

Methodology for Completing Weekly Lab Exercises and Lab Portfolio

1. **At the beginning of the term**, purchase the following materials for lab:
 - (a) 2.5-inch thick three-ring binder, with "see-through" plastic slip cover.
 - (b) 10 tab-separation sheets (three-hole punched), with stick-out tabs that can be clearly labelled.
2. **At the beginning of the term**, with a word-processor, create a binder cover and insert it into the plastic slip cover. Include the following information on the cover:

G202 Lab Portfolio
Western Oregon University
Winter Term 2001

Prepared By

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3. **At the beginning of the term**, label the 10 tab-separation sheets, with one each of the following: Lab 1, Lab 2, Lab 3, Lab 4, Lab 5, Lab 6, Lab 7, Lab 8, Lab 9, Lab 10. Place all of the tab-separation sheets into the three-ring binder at the beginning of the term so that you will be ready to insert the lab exercises as you complete them.
4. **Prior to attending lab each week**, read the scheduled lab exercise. Complete Pre-Lab Reading Questions prior to attending class.
 - A. Clearly answer all parts of Pre-Lab Questions, include drawings where required.
5. Insert your answers to the Pre-Lab Reading Questions in the appropriate tab slot, prior to attending lab each week. The instructor will check your work at the beginning of the lab period.
6. Complete the weekly in-class lab exercise. **Note:** the labs include both lab manual exercises and hands-on lab demonstrations. The lab exercises are such that you must attend lab during your designated lab period. Attendance will be noted, if you miss lab, you will lose points.
7. After completing the weekly lab exercise during the lab period (outside of class), write 300-500 word lab summary in the following format:

Title of Lab Exercise
Student Name / Date

PURPOSE / OBJECTIVE

(this should include a concise description of the lab objectives)

METHODOLOGY / TECHNIQUES

(this should include a discussion of the specific methodology / techniques that you learned to use in the lab. E.g. stereo viewing, graphing, contour drawing, rate calculations. Remember to cite your references, if you have any! See citation methods below).

SUMMARY OF RESULTS

(summarize the types of problems that you worked on, the geologic concepts that you learned about, and their significance)

REFERENCES CITED

(provide a bibliographic listing of references cited in the body of text, in alphabetical and chronological order. See citation methods below!).

8. Compile all components of the weekly lab in your 3-ring portfolio binder. Use the following organization:
 - I. Labelled tab-separation sheet
 - II. Lab Summary
 - II. Pre-Lab Reading Questions
 - III. Lab Exercise Answer Sheets

**** Use tab sheets to separate each lab exercise. Neatly label the tabs "Lab 1", "Lab 2" ... etc.****

9. Read and complete the Pre-Lab Reading Questions for the next week's lab.
10. Submit the completed portfolio entry (from last week's lab) and this week's Pre-Lab Questions to the instructor by the beginning of the Lab Class. The instructor will check the portfolio entry and pre-lab questions for completeness, and return to the student during the lab period.
11. Repeat procedure for each week, until submitting Part 1 of the portfolio for formal grading at the Mid-Term, and Part 2 of the portfolio for formal grading at the Final.

Methodology for Reference Citation

Reference Citation Within Body of Text

Cite a reference whenever you paraphrase another author's work. When making a citation within the body of text, the cited reference should parenthetically include the author's last name and the year of publication (DO NOT USE FOOTNOTES).

The following is an example citation where the author is referred to in the flow of text:

Smith (1999) suggested that a protractor is the best tool available for measuring angles between lines.

The following is an example citation where the author is parenthetically cited after a paraphrased statement:

The calculated rate of river erosion is identical to other rates estimated for the Colorado River (Johnson, 1980).

Bibliographic Listing of References Cited

1. Use a section subheading of "References Cited" for your bibliographic listing.
2. Use the following citation format:

Author's Last Name, Author's First and Middle Initials, Date, Title of Book or Article: Publisher or Journal, Page Numbers.

3. List your references cited in alphabetical and chronological order. Sort alphabetically first, then use chronological sorting if the same author appears a number of times (sort from oldest to youngest publication).

The following is an example format to use for citing references (you are expected to follow this format):

References Cited

- Alexander, D.E., 1995, A survey of the field of natural hazards and disaster studies, *in* Carrara, A., and Guzzetti, F., eds., *Geographical Information Systems in Assessing Natural Hazards*: Kluwer Academic Publishers, Netherlands, p. 1-19.
- Anbalagan, R., and Singh, B., 1996, Landslide hazard and risk assessment mapping of mountainous terrains: A case-study from Kumaun Himalaya, India: *Engineering Geology*, v. 43, p. 237-246.
- Brabb, E.E., 1995, The San Mateo County California GIS project for predicting the consequences of hazardous geologic processes, *in* Carrara, A., and Guzzetti, F., eds., *Geographical Information Systems in Assessing Natural Hazards*: Kluwer Academic Publishers, Netherlands, p. 299-334.
- Carrara, A., and Guzzetti, F., eds., 1995, *Geographical information systems in assessing natural hazards*: Dordrecht, Netherlands, Kluwer, 71p.
- Clouatre, E., Dubois, J.N., and Poulin, A., 1996, The geographic information-system and regional delimitation of zones at risk for landslides, Hull-Gatineau Region, Quebec: *Canadian Geographer*, v. 40, p. 367-386.
- Dooley, K., 1992, Geographic information systems in E&P computing: *Geobyte*, October issue, p. 36-41.

Here's How to Cite a Web Page...

- U.S. Geological Survey, 2001, Water Quality of the Willamette Valley: Internet Web Resource, URL: <http://www.usgs.gov/gwater/willamette.htm> (last updated March 1, 2001).
- U.S. Environmental Protection Agency, 2000, Online Report of Contamination of Regional Aquifer Systems in Oregon: Internet Web Resource, URL: <http://www.epa.gov/bigdirt/oregon.html> (last updated June 29, 2000).

Weekly Checklist for Completing Lab Exercises:

- _____ Three-ring binder with slip-cover sheet
- _____ Three-ring binder with labelled tab-separation sheets
- _____ Completed Pre-Lab Questions for the lab this week.
- _____ Completed Lab Summary / write-up from last week.
 - _____ Did I follow the lab summary format properly?
 - _____ Did I follow the references cited format properly?
 - _____ Did I write in English using complete sentences?
- _____ Completed Pre-Lab questions from last week
- _____ Completed lab exercise from last week

Example Lab Summary

The following is an example Lab Summary write-up to use as a model for completing the weekly exercise. Follow the organization and style exactly!

G202 Lab Exercise 2 - Rocks and Minerals

John Doe

January 23, 2001

PURPOSE / OBJECTIVE

Lab 2 focused on techniques in the identification of rocks and minerals. The objectives of this lab included the following:

- (1) to observe the physical properties of minerals
- (2) to identify minerals according to name and chemical composition
- (3) to observe textural and mineral characteristics of rocks
- (4) to identify and name igneous, sedimentary, and metamorphic rocks.

...on an on... whatever else one would need to say to complete the write-up...

METHODOLOGY / TECHNIQUES

Minerals and rocks were identified using a set of hand samples and tools such as a hardness kit, microscope, magnifying glass, and rock hammer. The samples were organized according to their physical properties, then named by using the classification charts in the lab manual (Busch and others, 1997).

...on an on... whatever else one would need to say to complete the write-up...

SUMMARY OF RESULTS

The Rock and Mineral Lab focused on techniques in physical observation, scientific classification, and geologic interpretation. Twenty five mineral specimens and thirty-four rock specimens were systematically classified according to texture and composition. Geologic interpretations were created on the basis of readings in the text by Skinner and Porter (1994). This was a highly informative exercise and I deserve a big fat "A".

...on an on... whatever else one would need to say...

REFERENCES CITED

Busch, J.C., Thompson, S.O., and McGillicuddy, T.W., 1977, Techniques in rock and mineral identification: Wiley and Sons, Publishers, New York, 173 p.

Skinner, T.W., and Porter, F.U., 1994, Methods in geologic interpretation: Geological Society of Europe Special Publication 23, 44 p.