

### SCAVENGER HUNT 1: RED ROCKS & DINOSAUR RIDGE

-Group Project - (3 students max per group)

**Assignment Outline:**

This is a FIELD GROUP assignment for maximal 3 students and requires an actual field trip. Groups are SELF-Assignment (Sign-up in CANVAS under "People"). For eventual transportation needs to the destination contact your group members. Report your results by answering the questions and inserting photos as indicated by the  symbol. Everyone in the group will receive the SAME grade!

**GROUP MEMBERS** Maximal 3 group members - Everyone in the group will receive the SAME grade!  
 Log in to CANVAS and sign up for a group under “People” for this assignment.

Group Member 1 Name:	Activity Description	Date	Hours (Hrs:min)
Contact Info:			
Job Summary:			
<i>Should Group Member 1 receive Full Credit for the project?</i>	Group Member 2	<input type="checkbox"/> Yes <input type="checkbox"/> No	____ Initial
	Group Member 3	<input type="checkbox"/> Yes <input type="checkbox"/> No	____ Initial


Group Member 2 Name:	Activity Description	Date	Hours (Hrs:min)
Contact Info:			
Job Summary:			
<i>Should Group Member 2 receive Full Credit for the project?</i>	Group Member 1	<input type="checkbox"/> Yes <input type="checkbox"/> No	____ Initial
	Group Member 3	<input type="checkbox"/> Yes <input type="checkbox"/> No	____ Initial

Group Member 3 Name:	Activity Description	Date	Hours (Hrs:min)
Contact Info:			
Job Summary:			
<i>Should Group Member 3 receive Full Credit for the project?</i>	Group Member 1	<input type="checkbox"/> Yes <input type="checkbox"/> No	____ Initial
	Group Member 2	<input type="checkbox"/> Yes <input type="checkbox"/> No	____ Initial

**SUBMIT THIS COMPLETED SHEET WITH YOUR ASSIGNMENT**

The group leader will submit the report for EVERYBODY in the group!



**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. Where graphics are indicated insert the proper graphic or picture as indicated by the  symbol. 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:

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/9 COMPOSITION & LAYOUT - one or multiple point deduction per infraction

The appearance is neat and orderly. A title page mentioning ALL group members and the completed page 1 of this assignment is included. Each question & question number is repeated before each answer. The assignment is complete with ALL questions answered. Everything is typed and any graphics and data used are electronically prepared. Pictures are placed in a coherent form. Proper formatted citations are included.

/15 WRITING & GRAMMAR - one point deduction per infraction

Answers are in paragraph form with 3 to 5 sentences max. 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.

/48 CONTENT (16 Questions - 3 points ea.) - one or multiple point deduction per infraction

ALL 16 questions are appropriately and factually answered. Answers reflect understanding of the subject matter.

/18 PHOTOS (6 photos - 3 points ea.) - one or multiple point deduction per infraction

Field photos are clear, sharp, and show good detail to address the questions. If necessary, photos should be cropped. Every photo should have a FIGURE CAPTION describing the major points of each picture. Photos should show internal labels describing important objects.

/10 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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## THE WRITE-UP

The write-up has a title page mentioning the title of the assignment, ALL group members the course and the date. The title page has NO page numbering.

The **completed** GROUP MEMBER PAGE found on page 1 of the assignment outline must be inserted after the title page and becomes PAGE 1 of this assignment. Your write-up work starts on page 2.

In your WRITE-UP / DOCUMENTATION, **repeat** the question and question number, then answer each question INDIVIDUALLY as a single paragraph between 3 to 5 sentences. Do NOT combine questions! You may use graphics and illustrations outside the required photos. If you use visual or text material from another source it must be properly cited!

The group leader will submit the completed assignment as a PDF document by the DEADLINE or before through CANVAS!!! (**Test your generated PDF to see if formatting and pictures exported correctly before submittal**). Everyone in the group will receive the same grade, which includes any late penalties.

Travel to Red Rocks Park and Dinosaur Ridge. While there, find the indicated points and answer ALL the following questions:

### RED ROCKS PARK

1.  Find a “slump” near the Red Rocks Amphitheater. What is a slump & how does it form?
2. What type of unconformity is found at Red Rocks park? How is this unconformity identified (NO, the answer is not because someone put a sign there!)
3. Which rocks (ages) are missing at the unconformity from question #2?
4.  Look closely at a rock outcrop of the Fountain Formation (close enough that you can touch it!) What rock type is it? How is it identified?
5. What is the depositional environment of the Fountain Formation? Give a short narrative including observed evidence found in the rock!
6. Find the Lyons Sandstone as you travel from the Amphitheater toward the exit of the park and stop there.  Look closely at a rock outcrop of the Lyons Formation (close enough that you can touch it!) What rock type is it? How is it identified?
7. What is the depositional environment of the Lyons Formation? Give a short narrative including observed evidence found in the rock!
8. Travel across the main road to Dinosaur Ridge. You will have to park your car and walk. Find the Morrison Formation (Lower part of Dinosaur Ridge).  Look closely at a rock outcrop of the Morrison Formation (close enough that you can touch it!) What rock type is it? How is it identified?
9. What is the depositional environment of the Morrison Formation? Give a short narrative including observed evidence found in the rock!
10.  You can see Dinosaur Bones at one of the stops in the Morrison Formation. What do they look like? How are these distinguished from the surrounding host rocks?
11.  You also find "load casts" in the Morrison Formation: How are they formed and how are they spotted?
12. Next stop, The Dakota Formation (The Ridge Part of Dinosaur Ridge) a little bit up the hill.  Look closely at a rock outcrop of the Dakota Formation (close enough that you can touch it!) What rock type is it? How is it identified?
13. What is the depositional environment of the Dakota Formation? Give a short narrative including observed evidence found in the rock!
14.  There are evidences that the Dakota Sandstones was deposited in shallow water! How is this identified? What are visible evidences?
15. What evidences are present that indicate that the climate during the deposition of the Dakota Sandstone was tropical?
16.  The Dinosaur footprints at Dinosaur Ridge are famous.
  - a. What type of Dinosaurs are identified from the footprints?

- b. What type of animal behavior could be inferred from the footprints found at Dinosaur Ridge?
- c. How does a carnivore and a herbivore footprint differ?

**CITATIONS:** ALL citations should be processed through the ZOTERO citation database software, freely available at <https://www.zotero.org/> .

Citations should follow the APA citation standard!

Make sure your pictures or graphics have headers with citations. If you took the picture then cite yourself, showing the year and the name of the individual who has taken the photo. If you use an internet picture, you must appropriately cite it!!