

APA Citation Style Guideline in Science

St. Mary's International School

Science Department

Based on: APA Citation guide

Compiled by Peter Marier and edited with Claude (Anthropic, 2026)

Background

At St. Mary's International School, the citation style used is American Psychological Association (APA) for all science courses, including:

- Middle School Science: Grades 6, 7, 8
- High School Science: Grades 9 and 10 Science
- IB Biology, IB Chemistry, IB Physics, IB Computer Science
- Science electives

When Should This Be Used?

APA citation style should be used for all submitted work which involved research, including (but not limited to):

- Science reports
- PowerPoint / Google Slide presentations
- Posters
- Homework / projects that require research

What Needs to Be Included?

- **In-text citation** for any information that was produced using research.
- **Reference list** of all cited entries in your work:
 - For written work: at the end on a separate page
 - For a presentation: at the end on a separate slide
 - For a poster: in a separate section on the poster

When Is Citation Not Needed?

Citation is not required when the written work consists entirely of your own original ideas, analysis, and observations (e.g., your discussion of experimental results).

Citation is also not needed for common knowledge – facts that are widely known and accepted within the field and can be found in many general sources. Distinguishing common knowledge from specialist claims takes practice. A useful test: if you could find the same fact in five or more general sources without it being attributed to any particular researcher, it is likely common knowledge.

Examples

Common Knowledge (no citation)	Specialist Claim (citation needed)
DNA is a double-stranded helix.	The error rate of DNA polymerase III is approximately 1 in 10^9 base pairs (Alberts et al., 2014).
Water molecules are polar.	Aquaporin channels increase water permeability of cell membranes by up to 100-fold (Agre, 2006).
Photosynthesis converts light energy into chemical energy.	The quantum yield of photosystem II varies between C3 and C4 plants (Ehleringer & Pearcy, 1983).

 **When in doubt, cite.** It is always better to over-cite than to risk an accusation of plagiarism.

What Is Paraphrasing?

A restating of another's idea in your own words. In science this should nearly always be done when writing using information from another's work (rather than direct quotation). Paraphrasing allows you to summarise and combine content from one or more sources, highlight key information, and better incorporate information in your own writing style and format.

After you paraphrase information from a source it needs to include an in-text citation.

Including Page Numbers When Paraphrasing

APA requires page (or paragraph) numbers for direct quotations but encourages them for paraphrased material as well, especially when the source is long and locating the original passage would otherwise be difficult.

When to include them: Including a page number is recommended when the source is a textbook, lengthy report, or book chapter. It helps both the reader and your teacher verify the information.

Parenthetical: The liver plays a central role in regulating blood glucose concentration (Allott & Mindorff, 2014, p. 267).

Narrative: Allott and Mindorff (2014, p. 267) explain that the liver plays a central role in regulating blood glucose concentration.

For webpages without page numbers: Use a paragraph number instead – (WHO, 2024, para. 3).

What Is an In-Text Citation?

It is a brief reference citing the author(s) and year of publication within the sentence. It is included so the reader can easily identify the original source for each piece of information being presented.

⚠️ AVOID / COMMON MISTAKE

A sentence which lacks an in-text citation implies that all pieces of information within the sentence are the writer's original ideas – this is often not true. Every claim based on research must be cited.

Types of In-Text Citations

Parenthetical Citations

The author name and publication date appear in parentheses at the end of the sentence. This style is used when mentioning the author within the sentence is not relevant or necessary. In scientific writing this system is most often used, as references tend to come from prior research and textbooks.

Type	Example
One author	(Marier, 2025)
Two authors	(Marier & Medley, 2025)
Three or more authors	(Marier et al., 2025)
Multiple works, three+ similar authors	(Marier, Medley, Van Loh, et al., 2025) (Marier, Medley, McGuire, et al., 2025)
Unknown author – book/report	(Title of Book, 2025)
Unknown author – webpage	("Title of Webpage," 2025)
Unknown date	Use n.d. in place of the year
Group author with abbreviation (1st)	(American Psychological Association [APA], 2019)
Group author with abbreviation (later)	(APA, 2019)
Group author without abbreviation	(Oxford University, 2025)
Two or more works – different authors	(Marier, 2025; Medley, 2025)
Two or more works – same author	(Marier, 2020, 2023, 2025)
Authors with same last name	(D. Marier, 2020; P. Marier, 2025)
Personal communication	(P. Marier, personal communication, Feb 18, 2025)
AI-generated content	(OpenAI, 2024) – see AI section below

Combining Multiple Sources in One Citation

When a claim is supported by findings from more than one source, list all relevant works within a single set of parentheses, separated by semicolons. Order the sources alphabetically by first author's surname.

Good: Elevated CO₂ concentrations have been shown to increase stomatal closure in a range of plant species (Ainsworth & Rogers, 2007; Medlyn et al., 2001; Morison, 1998).

Avoid: Elevated CO₂ concentrations increase stomatal closure (Ainsworth & Rogers, 2007). This has also been found by Medlyn et al. (2001). Morison (1998) found the same.

Narrative Citations

The author's surname appears in the text, and the date appears in parentheses immediately after the author's name. This style is used when mentioning the author is relevant – more common when citing novel studies or when a particular researcher is pertinent to the text.

Type	Example
One author	Marier (2025) found that...
Two authors	Marier and Medley (2025) discovered...
Three or more authors	Marier et al. (2025) worked on...
Unknown author – book	In Title of Book (2025)...
Unknown author – webpage	As written in "Title of Webpage" (2025)...
Group author with abbreviation (1st)	American Psychological Association [APA] (2019) suggests...
Group author with abbreviation (later)	Later the APA (2019) mentions...
Group author without abbreviation	Oxford University (2025) worked on...
Two or more works – different authors	...as reported by both Marier (2025) and Medley (2025)
Same author, multiple years	In several studies, Marier (2020, 2023, 2025) found...
Authors with same last name	D. Marier (2020) and P. Marier (2025) wrote that...
Personal communication	P. Marier (personal communication, Feb 18, 2025) mentioned...
AI-generated content	OpenAI (2024) generated text indicating...

Citing Secondary Sources ("as cited in")

Sometimes a textbook or article will mention findings from another study. If you cannot locate and read the original work, cite the secondary source using "as cited in."

Parenthetical: (Krebs, 1937, as cited in Allott & Mindorff, 2014)

Narrative: Krebs (1937, as cited in Allott & Mindorff, 2014) described the cycle of reactions...

Reference list: Only the source you actually read goes in the reference list (in the example above, Allott & Mindorff). The original work (Krebs) does not appear unless you read it directly.

⚠ IMPORTANT

Whenever possible, find and read the original source. Secondary citation should be a last resort – it demonstrates stronger academic practice to go to the primary study.

What Is a Direct Quotation?

A word-for-word (verbatim) reproduction of another person's work. Direct quotation should be used rather than paraphrasing when:

- Providing an exact definition
- When the exact words of an author are important and relevant to your work

⚠ CAUTION

It is generally best to paraphrase sources rather than directly quoting them because paraphrasing allows you to fit material to the context of your paper and writing style. It is exceptionally rare to see direct quotes within a scientific paper.

Short Quotations (fewer than 40 words)

Add quotation marks around the words and incorporate the quote into your own text. No additional formatting is needed. Place an in-text citation directly after the quote and include the page number.

Example: Since approximately 1750, increases in greenhouse gas concentrations “are unequivocally caused by GHG emissions from human activities” (IPCC, 2023, p. 42).

Block Quotations (40 words or more)

Block quotations require special formatting:

- Begin on a new line
- Indent the entire block 0.5 inches
- Double-space throughout
- Do not use quotation marks
- Place the parenthetical citation after the closing punctuation of the block.

Example:

On people's ignorance of being ignorant:

In essence, we proposed that when it came to judgments of performance based on knowledge, poor performers would face a double burden. First, deficits in their expertise would lead them to make many mistakes. Second, those exact same deficits would lead them to be unable to recognize when they were making mistakes and when other people were choosing more wisely. As a consequence, because poor performers were choosing the responses that they thought were the most reasonable, this would lead them to think they were doing quite well when they were doing anything but. (Dunning, 2011, p.260-261).

⚠ CAUTION

Block quotations should be strongly avoided in science writing.

Citing Figures and Tables

Citing a Figure / Image

A figure may be any non-textual depiction, including charts, graphs, photographs, drawings, etc. It is best and advised to produce your own figures whenever possible, but if you are using a figure from another source it must be referenced.

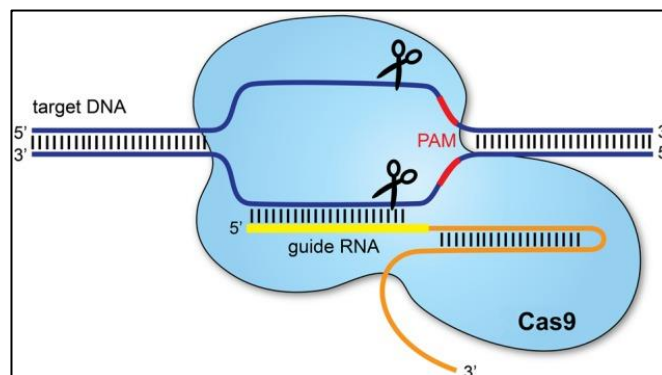
What Needs to Be Included?

- **Number:** The figure number (e.g., Figure 1) appears above the figure in bold.
- **Title:** Appears one double-spaced line below the number in italics.
- **Image:** The chart, graph, photograph, drawing, or illustration itself.
- **Legend:** If present, positioned within the borders of the figure to explain symbols.
- **Note:** Below the figure, flush left, beginning with “Note.” in italics. Includes caption (explains what the figure shows), source attribution and copyright information if not an original figure.

Example: Citing a Figure from a Published Paper

Figure 1

The CRISPR/Cas9 System



Note. A single guide RNA (sgRNA) directs the Cas9 endonuclease to a complementary DNA sequence adjacent to a PAM site. Cas9 cleaves both strands, producing a double-strand break (DSB). The cell repairs the break via one of two pathways: non-homologous end joining (NHEJ), which introduces insertions or deletions that disrupt the gene; or homology-directed repair (HDR), which uses a donor template to insert a specific sequence.

From “What is CRISPR/Cas9?” by M. Redman, A. King, C. Watson, and D. King, 2016, *Archives of Disease in Childhood*, 101(4), p. 214 (<https://doi.org/10.1136/archdischild-2016-310459>). CC BY 4.0

⚠ IMPORTANT

Use “From” when you reproduce the figure exactly. Use “Adapted from” if you redrew or modified it. Refer to the figure by number: “As shown in Figure 1, Cas9 creates a DSB at the target site (Redman et al., 2016).”

Citing a Table

APA treats tables separately from figures. Any tabular display of data is called a table and follows its own format. As with figures, it is best to create your own tables, but when reproducing or adapting a table from another source, it must be referenced.

What Needs to Be Included?

- **Number:** The table number (e.g., Table 1) appears above the table in bold.
- **Title:** Appears one double-spaced line below the number in italics.
- **Body:** The data itself. Tables should have clear column headers; avoid vertical lines where possible.
- **Note:** Below the table, flush left, beginning with “Note.” in italics. Include source attribution here if the table is reproduced or adapted.

Example Table

Table 1

Mean Heart Rate (bpm) at Rest and After Exercise

Participant	Rest	Post-exercise
A	72	148
B	68	155
C	75	142

Note. Adapted from “Cardiovascular Responses to Acute Exercise,” by J. Smith, 2021, *Journal of Exercise Physiology*, 24(3), p. 112. Copyright 2021 by the American College of Sports Medicine.

Citing AI-Generated Content

AI language models (ChatGPT, Claude, Gemini, Copilot, etc.) are treated as non-recoverable sources in APA style because the same prompt may produce different output at different times. The author is the organisation that created the model.


Reference List Format

AI Tool	Reference Entry
ChatGPT (OpenAI)	OpenAI. (2024). ChatGPT (Feb 13 version) [Large language model]. https://chat.openai.com/share/xxxxx
Claude (Anthropic)	Anthropic. (2025). Claude (Claude 3.5 Sonnet) [Large language model]. https://claude.ai
Gemini (Google)	Google. (2025). Gemini (1.5 Pro) [Large language model]. https://gemini.google.com
Copilot (Microsoft)	Microsoft. (2025). Copilot [Large language model]. https://copilot.microsoft.com

In-Text Examples

Parenthetical: When prompted with “Explain the mechanism of competitive inhibition,” the AI-generated text suggested that the inhibitor competes for the active site (OpenAI, 2024).

Narrative: OpenAI (2024) generated a response indicating that competitive inhibitors bind to the active site, reducing substrate access.

 **BEST PRACTICE:** Include a share link to the conversation when the platform supports it (ChatGPT and Claude both offer shareable links). If no share link is available, include the prompt you used and a relevant excerpt of the output in an appendix.

What Is a Reference List?

The reference list provides the information necessary to identify and retrieve each work cited in the text. It is located on separate pages at the end of the written work (before the appendices). Entries are in alphabetical order by author's last (family) name.

Note: This is called a "Reference List," not a bibliography. A reference list includes all works cited within the written text (all in-text citations), whereas a bibliography cites works for background or further reading and may include descriptive notes.

Major Elements of a Reference

A reference generally has four elements:

- **Author** – Who is responsible for this work?
- **Date** – When was this work published?
- **Title** – What is this work called?
- **Source** – Where can I retrieve this work?

Formatting

Entries within the Reference List are in hanging indent format with a 0.5-inch indent. In Google Docs: Format → Align & Indent → Indentation options → Special indent → Hanging → 0.5 → Apply.

Common Reference List Entry Formats

Below are the source types students encounter most frequently. Each entry follows the four-element structure: Author → Date → Title → Source.

Journal Article

Author, A. A., & Author, B. B. (Year). Title of article. Title of Periodical, Volume(Issue), Page–Page. <https://doi.org/xxxxx>

Example:

Redman, M., King, A., Watson, C., & King, D. (2016). What is CRISPR/Cas9? *Archives of Disease in Childhood*, 101(4), 213–215. <https://doi.org/10.1136/archdischild-2016-310459>

Textbook (with edition)

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

Example:

Allott, A., & Mindorff, D. (2014). *Biology: Course companion* (2nd ed.). Oxford University Press.

Chapter in an Edited Book

Author, A. A. (Year). Title of chapter. In E. E. Editor (Ed.), Title of book (pp. xx–xx). Publisher.

Example:

Campbell, N. A. (2017). Membrane transport. In L. A. Urry (Ed.), *Campbell biology* (11th ed., pp. 131–147). Pearson.

Website / Webpage

Author or Organisation. (Year, Month Day). Title of page. Site Name. URL

Example:

World Health Organization. (2024, June 12). Climate change and health. *WHO*. <https://www.who.int/news-room/fact-sheets/detail/climate-change-and-health>

Online Video (e.g. YouTube)

Author/Uploader. (Year, Month Day). Title of video [Video]. Platform. URL

Example:

Bozeman Science. (2016, September 4). *Photosynthesis and respiration* [Video]. YouTube. <https://www.youtube.com/watch?v=example>

AI-Generated Content

Author of AI tool. (Year). AI Tool Name (Version) [Large language model]. URL

Example:

OpenAI. (2024). ChatGPT (Jan 10 version) [Large language model]. <https://chat.openai.com/share/xxxxx>



TIP

Where possible, include a share link to the conversation so the reader can verify the output.

When to Include a Retrieval Date

Most sources do not need a retrieval date. Only include one when the content is designed to change over time and there is no fixed publication date. The retrieval date goes immediately before the URL.

Sources That Need a Retrieval Date

- Wikipedia articles and other wiki pages
- Social media profiles (not individual posts – those have a date)
- Online dictionary or encyclopaedia entries without a publication date
- Any webpage labelled with language like “last updated” rather than a fixed publication date

Sources That Do Not Need a Retrieval Date

- Journal articles (including online versions) – these have a fixed publication date and DOI
- Books and textbooks
- Webpages with a specific publication date
- YouTube videos, podcasts, and other dated media
- PDFs, reports, and documents with a publication date

Format

...Retrieved Month Day, Year, from <https://url>

Example: CRISPR. (n.d.). In *Wikipedia*. Retrieved March 18, 2026, from <https://en.wikipedia.org/wiki/CRISPR>

RULE OF THUMB

If the source has a publication date and a DOI, you almost certainly do not need a retrieval date. If it has neither, you probably do.

Citation Generators & Additional Resources

Many different online citation generators exist. They are a useful tool in creating an entry for a given citation. Always double-check that the entry is correct yourself.

- **Scribbr (recommended):** <https://www.scribbr.com/citation/generator/apa/>
- **Citation Machine:** <https://www.citationmachine.net/apa>
- **MyBib:** <https://www.mybib.com/tools/apa-citation-generator>

APA In-Text Citation Guide: <https://apastyle.apa.org/style-grammar-guidelines/citations>

APA Reference Examples: <https://apastyle.apa.org/style-grammar-guidelines/references/examples>