

SCI 311 Geology

Project 2

Purpose

Demonstrate your understanding of how rocks form and how geologists classify rocks.

What it is

Your project is a formal way to demonstrate that you understand the content covered in Unit II of the course. It should thoroughly fulfill at least two of the unit objectives.

Unit II objectives

1. Identify and describe the characteristics by which rocks are classified.
2. Classify igneous rocks by texture and composition.
3. Relate the texture and composition of an igneous rock to its geologic setting and history.
4. Classify and characterize intrusive igneous structures and describe how they form.
5. Describe extrusive igneous materials and how they are emplaced.
6. Classify volcanoes by their shapes, and relate their structures to their eruptive styles and tectonic settings.
7. Identify volcanic hazards and risks.
8. Recount the processes that create clastic sedimentary rocks.
9. Identify and classify clastic sedimentary rocks and relate their classification to their geologic history.
10. Describe the formation of chemical and biological sedimentary rocks.
11. Identify sedimentary structures and how they form.
12. Define metamorphism and identify its causes.
13. Identify geologic environments where metamorphism occurs.
14. Explain how the structure and composition of a metamorphic rock provides information about its history.

Possible projects

These are some ideas for a project. You are free to suggest others. I will approve of projects that demonstrate your mastery of the chosen unit objectives.

- A concept map describing the rock cycle
- A diagram of metamorphic facies with representative rocks and associated tectonic setting
- A biography of a geologist who elucidated some aspect of the history or formation of a particular rock
- A report on a rock of particular interest, such as an ore body, a fossiliferous formation, or a layered intrusion
- A report on a volcano or eruption
- A diagram of the form and function of a volcano
- A quiz covering the unit objectives

Graded Components

100 points total, awarded as described below.

Sign up (5 points): Select a project. Describe succinctly what form your project will take, and which of the unit objectives it will cover.

Outline (5 points): Give an overview of your project in more detail than your sign-up.

Rough Draft (10 points): Your project itself. The more complete the draft is, the more useful feedback your instructor can provide

Conference (10 points): Meet with the instructor to discuss your outline or rough draft. You may have more than one conference with the instructor, but one must take place before the end of Structured Study time on September 30.

Annotated bibliography (10): List your project's sources of information and how they can be accessed. Summarize the content of each source and identify what information from the source was used in your project.

Final Draft (60 points): The completed project.

Dates and Deadlines

Sep 12	Project assigned
Sep 15	Sign-up due
Sep 15, 23	Work days
Sep 22	Outline due
Sep 27	Rough Draft due
Oct 3	Project due

Scoring

Sign-up (5 points)

Let the instructor know what you intend to do for your project, and identify the unit objectives that it covers.

+3	Identifies the form and topic of the project.
+2	Identifies by number two unit objectives addressed.

Outline (5 points)

Provide an organized overview of the project.

5	Has an informative title, headings, subheadings, and brief, informative text describing an organized project.
4	Has informative title, headings, and brief, informative text.
3	Has informative title, headings, and subheadings, but text is lacking, not informative, or verbose.
≤ 2	Lacks title, headings, or organization.

Rough Draft (10 points)

This is the full project, but not polished.

10	Contains all parts of the project, addressing all of the specified unit objectives.
≤ 6	Submission lacks substantial portions of the project.

Conference (10 points)

Show up to the conference on time and discuss your submission.

10	Shows up on time and discusses the submission in good faith.
5	More than five minutes late.
3	Does not meaningfully discuss the submission.
0	More than ten minutes late.

Annotated bibliography (10 points)

Identify all sources of information used in the project (Wikipedia does not count), give their full look-up information, and describe them and their contribution to the project. This bibliography is not listed as a component of the final project because the project can take many forms. If your project is a report, it would make sense for the bibliography to be a section of the report.

+5	Contains at least two references.
+2	Gives complete look-up information for all references.
+3	Describes each reference and its relevance to the project.

Final Report (60 points)

+15	Neat and visually appealing.
+30	Demonstrates mastery of two unit objectives.
+15	Organized and easily understandable.