Name of Photographer, year. In the public domain.



Public Domain

Figure 12 is artwork, digitally reproduced online and found in the "public domain." An image in the [public domain](#) with an expired copyright, such as an image created before 1923, will still need a credit to the source in the caption below the image, and it will also need a reference citation to indicate where the photo can be retrieved; however, an image from the public domain will not need a copyright notice. Instead, write "In the public domain" as shown in Figure 12.

Figure 12. Study for the cellist. From "Olga's Gallery," by A. Modigliani, 1909 (<http://www.abcgallery.com/M/modigliani/modigliani12.html>). In the public domain.

- **Sample reference citation for a photograph in the public domain on the web:**

Modigliani, A. (Painter). (1909). Study for the cellist [Oil on canvas]. Retrieved from <http://www.abcgallery.com/M/modigliani/modigliani12.html>.

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