

CASPER COLLEGE COURSE SYLLABUS
EDCI 1450 01 Earth Science for Elementary Education Majors

Semester/Year: Fall 2015

Lecture Hours: 1

Lab Hours: 0

Credit Hours: 1

Class Time: 10:00-11:50 a.m.

Days: W

Room: TM121, TM108

Instructor's Name: Karen Sue McCutcheon

**Instructor's Contact
Information:**

Office - Tate Museum 124

Office Phone: 268-2536

Home Phone: 472-5359

(Please call prior to 9:00 p.m.)

Email:

kmccutcheon@caspercollege.edu

Office Hours: 9:00-10:00 a.m. on class days and by appointment

Course Description: Covers selection of basic earth science concepts, materials, and curricula appropriate for elementary school. This course parallels the contents of GEOL 1070 and ASTR 1070.

Statement of Prerequisites: There are no prerequisites. However, there is a co-requisite. Students must take Geology 1070 or Physical/Historical Geology.

Goal: It is my desire that students leave this class with an enhanced ability to involve their students in the hands-on learning of earth science in an interesting, exciting classroom environment.

Outcomes: Students will develop a notebook of ideas for hands-on classroom activities and lists of appropriate children's books, source books, and materials. Students will demonstrate their understanding of active, hands-on science teaching by presenting example activities, plus appropriate fillers and puzzlements. Students will achieve satisfactory scores on tests and assignments. Students will also:

1. Demonstrate effective oral and written communication
2. Solve problems using critical thinking and creativity
3. Appreciate aesthetic and creative activities
4. Use appropriate technology and information to conduct research

Methodology: This course will present ideas and techniques through the assignments and class discussions as a part of each section of the course. The readings will include embedded questions to be answered or ideas to be discussed. Individual communication is an important part of this course.

Evaluation Criteria: Each of the assignments will be checked and appropriate number of points awarded. The usual maximum for the assignments is twenty points. There will be an open notebook midterm tests and an open notebook final. Participation in the day-to-day give and take of the classroom is an important aspect of education. Therefore, students will be expected to attend each and every class and enter into discussions, hands-on activities, and question-and-answer sessions. The outcomes will be assessed by testing, problem solving, writing, and pictorial evidence in the notebook. One or two assignments will require more time and will be worth a larger number of points. I reserve

the right to add or delete assignments or tests, and to adjust points, depending on what I ask you to do and I expect you to add information to your notebook.

Casper College may collect samples of student work demonstrating achievement of the above outcomes. Any personally identifying information will be removed from student work.

Approximate Point Distribution

Assignments – 110 points

Notebook – 60 points (10 points each week – be in class)

Exams – 100 points

TOTAL POINTS POSSIBLE: Approximately 280 points

Grade Cutoffs: A: 90%; B: 80-89%; C: 70-79%; D: 60-69%; F: <60%

I hope you, as potential teachers, do not have to be threatened by points before you will take a serious interest in ideas, materials, and techniques that may be useful in your classroom.

Required Text, Readings, and Materials: No text. Make use of sources available. Use your text money for materials as needed.

Class Policies: It is likely that some small problems will crop up. Relax and don't worry. The problems can be taken care of. The most important thing to remember is to plan ahead, participate in class, and don't be afraid to try something new. Most assignments have specific due dates. They cannot be made up. Make sure you know when things are due as they may not be accepted past the due date. Plan accordingly. ***Do not ask for extra credit. Extra credit opportunities are listed on the syllabus for a rock collection or field with Dr. Sundell. Do the assignments well in a timely manner the first time around.***

Last Date to Change to Audit Status or to Withdraw with a W Grade: Check the Casper College Academic Calendar.

Student Rights and Responsibilities: Please refer to the Casper College Student Conduct and Judicial Code for information concerning your rights and responsibilities as a Casper College Student.

Chain of Command: If you have any problems with this class, you should first contact the instructor to attempt to solve the problem. If you are not satisfied with the solution offered by the instructor, you should then take the matter through the appropriate chain of command starting with the Department Head/Program Director, the Dean, and lastly the Vice President for Academic Affairs.

Academic Dishonesty: (Cheating & Plagiarism) Casper College demands intellectual honesty. Proven plagiarism or any form of dishonesty associated with the academic process can result in the offender failing the course in which the offense was committed or expulsion from school. See the Casper College Student Code of Conduct for more information on this topic.

Official Means of Communication: Casper College faculty and staff will employ the student's assigned Casper College email account as a primary method of communication. Students are responsible to check their account regularly. This is also, where you will find course evaluation links during course evaluation periods.

ADA Accommodations Policy: If you need academic accommodations because of a disability, please

inform me as soon as possible. See me privately after class, or during my office hours. To request academic accommodations, students must first consult with the college's Disability Services Counselor located in the Gateway Building, Room 344, (307) 268-2557, bheuer@caspercollege.edu. The Disability Services Counselor is responsible for reviewing documentation provided by students requesting accommodations, determining eligibility for accommodations, and helping students request and use appropriate accommodations.

Calendar or schedule indicating course content: Please read through all the assignments, welcome and syllabus now. Send an email telling me you have done so and I will reward you with 5 extra points.

I hope doing these assignments will introduce ideas for your classes and encourage you to investigate possibilities. Each assignment is due no later than the date indicated unless we have talked about a problem. Most require just a single page or two. Please remember to put your name, section, date, and title of the assignment at the top of the page.

Some of the assignments require lead-time so start now. If you expect to look at an assignment Tuesday night and submit it Wednesday you may be sadly fooled. Remember you have two weeks between classes to get the assignment finished.

Mailing address: Karen Sue McCutcheon, Geology Department, Casper College, 125 College Drive, Casper WY 82601. Home phone (in case you have a worry) 307-472-5359

Assignment 1 - *Careers in Earth Science* (10 points) Due Wednesday, September 9th.

1. Research one of the many careers in Earth Science. *Find out what they do, where they work, what they need to study in school to become that scientist.*
2. Access toondo @ <http://www.toondoo.com/>
Based on your research, create a cartoon that explains *what your scientist does, where they work and what they need to study in school*. Be sure to include your name and print it out. Be ready to share in class.

Assignment 2 – *Interactive 3D* (10 Points) Due Wednesday, September 23rd.

Work through the Interactives for the Dynamic Earth web site
(<http://www.learner.org/interactives/dynamicearth/>)

Click on see results. Take a screen shot of your Test Skills scores that includes your name, date, and percentage grade. Email or print the results.

Assignment 3 *Me and My Rock* (10 points) Due Wednesday, October 7th.

Finding things in nature spark many good stories and memories. Find your 'special rock.'
Describe the scientific aspects of the rock. Then write a story about what makes the rock a special memory. You should include a drawing or photo of the rock as well. All this will be shared in class and added in your journal.

Mid-term Test (20 points) will be Wednesday, October 7th.

This is an open-notebook (the one you have been building since the beginning of class) test of ten to twenty questions.

Assignment 4 *NatureScope* (10 points) Due Wednesday, October 21st.

Evaluate the National Wildlife Federation's series of publications called *NatureScope*. The Casper College Library has a couple of sets on reserve and more in the stacks if you have an opportunity to visit the library. Write a review of at least 2 volumes relating to **EARTH SCIENCE**. You can relate such things as modern biological environments to what conditions might have been like when now fossil plants or animals were alive. *Include how you might use these 2 resources. Provide specific references by volume name and page numbers.*

***While you are at the library take a look at *Roadside Geology of Wyoming* (or your state).**

Assignment 5 *Big Taffy Mountain* (20 points) Due Wednesday, November 4th.

Big Taffy Mountain is a lesson by Dana Van Burgh. More information will be given out prior to the due date. This assignment requires lead-time so start early.

Assignment: Go forth and purchase some of these candy bars and experiment with them. Try placing one of the longer types across the open end of an old glass. Put it someplace where it will not be disturbed for a few days. Make a stack of Air Heads and stand it on end in a small jar like a cheese glass. Place others between two supports or balance one (or a set) over a small support. Check on these every day to see what has happened. Document your experiment with photos.

Now take these observations to your imaginary classroom. How might you use them? Can you come up with enhancements? Let your imagination loose on the project. Tell me what you dreamed up.

Assignment 6 *Discovery Days* (50 points) Due Wednesday, November 18th or December 2nd.

Think of a lesson for Earth Science! Plan a way to present an Earth Science concept or project to elementary students. It will need to be engaging, hands-on, and thoughtful. If you have a worksheet for students to fill out or a PowerPoint, it probably isn't a hands-on lesson. You will share the lesson with your classmates. Bring all materials you need to do the lesson. A rubric will be provided for how your lesson will be assessed.

Finals - December 14-17th

Final Examination Date to be announced.

Rock Collections – You may earn 10 points extra credit for a 15-sample rock collection.

You should have at least 4 of each one - sedimentary, metamorphic, and igneous rocks plus some minerals. They should be identified as to type and where they were located. Try to find your own rather than buying them. Due before November 18th.

Field Trips – You may earn 10 points extra credit for attending Dr. Sundell's weekend field trips. Type a one-page paper reflecting on the trip and what elementary students might learn. Turn it in the Monday following the trip. All field trip papers are due by December 14th.