**Oceanography Portfolio**

*Geological Oceanography—Prof. Laura Wetzel*

**Overview**

Write a series of one-page papers describing topics related to class throughout the semester.

Present one topic as a 3 to 5 minute oral presentation in lab.

Revise these one-page papers as a portfolio for submission at the end of the semester.

**Details**

Be creative. Feel free to use unique layouts and illustrate your points with figures. All one-page papers must include these elements:

* Descriptive title (Bad Title: *Minerals are Great!* Good Title:  *Quartz is Everywhere*)
* Your name
* Date of submission
* Substantive and detailed text
* Illustrations, with captions and citations
* APA-formatted bibliography of citations

Topics will be assigned randomly to students in all of these subjects:

1. Solar System
2. Minerals
3. Rocks
4. Hydrothermal Vents
5. Volcanoes & Earthquakes
6. Marine Sediments
7. Hurricanes & Typhoons
8. Tides

You may skip two topics, or investigate all eight topics and I will include your oral presentation and your best five papers in your final grade.

All one-page papers must be submitted to me via email as PDF files. Why PDF files?

* The format of your work will not change between your computer and mine, unlike documents from word processing programs, which often change formats when you change computer platforms.
* You can use color without going through the time or expense of printing in color.

The PDF file name must be in the following format: YourLastName\_Topic.pdf

For example, Wetzel\_Quartz.pdf. My email address is wetzellr@eckerd.edu.

Your final portfolio will consist of at least five one-page papers that have been revised based on feedback from me and from your increased expertise over the course of the semester. Submit your final portfolio as a single PDF file, WORD, or PPT document.

Refer to the course schedule for deadlines. present

Avoid plagiarism by writing all material in your own words. Avoid direct quotations and be sure to list all sources of information in your bibliography, which includes all sources for factual information and illustrations. The bibliography can be in addition to your one-page paper.

Remember, the first information you find is not necessarily the best information. Your goal is to include the best information on the topic in your one-page paper. Be sure to include vocabulary that you have learned in class and tell me something new. The best papers will look great and have excellent, substantive, detailed scientific content.

Format the one-page paper so that it is visually appealing. You may single, 1.5, or double-space your text. Leave blank lines between paragraphs if you think it looks best. Use any fonts you like, so long as they are clear. Please use an 11 point font or larger for the main body of your text. You may use smaller fonts for figure captions.

Use reputable sources for your scientific material. You may start with Wikipedia, but you may not use it as the ultimate source for substantive information. You must confirm any material in Wikipedia by using other reliable sources: books, journal articles, magazines, newspapers, or websites of universities, museums, scientific societies, and government institutions. You should not need to list Wikipedia in your bibliography, except for figures.

You may simply list all of your sources in APA format at the end of the paper. You do not need to use in-text citations except for direct quotations. In some way, indicate which figures come from which sources. For example, you might number the figures on your one-pager and then have a list of figure sources in your bibliography.

The grammar and spelling in your one-page paper should be perfect. These are short, concise assignments that you should edit, review, and revise many times before turning them in the first time. Review your work again before submitting with your portfolio at the end of the semester.

**Oral Presentations**

The oral presentation topics will be assigned randomly, with four or five students presenting in lab on the dates specified. You will prepare a standard series of slides using PowerPoint or another similar program. Presentations are limited to three to five minutes, so practice your presentation in advance. Present the most important, and interesting, information in an engaging and organized way. See the *Oral Presentation Evaluation* form for further details.

**Grading**

This is the grading rubric for the one-page papers. I may modify it as the semester progresses.

 (10 pts) On time: emailed to me by 9:00 am on the due date

 5 pt. deduction for emails after 9:00 am on due date; 0 pts. after the due date

 (10 pts) One page with title, author’s name, topic details & appropriate PDF file format

 (20 pts) Substantive scientific details

 (20 pts) Writing is clear, direct, and concise; demonstrates understanding

 (10 pts) Proofread carefully with no grammatical or typographical errors

 (10 pts) Illustrations are clear and relevant to the topic (no illustrations—no points)

*and* illustrations are numbered, with sources specified in bibliography

 (10 pts) No plagiarism; bibliography contains sources; minimal quotations used

 (10 pts) Bibliography with ≥3 reputable sources, APA format (can be on a 2nd page)

 (Bonus pts) Exceptional creativity with factual content and/or visual appeal

 **Total out of 100 points** *No papers accepted after noon on the day following the deadline.*

**Requirements for Each Topic**

All papers must contain illustrations, comprehensive descriptions of your topics, and a bibliography. The minimal information that must be included for each topic is listed below. Be sure to include other relevant and interesting material as well.

**Solar System:**

* Start your research on the NASA website: <http://solarsystem.nasa.gov/planets/>

**Minerals:**

* Include the chemical formula, physical properties, hand specimen identification, geologic occurrence, and origin of the mineral name.
* Recommended sources:
	+ Lab text: *Smithsonian Handbook of Rocks and Minerals* by Chris Pellant
	+ *Smithsonian Mineral Gallery*: <http://geogallery.si.edu/index.php/en/minerals/all>

**Rocks:**

* Minerals, textures, hand specimen identification, geologic occurrence
* Recommended source:
	+ Lab text: *Smithsonian Handbook of Rocks and Minerals* by Chris Pellant

**Hydrothermal Vents:**

* Access the *InterRidge Vents Database* at <http://vents-data.interridge.org> to determine basic information.
* Use <http://vents-data.interridge.org/ventfields-geofield-map> to create a map of the area. Use the Satellite view (select in the upper right of the map) and identify major tectonic features on the map as labels or in a figure caption (mid-ocean ridges, trenches, transform faults, islands, etc.).
* To search Google for vents with common names, use quotes to designate a string of words, e.g. “rainbow hydrothermal vent”.
* Include geologic details and photos of vent chimneys.

**Volcanoes & Earthquakes:**

* Use *NOAA’s Natural Hazards Viewer* at <http://maps.ngdc.noaa.gov/viewers/hazards/> to create a map of regional earthquake **and** volcanic activity as well as determine basic information. Explain why there are volcanoes and/or earthquakes in the area. Explain map symbols using a legend or figure caption.
* Describe geologic causes, casualties, and damages.
* Other recommended websites:
	+ *Natural Hazards Image Database*: <http://ngdc.noaa.gov/hazardimages/>
	+ *U.S. Geological Survey*: <http://geohazards.usgs.gov>, <http://volcanoes.usgs.gov>
	+ *Smithsonian Institution, National Museum of Natural History, Global Volcanism Program*: <http://www.volcano.si.edu>

**Marine Sediments:**

* If your sediment is biogenic, you may describe biological aspects of the subject, but be sure to emphasize the geological characteristics (e.g., test or shell mineralogy, sedimentary environment, geologic time frame).

**Hurricanes & Typhoons:**

* Will your name be used for a tropical storm? Which region and year? Check <http://www.wmo.int/pages/prog/www/tcp/Storm-naming.html>. Indicate your answer at the end of your bibliography.
* Use *NOAA’s Historical Hurricane Tracks* site to plot the track of your storm: <http://coast.noaa.gov/hurricanes/index.html>. Include a legend or a description of the colors in a figure caption. Describe the development of the storm. (For “Not Named” storms, put the year in the search box and then click on the storm track of interest.)
* Recommended Sources:
	+ *The Deadliest, Costliest, and Most Intense United States Tropical Cyclones
	from 1851 to 2010*: <http://www.nhc.noaa.gov/dcmi.shtml>
	+ *NOAA Image Gallery:* <http://www.nnvl.noaa.gov/site-custom/ImageGallery.php>

**Tides:**

* Describe the tidal patterns for the coasts of the two specified states
* Provide a graph from at least one tide station for each state from the *NOAA’s Tides & Currents* website: <http://tidesandcurrents.noaa.gov/map/>
* Include details regarding the tide station, a map showing its location and, if available, a picture of the tide station

**Oral Presentation Evaluation**

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*6 = Exceptional 5 = Above Average 3-4 = Average 2 = Needs Work 1 = Unacceptable*

**Content: Low High**

1. Was the presentation well organized and easy to follow? 1 2 3 4 5 6

 Clear? Logical? Introduction? Conclusion?

2. Was the topic adequately explained? 1 2 3 4 5 6

 Sufficient scientific content? Used scientific vocabulary?

3. Was the most important and relevant material discussed? 1 2 3 4 5 6

 Chose the best material for the short time frame?

4. Did the speaker demonstrate a detailed understanding of the topic? 1 2 3 4 5 6

 Were all illustrations and concepts explained correctly? During the talk? During Q&A?

**Delivery:**

5. Did the student speak clearly and maintain my interest? 1 2 3 4 5 6

 Enthusiastic? Eloquent? Interesting? Volume? Rate? Pronunciation? Vocal fillers (um)?

6. Did the speaker make good use of physical gestures and eye contact? 1 2 3 4 5 6

 Minimal reliance on notes? Looked at audience? Fiddled with pointer, keys, coins?

7. Were the visual aids used effectively? 1 2 3 4 5 6

 Pointed to slides? Good color contrast? Blurry figures?

8. Was the presentation within time limits? Time: \_\_\_\_\_\_\_\_\_\_\_\_\_ min 1 2 3 4 5 6

 (6 pts = 3-5 min; 5 pts = 5-6 min; 4 pts = 2-3 min; 1 to 3 pts = > 6 or < 2 min)

9. Did the speaker show up prepared and on time? 0 1 2

**Bonus for Originality:**

10. Did the speaker tell me something novel or use a particularly creative approach? 0 1 2 3

**Additional Comments:**  **Total Score:** \_\_\_\_\_\_\_\_\_ out of 50