Objectives:
1. Students will understand the nature of scientific inquiry and become scientifically literate.
2. Students will demonstrate fundamental facts and concepts in the major science disciplines that will help them teach science to children in K-8.
3. Students will make conceptual connections within the science disciplines, as well as to mathematics and technology.

Attendance Policy:
You are strongly encouraged to attend class regularly. Class participation is essential and lack of attendance may lower your grade. It is your responsibility to notify the professor before class of your absence, so that materials may be obtained and assignment completed on time. You must come prepared to discuss all topics listed in this syllabus each class period.

Academic Honesty Policy:
The Moravian College policy on academic honesty will be followed. Please refer to the student handbook for this policy.

Texts Required:
Sciencesaurus, A Student Handbook, Great Source, 2005

References:
Science Content for Elementary and Middle School Teachers, Penelope Fritzer and Valerie Bristor, 2004
Teaching Children Science A Discovery Approach, Joseph Abruscato, 2004
Essentials of Elementary Science, Daniel Dobey, Beichner, and Jabot, 2004

Grading: Your performance will be assessed in the following areas:
94-100 points = A
90-93 points = A-
87-89 points = B+
84-86 points = B
80-83 points = B-
77-79 points = C+
74-76 points = C
70-73 points = C-
67-69 points = D+
64-66 points = D
60-63 points = D-
Requirements:

**In-School Observation**- You must observe a science lesson in any grade K-8. Plan to observe an experienced teacher and to fill out a form, as you observe the lesson looking for scientific accuracy, enthusiasm, content knowledge, safety, creativity, hands on and management. Plan to discuss this observation in class with colleagues. Write a one page summary of the lesson observed double spaced mentioning the above observations in your paper.

**Interview a Child**- Interview an elementary child and discuss his scientific knowledge, reflections, feelings, etc. Critique his/her interview and submit it on paper. This should be one page in length double spaced.

**Classroom Demonstrations**- Your colleagues will be your elementary students as you teach science content on a particular topic. A hands-on demonstration must be included in your lesson. You may work with a partner. A lesson plan must be provided (Moravian style). The lesson should be about 20-30 minutes in length. You may incorporate your learning center with your demonstration with a partner. Also, the teacher created test must be related to your demonstration topic as the learning center should too.

**Learning Center**- This should be an activity oriented learning center for any grade level on your science topic for your demonstration. All materials should be provided at the station. The center should be attractive, inviting, fun, safe, and scientifically accurate. Attention should be given to at least 3 learning tasks. Clear instructions must be given. One or two students should be able to interact at the center. You may do this with a partner.

**Teacher Designed Test**

You must design a teacher made science test on the science topic you have chosen for your demonstration. You must include various forms of assessing such as multiple choice, labeling, matching, fill-ins, and essays.

**Research Paper**

This is to be at least a five page typed research paper on an inventor or scientist or a career or careers in science. If you choose to do a scientist, it should be a biography. You must include a bibliography of at least 3 sites and a title page is required. Be prepared to discuss this paper with your colleagues.

**Web Sites**

You must review 3 science web sites or science software and fill out the form provided. Be prepared to share the sites and software with the class.

**Exams #1 and #2**

There will be two exams. They will both be essay questions with emphasis on methods and content. The final will also contain some multiple choice, matching, and a diagram to label. Study Guides will be provided.
All assessments are tied into the student outcomes.

Expect 4-5 hours of course work per week.

If you have any type of disability, please notify the instructor immediately.

**Class Schedule** - Class Meets every Tuesday and Thursday at 6:30 in Room 302 in PPHAC from August 28 through December 10, 2007

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Texts</th>
</tr>
</thead>
<tbody>
<tr>
<td>August 28, 2007</td>
<td>Introduction</td>
<td>Science K-8</td>
</tr>
<tr>
<td></td>
<td>Review Requirements</td>
<td>Sciencesaurus</td>
</tr>
<tr>
<td></td>
<td>Free write</td>
<td>Review text structure</td>
</tr>
<tr>
<td></td>
<td>Review Standards</td>
<td>Magic Square on science content</td>
</tr>
<tr>
<td>August 30, 2007</td>
<td>Hands on Experiments</td>
<td>Science K-8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chapter 1-Teaching Science in Grades K-8</td>
</tr>
<tr>
<td>September 4, 2007</td>
<td>Current Events Articles</td>
<td>Science –K-8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chapter 2-Goals and Objectives For K-8</td>
</tr>
<tr>
<td>September 6, 2007</td>
<td>Sciencing</td>
<td>Science-K-8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chapter 3-Understanding the Nature of Science</td>
</tr>
<tr>
<td>September 11, 2007</td>
<td>Active Science Learning</td>
<td>Science K-8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chapter 4-Questioning</td>
</tr>
<tr>
<td>September 13, 2007</td>
<td>Inquiry Teaching</td>
<td>Science K-8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chapter 5-Strategies to Help Children Learn</td>
</tr>
<tr>
<td>September 18, 2007</td>
<td>Technology</td>
<td>Science K-8</td>
</tr>
<tr>
<td></td>
<td>Review websites</td>
<td>Chapter 6-Selecting and Using Media</td>
</tr>
<tr>
<td>September 20, 2007</td>
<td>Instruction of Science</td>
<td>Science K-8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chapter 7-Planning for Science</td>
</tr>
<tr>
<td>September 25, 2007</td>
<td>Student Achievement</td>
<td>Science K-8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chapter 8-Assessments</td>
</tr>
<tr>
<td>September 27, 2007</td>
<td>Learning Activities</td>
<td>Science K-8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Part Two Chapter 9 Lesson Observations Due</td>
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<td>Date</td>
<td>Event Description</td>
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<tr>
<td>October 2, 2007</td>
<td>Exam # 1</td>
<td></td>
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<td></td>
<td>Exam on Chapters 1-8 in Science K-8</td>
<td></td>
</tr>
<tr>
<td>October 4, 2007</td>
<td>Making the Literature Connection</td>
<td></td>
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<td>Lab-Children’s Literature and Web sites due</td>
<td></td>
</tr>
<tr>
<td>October 9, 2007</td>
<td><strong>No Class Fall Break</strong></td>
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<tr>
<td>October 11, 2007</td>
<td>Almanac, Science Timeline</td>
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<td></td>
<td>Science Terms</td>
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<tr>
<td>October 16, 2007</td>
<td>Doing Science</td>
<td></td>
</tr>
<tr>
<td>October 18, 2007</td>
<td>Classroom Demonstrations</td>
<td></td>
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<tr>
<td></td>
<td>Learning Centers presented</td>
<td></td>
</tr>
<tr>
<td>October 23, 2007</td>
<td>Doing Science</td>
<td></td>
</tr>
<tr>
<td>October 25, 2007</td>
<td>Classroom Demos and Learning Centers Presented</td>
<td></td>
</tr>
<tr>
<td>October 30, 2007</td>
<td>Life Science</td>
<td></td>
</tr>
<tr>
<td>November 1, 2007</td>
<td>Classroom Demos and Learning Centers Presented</td>
<td></td>
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<tr>
<td>November 6, 2007</td>
<td>Life Science</td>
<td></td>
</tr>
<tr>
<td>November 8, 2007</td>
<td>Lab-cooperative group time</td>
<td></td>
</tr>
<tr>
<td>November 13, 2007</td>
<td>Earth Science</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Interviews with a child due</td>
<td></td>
</tr>
<tr>
<td>November 15, 2007</td>
<td>Classroom Demos</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Learning Centers Presented</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Teacher Made Tests Due with Demos</td>
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</tr>
<tr>
<td>November 20, 2007</td>
<td>Earth Science</td>
<td></td>
</tr>
<tr>
<td>November 27, 2007</td>
<td>Physical Science</td>
<td></td>
</tr>
<tr>
<td>November 29, 2007</td>
<td>Demonstrations</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Learning Centers Presented</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Research Paper Due</td>
<td></td>
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<tr>
<td>December 4, 2007</td>
<td>Final Exam</td>
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<tr>
<td>December 6, 2007</td>
<td>Science, Technology, and Society-</td>
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<td>Sciencesaurus</td>
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