

GEL 1020 - GEOLOGY OF COLORADO

LAB 2: "EVERY ROCK HAS A STORY" LAB

Name:	Date:
GRADE:	/50



ALL ANSWERS MUST BE TYPED USING A WORD PROCESSOR! This includes chemical formulas, equations, tables and special characters. Become intimately familiar with these functions in your preferred word processor. Be familiar with placing and sizing visuals into a written document.

GRADING

In general, for each fault in layout, grammar, spelling, content, concept, format, presentation, expression, design, citation, missing content, etc. I will deduct points. Multiple points can be deducted for larger infractions, such as missing content. Be aware that repeat mistakes will count MORE THAN ONCE !

RUBRIC:

- /5 COMPOSITION & LAYOUT - one or multiple point deduction per infraction
The appearance is neat and orderly. A title page mentioning the assignment, course name, your name, and date. Everything is typed and any graphics, data or tables used are electronically prepared. Pictures are placed in a coherent form. Proper formatted citations are included.
 - /5 WRITING & GRAMMAR - one point deduction per infraction
Spelling and grammar are correct. Word repetition and use of first person language is avoided. Statements are factually correct. Appropriate and complete language is used. Scientific notations / abbreviations as well as subscripts and superscripts are appropriately formatted.
 - /10 GRAPHICS (2 photos, 1 map, 1 illustration - 2.5 points ea.) - one or multiple point deduction per infraction
One field photo of sample location and one sample photo. One high quality map snippet showing sample location. One illustration with citation showing something pertinent about your rock's formation or transport. Every graphic should have a FIGURE CAPTION describing major points of each. Graphics should have internal labels describing important objects. Graphics are clear, sharp, and show good details. If necessary, graphics should be cropped.
 - /10 ROCK SUMMARY (Rock name, Class, Formation, Age, Composition, Texture) - one or multiple point deduction per infraction
Rock Description of you Rock with Lab data. Includes rock name and class (sed, ign, metam), Stratigraphic Formation name & Age, Compositional Description, Textural Description. Follow the template below
 - /5 ORDINARY or UNUSUAL ROCK - 5 point scale
Ordinary/boring rocks (1pt) to unusual and/or effort to collect (5 pts) sliding scale
 - /10 CONTENT & STORY (Formation, age, environment) - one or multiple point deduction per infraction
Story of your rock: How formed? Age relation? Environment of formation / deposition? Correct geologic terms used. Factual correct! Graphics included as necessary!
 - /5 5 CITATIONS (2 pts ea) - one or multiple point deduction per infraction
You must use a minimum of 5 properly formatted APA style citations)
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LAB 2: "EVERY ROCK HAS A STORY" LAB

Rocks are story tellers, if you can read the clues. In this lab it is your job to get as many clues out of a rock or mineral that you have found in Colorado and then to tell its story infused with pictures.

Instruction:

1. **Collect:** During your field trips and excursions here in Colorado, find a rock or mineral. Note where you found it (GPS coordinates), you might need to use this later for your research! There are rules:
 - a. The rock must be in its original location, e.g. a rock out crop; use a hammer to dislodge your specimen.
 - b. NO rounded specimens allowed. Rounded rocks have been transported and are no longer at their original location
 - c. Do NOT pick up rocks from the side of a road or a creek / river bed. In both cases you will find transported rocks that are no longer at their original location. (In the case of a road you will most likely pick up some road base, hauled in there by trucks when the road was constructed.
 - d. Your specimen should be about fist size. You will need to take a high quality picture of your specimen and include it in your write-up.
 - e. Ordinary or boring rocks that are plentiful and about everyone can collect with ease will receive less points than samples that are unusual and/or took some effort to collect (e.g. hiking a distance).
2. **Field Observation:** Note the location where you found the rock. Anything special about the place? Take a photo and describe the “bigger” picture. Also, include a location map of where you found it!
3. **Lab Observation:** Back in the Lab, clean your rock with water. If wanted, your rock can be sliced with our big rock to reveal its inside. This will be on availability and first come first served basis. IDENTIFY your rock and describe its texture and make up in detail, as you observe it. Do NOT copy generic stuff out of the literature. What is it YOU see!
4. **Write-up, research, and lab compilation:** Write the story of your rock, how did it form? What is its age? What does it tell us about the environment when it was formed? Then put it all together as outlined below:

“Every Rock Tells A Story”

by *[insert your name]*

[insert your location map here]

Describe Location & GPS coordinates:

Name of Rock:
 Sedimentary Igneous Metamorphic Mineral

estimated Age of Rock:

Stratigraphic Formation name & Age:

Compositional Description:

Textural Description:

[insert a picture of your rock with caption here]

Note: Cite your Information

The Story

Write about two paragraphs that explain how your rock was made. Include the approximate age when things happened. Was it eroded first? How far were the ingredients to make your rock transported? If it was buried under ground, how deep? How hot? What was Colorado like when your rock formed (Include at least two visuals)?

Put as much detail in this write up as you can, but keep it short.

CITATIONS: ALL citations should be processed through the ZOTERO citation database software, freely available at <https://www.zotero.org/> . At minimum you should cite the map used.

Citations should follow the APA citation standard!