I. Course Description:
The scope and sequence of science skills and content, grades K-6. Activities and materials appropriate for achieving curriculum objectives. Prerequisites: EPS 380, SPE 329, and admission to teacher education.

Course Rationale: Through the past decade, elementary science education has taken on a "new" direction. Two factors which have given direction to the new elementary education curriculum are: (1) studies of the intellectual development of the young child, and (2) a shift from the lecture-demonstration teaching method to a discovery inquiry learning method. Science is a methodology (process) as well as a body of knowledge (content). Process and content are closely interrelated and both are essential in the science curriculum. It also encompasses a set of personal characteristics (attitudes), which reflects certain behavioral traits of a scientist/problem solver. Coverage of a fixed body of information is not to be regarded as an end in itself, but rather we should focus upon helping children develop an understanding of significant conceptual relationships. Students of science must develop proficiency in collecting, analyzing, synthesizing, and evaluating data, and in making application of this data to new problems. They must also be able to use basic scientific terminology and express simple basic number relationships in mathematical terms. Special consideration should be given to the ways in which scientific theories and laws are discovered, refined and tested. An understanding that theories and laws are regarded as tentative and open to revision should be developed. These ideas furnish this course with its objectives.

Mission: Through active participation in classroom projects/activities and outside field investigations the mission of this class, and the College Of Education, is to prepare competent, successful, caring and enthusiastic professionals dedicated to responsible service, leadership and continued professional and intellectual development.

II. EC6 Undergraduate Program Learning Outcomes:
1. EC6 candidates will demonstrate the professional knowledge and skills required of an entry-level educator for pre-K through 6th grades in Texas public schools.
2. EC6 candidates will demonstrate the prerequisite content and professional
knowledge necessary for an entry-level position for pre-K through 6th grades in Texas public schools.
3. EC6 candidates will demonstrate the disposition of the College of Education (service, openness, collaboration, integrity, academic excellence, and life-long learning).
4. EC6 candidates will illustrate the ability to assess, plan instruction, determine impact on learners, reflect/plan for future learning, and advocate for the profession/family/community.
5. EC6 candidates will demonstrate critical reflection of values/ideals and excellent communication skills.

**Student Learning Outcomes:**
1. State an operational definition of science for teaching sciences in the elementary school.
2. Explain the differences between Content and Process as they relate to science in the elementary classroom.
3. Explain the personal and/or intellectual qualities, which characterize the Scientific Attitude Concept.
4. List several objectives, which justify the teaching of science in the elementary school.
5. Explain the differences between convergent and divergent thinking.
6. Explain how a teacher's questioning technique is important in developing inquiry skills.
7. Learn to incorporate use of technology in the classroom.
8. Explain why it is important for children to learn to become "Skeptical Inquirers".
9. Demonstrate competence in the objectives associated with each of the following essential elements: a. Observing; b. Inferring; c. Communicating; d. Classifying; e. Predicting; f. Experimenting
10. Identify the elements of a good lesson design and apply this knowledge when writing lesson plans.
11. Write lesson plans appropriate for elementary school children using the standard and 5-E lesson cycle format.
12. Practice teaching lessons to children using appropriate instructional and a managerial techniques.
13. Evaluate science lessons taught in the schools according to criteria and procedures explained by the instructor.
15. Identify and describe the appropriate safety precautions needed when teaching science lessons to children.
16. Identify a variety of sources for science activities, ideas, and materials.
17. Develop a positive attitude toward the teaching of science.
18. The elementary teacher understands, applies and encourages high-order thinking.
19. The elementary teacher understands basic concepts of the life, earth and physical sciences and applies these concepts to interpret and analyze phenomenon and to plan instruction.
20. The elementary teacher is familiar with the basic laboratory and instructional materials, equipment and technology and knows how to use these resources effectively
and appropriately in elementary hands-on science.
21. The elementary teacher understands and applies principles and procedures of experimental design.
22. The elementary teacher demonstrates an understanding of how the life, earth, and physical sciences relate to one another, to other disciplines and daily life.
23. The elementary teacher is familiar with recent developments and issues in science education and is familiar with professional organizations and publications.
24. The elementary teacher will teach the importance of diversity in the classroom.
25. The elementary teacher will understand the important connection between stated objectives and assessment (including authentic assessment).

B. Required Text and Materials:
1. Texas Essential Skills and Knowledge (TEKS) by grade level..
3. Resource Packet with Articles/Activities (approx. $12.00)
4. Children's Literature correlated to Science Concepts
5. BBBB T-Shirt ($12.00)

III. Course Assignments, Activities, Instructional Strategies

1. Develop a science portfolio composed of: science resource packet, class notes, and handouts.
2. Science lesson plan for activity taught in the science lab and classroom (using standard lesson cycle format) either 5 E or Direct Instruction, with objectives correlated to grade level Texas Essential Knowledge and Skills (TEKS).
   c) Science Lesson/Reflection taught to children.
   d) Science Self-Assessment
   e) Summary and reflection from Science and Children periodical.
3. Five Quizzes
4. Butterfly Journal
5. Construction of Butterfly Habitat.
6. Participation in PLT Workshop
7. Participation in the Bugs, Bees, Butterflies and Blossoms Special Event
8. Attendance and Attitude
9. Course Evaluation
10. Science Diagnostic assessment
11. Mid-Term Exam
12. Final Exam

Attendance Policy:
For classes meeting once a week (three hours) more than one absence in class will result in lowering of students grade by one letter. Additional absences will result in further reduction of grade or failure in that class. The student will be responsible for all work missed during absences.

Any excused Absence must have written Doctors signature for day missed
### IV. Evaluation and Assessments

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Points</th>
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<tbody>
<tr>
<td>Mid-Term Exam</td>
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<tr>
<td>Five Quizzes</td>
<td>50</td>
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<tr>
<td>Bugs, Bees, Butterflies and Blossoms (BBBB) Special Event</td>
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<tr>
<td>Science Diagnostic Assessment</td>
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<tr>
<td>Butterfly Journal</td>
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<td>Butterfly Habitat</td>
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<tr>
<td>PLT workshop</td>
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<tr>
<td>Science and Children Summary/Reflection</td>
<td>10</td>
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<tr>
<td>Attendance, Attitude and Class Participation</td>
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</tr>
<tr>
<td>Final Exam</td>
<td>100</td>
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<tr>
<td>End of semester course evaluation</td>
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</tbody>
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A = 397-430  
B = 344-396  
C = 301-343  
F = Below 301

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**ELE 301 CALENDAR**  
**ASSIGNMENT DUE DATES**  
Spring 2011

**Week of**

<table>
<thead>
<tr>
<th>Date</th>
<th>Assignment</th>
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<tbody>
<tr>
<td>1-31-11</td>
<td>Student Bio-Sketch and Science Self Assessment</td>
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<tr>
<td>2-07-11</td>
<td>Science Diagnostic Assessment</td>
</tr>
<tr>
<td>2-21-11</td>
<td>Science and Children article summary/reflection</td>
</tr>
<tr>
<td>3-21-11</td>
<td>Received Painted Lady Butterfly larvae</td>
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<tr>
<td>3-28-11</td>
<td>Mid-Term Exam; BBBB resource materials due in class</td>
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<tr>
<td>4-04-11</td>
<td>Butterfly Habitat</td>
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<tr>
<td>4-11/15-11</td>
<td>BBBB Special Event</td>
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<tr>
<td>4-18-11</td>
<td>Butterfly Journal</td>
</tr>
<tr>
<td>5-02-11</td>
<td>Final Exam Week</td>
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**HABITAT CONSTRUCTION**  
(25 points)

<table>
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<th>Points</th>
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<tbody>
<tr>
<td>1. VISIBILITY</td>
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<tr>
<td>2. ACCESSIBILITY</td>
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<tr>
<td>3. DURABILITY</td>
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<tr>
<td>4. CREATIVITY</td>
<td>5</td>
</tr>
<tr>
<td>5. SAFETY</td>
<td>5</td>
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</tbody>
</table>

**JOURNAL REQUIREMENT**  
*(50 points)*  
**BUTTERFLY JOURNAL:**

| Daily entries **(detailed observation)**; includes research on Painted Lady Butterflies | 10 |
| Photos, drawings or both off all stages of the Painted Ladies Life Cycle.            | 10 |
| Creative and neatness in presentation                                             | 10 |
| Graphic organizer (if life cycle is used you must include the number of days in each stage on the graphic organizer) | 10 |
| Additional resources ie. Periodicals/internet sites & info etc. **(at least 3)** to be place at end of journal after last daily entree. | 10 |

**V. Tentative Course Calendar:**

Tentative Schedule  
ELE 301 Spring 2011  
Dr. Sowards

Week Of:

| 1-24-11    | Course Overview; Science Self - Assessment; Bio-sketch; Tentative Schedule and due Dates; **Pre-Assessment for BBBD** |
| 1-31-11    | Assign BBBD stations; What Is Science? Science Safety; Questioning Skills; Science and Children summary/reflection assignment. |
VI. Readings:


VII. Course Evaluations:

Near the conclusion of each semester, students in the College of Education electronically evaluate courses taken within the COE. Evaluation data is used for a variety of important purposes including: 1. Course and program improvement, planning, and accreditation; 2. Instruction evaluation purposes; and 3. Making decisions on faculty tenure, promotion, pay, and retention. As you evaluate this course, please be thoughtful, thorough, and accurate in completing the evaluation. Please know that the COE faculty is committed to excellence in teaching and continued improvement. Therefore, your response is critical!

VIII. Student Ethics and Other Policy Information:

ATTENDANCE:
More than one unexcused absence during the semester may lower your overall
course grade by one letter grade. More than two absences may cause you to receive a failing grade for this course.

POLICY ON WH GRADES:
The university policy concerning WH grades states, "Students are responsible for providing documentation satisfactory to the instructor for each class missed. Students with acceptable excuses will be permitted to make up work for absences to a maximum of three weeks of a semester or one week of a six-week summer term when the nature of the work missed permits." It also states that: "Students may not attend sections of a course in future semesters to 'complete' a WH grade. Limited course visitation may be arranged with the permission of the instructor. When students register for the same course in future terms the WH will automatically become an F and will be counted as a repeated course for the purpose of computing the grade point average."

PLAGIARISM/CHEATING:
Plagiarism is unprofessional and will be considered cheating, resulting in a zero on the assignment. All assignments must be written in your own words. Quotes and pictures from web sites or other sources must be properly cited. Any form of copying from any source, including another student, will be considered cheating and will result in receiving a zero for the assignment and possibly an F in the course and/or dismissal from the program.

ASSIGNMENT POLICY:
All interns are expected to complete assignments on the due date shown on the Calendar of Assignments. Assignments are due at the beginning of class. Points will be subtracted for assignments turned in late. In order to receive an "A" in the course, ALL assignments must be completed. Failure to complete any assignment will result in an automatic reduction of the course grade earned by one letter grade, regardless of the total number of points earned. Written work in which the use of the English language is not at an acceptable level for a university senior will be returned to the intern marked "Unacceptable" and a zero assigned.

MAKE-UP WORK POLICY:
The decision whether to accept make-up work is at the discretion of the instructor. In general, make-up work will be accepted one week from the original due date. No make-up work will be accepted Dead Week or Finals Week.

LATE WORK POLICY:
No late work will be accepted.

REDO WORK POLICY:
Some assignments may be subject to editing and resubmission at the discretion of the instructor. In this event the resubmitted work is due no later than one week after it is received from the instructor. Edited work resubmitted without the original work attached will not be graded.
NONDISCRIMINATION:
No person shall, on the basis of race, color, religion sex, age, national origin, handicap, or veteran status, be subjected to discrimination or be excluded from participation in or be denied the benefits of employment or any educational program or activity operated by Stephen F. Austin State University. (Reference: SFASU General Bulletin 2001 - 2003)

STUDENTS WITH DISABILITIES:
Students with Disabilities: To obtain disability related accommodations and/or auxiliary aids, students with disabilities must contact the Office of Disability Services (ODS), Human Services Building, Room 325, 468-3004/ 468-1004 (TDD) as early as possible in the semester. Once verified, ODS will notify the course instructor and outline the accommodation and/or auxiliary aids to be provided.

Academic Integrity A-9.1
Education

Faculty are responsible for providing information about academic integrity and education for maintaining academic honesty during their regular coursework. Course syllabi provide information about penalties and the appeal process.

COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT OF 1990

Stephen F. Austin State University does not discriminate on the basis of disability in admission to, access to, or operations of its programs, services, or activities. Stephen F. Austin State University does not discriminate on the basis of disability in its hiring or employment practices.

I have read the ELE 301 syllabus and I understand I am expected to fulfill all of the requirements of the course.

______________________________________ __________________________
Name (Signature) and Date