

Scientific Poster Instructions

A scientific poster is an illustrated presentation of research that assists scientists, engineers, and other professionals to present their scientific data to larger audiences. Posters are often shown at events such as symposiums, conferences, and meetings to show new information to people in differing fields. For our class, you will be designing, constructing, and presenting a large-format scientific poster to your classmates. Students enrolled in the in-person section of the course will print and present their posters in-person at the Environmental Science Student Symposium. Students enrolled in the online section of the course will present their posters on Carmen in a Virtual Symposium and will not be required to print their poster. Your poster should be written for an audience of university students, faculty, and professionals. The recommended class textbook provides excellent examples of topics (e.g., alternative fuels, electricity generation, resource use, pollution, mining, green architecture, waste water treatment, wildlife management, biodiversity, etc.). In addition, the accounts that @OSUEnViRo follows on Twitter are excellent sources of information to help you select a poster topic. You can view previously presented posters at the courses [ENR 2100 Poster Day website](#). The scientific poster assignment is worth 25% of your Final Course Grade. You will work on 5 different poster assignments throughout the semester. Each assignment is described in 1-5 below. All poster assignments will be graded.

Several good programs can be used to design large-format posters: **Microsoft PowerPoint**, Apple Keynote, Apple Pages, Adobe Illustrator, CorelDRAW, Inkscape, Omnigraffle, Scribus, LaTeX. View [directions for creating Posters with Microsoft PowerPoint for more information](#).

1. **Poster Title, Abstract and 10 References Quiz.** Complete this quiz online using Carmen (<https://carmen.osu.edu>). Your abstract should consist of 200-400 words.
2. **Parts of a Poster.** You will complete one part of your poster: Introduction, Material & Methods, Results or Discussion. You will include figures, tables and references. You will use one of the Microsoft PowerPoint Poster Templates provided on Carmen.
3. **Poster First Draft.** You will use a Microsoft PowerPoint Poster Template. Your First Draft will contain all the parts of a poster including:
 - Title, Your Name, Address (OSU not your home address), Major Department.
 - Abstract (200-400 words) summarizing the research and poster.
 - Introduction of poster topic or scientific question and background information.
 - Methods & Results – present data and/or methods used to collect data and conduct experiments.
 - Discussion section that analyzes results, presents hypothesis and ideas about the results that is supported by the data.
 - Total of 4-6 figures or tables, with at least one figure being an original figure
 - References (**minimum of 10 references required, 6 of these must be articles from peer-reviewed science journals**)
4. **Poster Final Draft.** You will revise your first draft to create a Final Draft and then present your poster at either the Virtual Poster Symposium (online class) or at the [Ohio Union](#) during the Environmental Science Student Symposium (in-person class).

You will make your poster using Microsoft PowerPoint and one of the templates that Dr. Lower provides for you on Carmen (<https://carmen.osu.edu>). Poster dimensions should be 36 inches (height) x 48 inches (width).

Poster Symposium Directions (in-person section or online section):

- (In-person section) The symposium will take place at the [Ohio Union](#). Poster presenters will be required to stand at their poster for **45 minutes** to present their poster to the audience (i.e., students and faculty) and answer questions. All students will have the opportunity to view the posters and interact with the presenter to learn about their project. All students will present a poster. All students will complete 3 poster peer reviews.
- (Online section) Students will be required to record a 3-5-minute audio or video clip of their poster presentation and submit this to the Virtual Symposium on Carmen for their peers to view and each student will complete 3 poster peer reviews on Carmen (<https://carmen.osu.edu>). All students will present a poster.

5. Poster Peer Reviews. Complete 3 peer reviews for 3 of your classmates' posters. You will be assigned three different posters to review by Dr. Lower. You will complete these reviews and have a chance to ask the poster presenters questions during a poster symposium. Each peer review will be based on the criteria A-D below:

A. Intellectual Impact of the Poster

- A1. How well does the article function as a piece of writing (i.e. quality of language, explanation of issue, description of methods, voice)?
- A2. Is the article scientifically accurate, how has the author demonstrated this to the reader?
- A3. Does the design, flow and the creativity of the article encourage learning?

B. Broader Impact of the Poster

- B1. How well does the poster function as a piece of teaching (i.e. quality of pedagogy, clarity of explanations)? Does the poster tell an organized and detailed story that teaches you something new? Is the poster too general and/or does it lack details that would make the story more educational or easier to understand?
- B2. Does the poster contain all the necessary components needed to describe the story (i.e., introduction, material & methods, results and discussion) or are things missing that could enhance the topic and what element(s) is missing?

C. Technical Details of the Poster

- C1. Has the author included at least ten sources and at least 6 from primary journals?
- C2. Has the author included at least 4 high-quality figures? Did the author provide a reference for each and every figure? Did the author provide a figure caption for every figure? Does the author include an original figure? Could the figures be improved, if so how can they be improved?
- C3. Has the author properly referenced their sources of data and information throughout their poster and if not where in the poster did they fail to do this?

D. Summary of your Review: Based on your answers above, what is your final recommendation and why have you come to this conclusion?

D1. Publish the poster in its current state (the poster is excellent). It should be noted that this recommendation is very rarely given.

D2. Publish the poster with minor revisions (the poster is very good).

D3. Publish the poster after major revisions are made to it (the poster is good). The poster is in good shape, but the author needs to complete a substantial amount of work before it is ready for publication. This work could include major changes required to fix figures and tables, or major changes required to fix large portions of the text.

Posters can be printed on campus at the locations listed below. We recommend [UniPrint on the 2nd floor floor of Barnes and Noble](#), because you will receive a discounted rate of approximately \$36.00 to print your poster. To receive this discount, tell UniPrint that you are printing your poster for Dr. Lower's ENR2100 class.

- UniPrint (\$36 discounted rate):
<https://denman.uniprintonline.osu.edu/uStore/14/Home>
- Ohio Union Resource Room:
https://activities.osu.edu/involvement/student_organizations/resource_room
- Thompson Library: OIT Computer Lab, Room 160 (247-4577)
<https://library.osu.edu/locations/thompson>
- Health Sciences Library:
<http://hsl.osu.edu/service-areas/medvis/services/poster-printing>
- FedEx: <http://www.fedex.com/us/office/index.html>

References for your Poster:

You will need a **minimum of 10 references** for your poster.

At least **6 of your 10 references need to be from a primary source, which means an article printed in a scientific journal** (for example, Nature, Science, Proceedings of the National Academy of Sciences, Ecology Letters, Environmental Science & Technology).

The other **4 references can be from well-respected secondary sources** (for example, Columbus Dispatch, Los Angeles Times, National Geographic, New York Times, NPR, PBS, Scientific American, Washington Post) or federally funded research reports (for example, NASA, NOAA, NSF, USGS report) **Do NOT cite blogs or webpages!**

Use [ISI Web of Science](#) or [PubMed.gov](#) to find primary source journal articles or visit the websites that @OSUEnViRo is following on Twitter.

References (i.e., primary sources or secondary sources) should follow these styles:

1. **Journal article in print (primary source):** Author names. (Year published in parenthesis). Article title. Journal name. Volume number(Issue number in parenthesis if known):Page numbers.

Journal article with one or two authors:

McMurrin, M., and Christopher, G. (2009). Bayes factors increases criminal sentence recommendations. *Legal & Criminological Psychology*, 14(1):101-107.

Journal article with more than two authors:

Post, E., et al. (2009). Genome studies of quorum sensing organisms. *Science*, 325(5946):1355-1358.

2. **Online journal article (primary source):** Author names. (Year published in parenthesis). Title of article. Journal name. Volume number:Page numbers. Include complete URL link in full or DOI if known.

Dionne, M.S. and Schneider, D.S. (2002). Adaptive mutability in targeted microRNA infections. *Genome Biol.* 3:10.3559. <http://genomebiology.com/2002/3/4/reviews/1010>

3. **Government technical report in print (primary source):** Author names or name of organization. (Year Published in parenthesis). Report title. Report Number. Name of government agency that published report, Place of publication.

Smith, G.I. and Chen Y.P. (2018). Growth stages and tolerable fire intervals for Georgia's native vegetation data sets. Report no. 247. U.S. Department of Interior. New York, NY, USA.

4. **Government technical report online (primary source):** Author names or name of organization. (Year Published in parenthesis). Report title. Report Number. Name of government agency that published report. Place of publication. Date retrieved followed by complete URL link in full or DOI if known.

Spandone, H.K. et al. (2017). Energy futures for Midwestern wind farms. Report no. C2.4715.12. U.S. Department of Energy. Washington D.C., USA. Retrieved on February 15, 2017 from <https://pdfs.semanticscholar.org/3e93/e8551981c644de300.pdf>

5. **Patent (primary source):** Author names. Date in parenthesis. Title of patented item, technique, method or process. Patent number.

Odell, J.C. (1970, April). Process for batch culturing. U.S. patent 484,363,770.

6. **Book chapter (secondary source):** Authors names. (Date of publication in parenthesis). Chapter title, page numbers. Editors of book, Book Title, Place of publication. Name of publisher.

Forman, M.S., and Valsamakis, A. (2003). Specimen collection, transport, and processing: virology, p. 1227-1241. Murray, P.R., et al. (Eds.), *Manual of clinical microbiology*, 8th ed, Washington, D.C. Penguin Press.

7. Book (secondary source):

Anderegg, D. (2007). *Nerds: Who they are and why we need more of them*. New York, NY: Jeremy P. Tarcher, Penguin Press.

8. Magazine article in print (secondary source):

Road map to a great deal. (2009, October). *Consumer Reports*, 74(10), 44-47.

9. Magazine article published online (secondary source):

Taibbi, M. (2009, September 3). Sick and wrong. *Rolling Stone*, 1086, 58-65. Retrieved on February 22, 2020 from <http://www.rollingstone.com>

10. Newspaper article in print (secondary source):

Lucchetti, A. & Craig, S. (2009, September 11). Morgan Stanley taps new boss. *The Wall Street Journal*, pp. A1, A16.

11. Newspaper article published online (secondary source):

Moran, S. (2009, September 7). If you don't snooze, you lose: Most Americans aren't getting enough sleep. And for both adults and students, there are health consequences. *Star Tribune*. Retrieved on August 6, 2019 from <http://www.startribune.com/>

12. Podcast (secondary source):

Nature (Producer). (2009, July 16). Moon gazing in the Southern hemisphere, Audio podcast. Retrieved on November 5, 2009, from <http://www.nature.com/nature/podcast/index-2009-07-16.html>

13. Documentary, Video or Movie (secondary source): A documentary may be acceptable. In most instances, a movie does not count as one of the 10 acceptable references.

Donner, R. & Lee, S. (Producers), & Hood, G. (Director). (2009). *X-Men Origins: Wolverine* [DVD]. USA: Twentieth Century-Fox Film Corporation.

14. Personal Web Page (secondary source): In most instances, a web page does not count as one of the 10 accepted references.

Roszak, T. (1996, September). Why ecology needs psychology, why psychology needs ecology. *Ecopsychology Online*, 1. Retrieved on July 12, 2009 from <http://ecopsychology.athabasca.ca/0996/ecowelcome.htm>

15. Web Page of organization or group of authors (secondary source): In most instances, a webpage does not count as one of the 10 accepted references.

National Museum of American History. (2006, July 7). National museum of American history displays recent hip-hop acquisitions. Retrieved from <http://www.americanhistory.si.edu/news/pressrelease.cfm?key=29&newskey=383>