

Presentation: Results from Class Lab Research Project
CH 3420: Environmental Chemistry
Plymouth State University

Due Dates

May 18: Presentations given during the Final Exam time, 8-10:30am

The Presentation

Your assignment is to give a 15 minute presentation on your group's portion of the Class Research Project. Your talk should cover the following:

1. What chemical species you quantified
2. Background on the chemical species. Be sure to answer the following questions:
 - a) Is toxic or nutritive?
 - b) If toxic, what are the health effects?
 - c) Is it naturally occurring?
 - d) What are normal, background, and/or toxic levels?
 - e) If not naturally occurring, what are sources?
3. What technique you used for the analysis, including the following:
 - a) How does it work?
 - b) What are the upper and lower detection limits?
 - c) What was your resource for the actual method? (If it was just procedure from earlier labs, you must look further to find original sources. See Method Sources below.)
4. Your results, including
 - a) The raw data collected, including data on samples and standards
 - b) Graphical representation of standard curves, etc. as appropriate
 - c) Graphical and/or tabular representation of analyzed data as appropriate
5. Analysis of results, including
 - a) Identification of trends, which may relate to
 - location of sampling
 - dates of sampling
 - recent weather around time of sampling
 - other data collected on the water, as reported in Lab 10 (e.g. pH, temp)
 - b) Speculation on the causes of results found

Your presentation must meet the following guidelines:

1. Must include overheads, either in the form of traditional projector-style overheads or a "powerpoint" presentation
2. Graphs, tables, etc. will be generated on a computer using appropriate software.
3. Pictures, figures, etc. from various sources may be included. If not created by members of your group, the source must be cited.
4. With very few exceptions, hand-drawn figures, etc. will not be accepted in overheads. (I encourage you to check with me first about the appropriateness of any hand-draw figure you might wish to include).
5. Old-school projector-style overheads can be provided for those wishing to use them, though it is assumed nearly all the material to be presented will have been produced on a computer.

You should plan on a 3-minute "question and answer" period following your talk.

Other Materials to Hand-In

By the time of your presentation, you must electronically submit the following via Moodle:

1. Your presentation (materials that were not originally digitized may be scanned or hard-copies can be turned in).
2. A short Methods and Results document containing
 - a) Detailed Methods and Materials (exactly how were standards and samples prepared and analyzed)
 - b) List of references, including a source for the method of analysis
 - c) Results, including raw data

The Methods and Results document is NOT intended to be a full report, but merely a good record of what you did, how you did it, and what the results were. It need NOT contain Introduction, Analysis, or Conclusion sections.

THESE MATERIALS SHOULD BE UPLOADED TO MOODLE before your presentation

Grading

Your presentation will be graded on the basis of the following:

1. Your ability to explain the analytical technique clearly.
2. Your ability to do the analysis and collect data.
3. Your ability to analyze the data and interpret the results
4. Your ability to draw reasonable conclusions from the results
5. Your ability to answer reasonable questions on the topic
6. How well the labor appeared to be distributed among the group

In addition, your grade will partly depend on the materials you hand in, including:

1. Completeness of the materials
2. Methods and materials being written in such a way that someone else could easily repeat your analysis
3. Data being presented in such a way that someone else could analyze it and reasonable arrive at your conclusions

Grading Matrix

Submitted Items (25 pts)

- Methods (10 pts)
- Results (10 pts)
- Presentation (5 pts)

Presentation (75 pts)

- Background (10 pts)
- Explanation of technique (5 pts)
- Data Collection (15 pts)
- Data Analysis and Conclusions (25 pts)
- Question and Answers (10 pts)
- Overall Presentation (10 pts)

Late Policy

Failure to present during the scheduled time without a valid excuse will result in a 0 on the presentation. Failure to hand in the other required materials will result in a 10 point deduction per day, up to 40 points total.

Final Notes

You may, at any time in the research and preparation of your presentation, seek advice or information from your instructor, other professors, other students, or anybody. However, what you present must be the work of your group only.

In the course of your presentation, it must be made clear how each group member contributed to the research project effort, and that contributions were made equally. It is NOT absolutely necessary that each member present, but of course it helps to show equal distribution of labor.