CEDAR CREST COLLEGE
EDUCATION DEPARTMENT

EDU 517: CURRICULUM, ASSESSMENT AND LEARNING EXPERIENCES FOR SCIENCE IN THE ELEMENTARY SCHOOL (K-6)

FALL – 2008
Wednesdays 6:30PM – 9:30PM

Instructor: Mrs. Megan Basile
Telephone: 610-606-4666 Ext. 3422
E-mail Address:
Office Hours: Available by appointment

***Please note that I will only correspond via Cedar Crest email accounts.**

Course Description: Students are exposed to the various methodologies to successfully teach science to elementary students, integrating hands on activities, and challenging extensions to standard lessons/activities. The classes are modeled on the constructivist approach to science education. This course includes a review of science concepts that relate to the many misconceptions held by elementary students. National and PDE standards are used extensively for curriculum and assessment development.

Course Outcomes:

1. The student will demonstrate an understanding of the inquiry-based science model.
2. The student will be able to plan an inquiry-based science lesson using the CCC lesson plan format.
3. The student will use a science notebook and will develop a rubric to assess the use of science notebooks.
4. The students will research a topic related to elementary science education.
5. The student will demonstrate how to integrate technology into science teaching.
6. The student will demonstrate an understanding of assessment as related to the area of science.
7. The student will demonstrate an understanding of scientific terminology and concepts.

Required Texts:

Bass, J.E., Contant, T.L., Carin,A.A. (2009). *Teaching Science As Inquiry(11th ed)*. Boston, MA: Pearson.

Suggested Readings: Students will be encouraged to investigate a variety of resources pertaining to particular topics throughout the course. Students will be directed toward topics relevant to subject matter addressed during the course.

Note: ***Students are required to use APA style for all assignments that include documentation of sources. You may want to consider purchasing the manual: Publication Manual of the American Psychological Association. Be sure to buy the most recent edition.***

Student Accommodations: Students with documented learning disabilities who may need academic accommodations should discuss these needs with their professors during the first two weeks of class. Students with disabilities who wish to request accommodations should contact the Advising Center during the first week of class.

Honor Philosophy: The Cedar Crest Honor Philosophy is based upon the principle that, as a self-governing body, students have the ability to create an atmosphere of trust and support. Within this environment, individuals are empowered to make their own decisions, develop personal regard for the system under which they live, and achieve a sense of integrity and judgment that will guide them through life.

The formal honor code adopted by CCC as outlined in the college catalogue and student handbook will be followed in this course. Appropriate behavior is implicit in the Cedar Crest College Honor Code.

Classroom Protocol: Appropriate classroom behavior is implicit in the Cedar Crest College Honor Code. Such behavior is defined and guided by complete protection for the rights of all students and faculty to a courteous, respectful classroom environment. That environment is free from distractions such as late arrivals, early departures, inappropriate conversations, and any other behaviors that might disrupt instruction and/or compromise students' access to their Cedar Crest College education. In order to minimize distractions, please turn cell phones off during class.

Attendance and Late Arrivals: As part of your learning responsibility, your attendance at all class meetings is expected and a vital part of the learning process. If vacations, athletic activities, professional duties, medical appointments, or any other conflicts prevent you from fully attending all classes, you are strongly encouraged to take this course during another semester. If an illness or emergency occurs during the semester, you are responsible for contacting the course instructor to make up work missed. Due to the interactive nature of this course, however, there will be assignments that you will not be able to make up if you are absent. Your attendance and participation will be scored using the professional rubric provided with this document.

Late Assignments: Assignments are due at the beginning of each class period. If an assignment is handed in after this time, including email, it is considered late. Late assignments will be lowered a full letter grade for each day they are overdue unless other arrangements are approved in advance by the professor.

Plagiarism: Plagiarism is regarded as a failure to comply with the college honor code. Therefore, any student who is documented as cheating on an assignment, plagiarizing or otherwise breaking the honor code will receive an "F" for that assignment. This policy includes plagiarizing by not citing the material accurately. Please use the APA manual for accuracy. Students may not use the same paper, unit, or lesson for more than one course without the permission (in writing) of the instructor.

Course Requirements:

1. **Lesson Plans** (150 points): You will develop three lesson plans (one physical science, one life science and one earth and space science) following the CCC format. Each lesson must include some type of formal assessment. You will receive detailed information about the development of the lesson plan in class. Each lesson plan will be worth 50 points. See rubric for scoring guide.

2. **Presentation of Lesson** (100 points): You will choose one of your written lesson plans and present it to the class. You will have 15 minutes to present this lesson. You will be graded by your peers and the professor. See rubric for scoring guide.

3. **Website Review** (50 points): You will review 2 websites dedicated to science education. The websites may be designed either for teacher or for student use. You will evaluate the science content, arrangement/organization, ease of use, loading time, visuals, and documentation. See rubric for scoring guide.

4. **Notebook** (35 points): You will keep a notebook throughout the course of notes on science concepts, lab activities, questions and reflections.

5. **Notebook/Inquiry Lesson Rubric** (15 points): You will develop a rubric to assess either student learning as recorded in a science notebook or student performance and learning during an inquiry activity. Your rubric should include at least 3 areas of focus and 3 levels within each area.

6. **Professionalism Rubric** (70 points): It is essential that you participate in all class discussions and activities in order to understand the course material. Reading assignments must be completed to participate in class discussions and activities.

7. **Research Paper**(50 points): You will research a topic related to elementary science and write a 3-5 page paper explaining its relevance. Your paper should include at least 3 sources and follow the APA format.

8. **Research Presentation** (30 points): You will present your research in a symposium type setting. You will explain what you learned about your topic and how it relates to elementary science education. You will also answer questions from your peers and the professor. You are expected to be an active participant throughout the symposium.

Total Points: 500

94-100%	A	74-76%	C
90-93%	A-	70-73%	C-
87-89%	B+	67-69%	D+
84-86%	B	63-66%	D
80-83%	B-	Below 63%	F
77-79%	C+		

Please Note: Any student receiving a grade below a B in any education course will have to re-take the course to be certified in the State of Pennsylvania. This is a Pennsylvania Department of Education requirement.

COURSE SCHEDULE

The professor reserves the right to make changes in the course schedule to meet the needs of students, including developing prerequisite knowledge/skills, reviewing/re-teaching content, etc.

Date	Topics	Assignment(s) Due
8/27	Introduction Why teach science? Science and the Standards Inquiry Science Lessons	Read Chapter 1
9/3	Processes and Strategies for Inquiring Inquiry Science Lessons	Read Chapter 2 Print a copy of the PDE Science and Technology Standards(www.pde.state.pa.us/) **Research Topic Due**
9/10	Learning with Understanding Inquiry Science Lessons	Read Chapter 3 **Lesson Plan Due**
9/17	Planning for the Inquiry-Based Classroom Inquiry Science Lessons	Read Chapter 4
9/24	The 5-E Model Inquiry Science Lessons	Read Chapter 5
10/1	Integrating Technology Inquiry Science Lessons	Read Chapter 8 **Lesson Plan Due**
10/8	Assessing Science Learning Inquiry Science Lessons	Read Chapter 6
10/15	Explore Internet Resources	
10/22	Effective Questioning Technology Activities Inquiry Science Lessons	Read Chapter 7 **Website Review Due**
10/29	Connecting Science with Other Subjects Inquiry Science Lessons	Read Chapter 9
11/5	Science for All Learners Inquiry Science Lessons	Read Chapter 10 **Lesson Plan Due**
11/12	Materials and Resources Inquiry Science Lessons	Read assigned journal articles
11/19	Research Presentations Inquiry Science Lessons	**Research Papers Due**
11/26	NO CLASS	
12/3	Research Presentations Course Evaluation	Read assigned journal articles **Science Notebooks and Rubrics Due**