

INSTRUCTOR: CHUCK PATTERSON, Ph.D.

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TEXT: MESSAGES IN STONE, MATTHEWS

ADDITIONAL TEXTS: ROADSIDE GEOLOGY OF COLORADO, CHRONIC PRAIRIE, PEAK, AND PLATEAU, CHRONIC PHYSICAL GEOLOGY, PLUMMER, MCGEARY, AND CARLSON, ANY RECENT EDITION (OR EQUIVALENT)

CLASS MEETS FRIDAY EVENINGS FOR LECTURE FROM 5-10, AND ALL DAY FIELD TRIP SATURDAYS 8-5:30 (CARPOOL) FOR 3 WEEKENDS BEGINNING 7/9, ENDING 7/24.

GRADES BASED ON ATTENDANCE, PARTICIPATION, AND COMPLETION OF TAKE-HOME ESSAY, A JOURNAL, (ILLUSTRATED NOTES FROM THE CLASS) AND A PAPER OR POSTER PROJECT ON A TOPIC OF INTEREST.

#### SYLLABUS

- 7/9 INTRO TO ROCKS, MINERALS, GEOLOGIC TIME AND THE GENERAL GEOLOGIC STRUCTURE OF COLORADO
- 7/10 GENESSEE MT., GOLDEN GATE CANYON, TABLE MOUNTAIN LAVA FLOWS, CSM MUSEUM
- 7/16 PALEOZOIC AND MESOZOIC STRATIGRAPHY AND EVENTS IN COLORADO
- 7/18 RED ROCKS PARK, DINOSAUR RIDGE, I-70 ROAD CUT, ROONEY ROAD, US 285 ROADCUT, GREEN MOUNTAIN, COAL CREEK CANYON, (ELDORADO CANYON, CU MUSEUM, TIME PERMITTING)
- 7/23 CENOZOIC HISTORY AND EVENTS, UPLIFT OF ROCKIES, COLORADO PLATEAU, RIO GRANDE RIFT, MINING GEOLOGY AND POLLUTION, GLACIATION
- 7/24 LOVELAND PASS, SILVERPLUME, IDAHO SPRINGS, ARGO TUNNEL OH MY GOD ROAD TO CENTRAL CITY, GLORY HOLE

TURN IN WORK AND FINAL PROJECTS BY 7/28 AT RED ROCKS, Instructional Services desk.  
(Please do not email. I require hard copy)

Please answer these questions by next Friday class period. (use extra paper if you need)

1. Definitions

Mineral

Rock/Rock Cycle

(Be sure to include typical examples and names of each rock type as well as major categories within each type)

Igneous rock

Sedimentary rock

Metamorphic rock

2. Make a geologic cross-section along I-70 from Lakewood to Dillon showing the distribution and structure of these rocks.

3. Make a Geologic Time chart showing Eras and Periods and list the major events in the history of Earth and Life that occurred in each. Mark where Colorado's rocks, episodes of mountain building, seaway incursion, and continental drift events are placed in time on the chart.

## EQUIPMENT LIST

PLEASE COME PREPARED TO BE OUTDOORS FOR MOST OF THE DAY.

HAT

SUNSCREEN

RAIN/WIND JACKET

INSULATING LAYER

1 QT CANTEEN OF WATER

STURDY SHOES (WE WILL POTENTIALLY WALK UP TO SEVERAL MILES)

CAR POOL: IN CLASS I WILL SOLICIT DRIVERS FOR CARPOOLING. PASSENGERS SHOULD BE PREPARED TO PAY GAS COSTS FOR THE DRIVER OF 0.05 PER MILE EACH TO MAKE IT WORTH IT FOR THE DRIVER